CUNY CareerPATH
and
CUNY Start

Psychology Curriculum

CUNY Office of Academic Affairs

March 11th, 2014

CUNY Career Path/CUNY Start Psychology Curriculum Overview

Unit 1 - Introduction to Psychology: Topics, Careers, and Methods

	Texts and Resources	Activities	Skills
Lesson 1: Intro to Psychology	-syllabus -"What Psychology Can Do for You" (Wade & Tavris, 2003, p.30-31)	-free write -introduce and use vocabulary -guided practice reading with strategies -read and annotate	skimming, questioning and predicting
Lesson 2: Psychology as Science	"Psychology, Pseudoscience, and Popular Opinion" (Wade & Tavris, 2003, p. 4-6)	-vocabulary review - anticipation guide	skimming, questioning and summarizing
Lesson 3: Careers in Psychology A	"What Psychologists Do" (Wade & Tavris, 2003, p. 24-29)	-vocabulary logging -free-write career reflection - read using strategies	-skimming and questioning; annotation
Lesson 4: Careers in Psychology B	Mynextmove.org	-student research on mental health careers -plan informational interview	-internet research - informational interviewing - questioning
Lesson 5: Careers in Psychology C	"Treating the Doctor's Bedside Manner" (Swirsky, 1999)	- Opinionaire -CATW (CUNY Assessment Test of Writing	-CATW skills (reading, annotating, brainstorming, organizing ideas, coming up with personal examples, essay writing)
Lesson 6: Careers in Psychology D		- prepare and deliver mental health career presentations	-synthesizing information - public speaking -listening and questions
Lesson 7: Methods A	"How Psychologists Do Research" (Wade & Tavris, 2003, p.35-39)	-introduce and use vocabulary - skim and question; compare student questions with textbook questions - analyze physical	- questioning, annotation

		annotation models	
Lesson 7: Methods B	"Psychology, Pseudoscience Popular Opinion" and "How Psychologists Do Research" (Wade & Tavris, 2003, p.4-6 and 35-39)	-review vocabulary -Discussion Journal	-using textual evidence -providing definitions and examples for key terms
Lesson 7: Methods C	"Experiments: Hunting for Causes" (Wade & Tavris, p.50-54)	-Design an Experiment -read and clarify	-clarification
Lesson 8: Methods D	"Experiments: Hunting for Causes" (Wade & Tavris, p.50-54)	-Learn and practice using textbook diagrams	-using diagrams to learn and study from textbooks
Lesson 9: Methods E	"Psychology, Pseudoscience Popular Opinion" and "How Psychologists Do Research" (Wade & Tavris, 2003, p.4-6 and 35-39)	-Finish Discussion Journal	-using textual evidence - quotation sandwiches
Lesson 10	"Teen Depression Linked to Internet Overuse" (Shute, 2010)	-Use template to write about an experiment -discuss "Psychology, Pseudoscience" and "How Psychologists do Research" using discussion protocols	-writing about experiments - engaging in academic, text-based peer discussion
Lesson 11: CATW and begin Unit Review	"Individuals in Groups" adapted from " (Tavris, 1991)	-timed CATW -begin unit review by brainstorming key terms	-CATW skills (reading, annotating, brainstorming, organizing ideas, essay writing) - Study skills
Lesson 12: Unit Review		- vocabulary quiz review discussion -category sort and reverse note-taking	- categorization -study skills
Lesson 13: Unit Review		-vocabulary quiz - study for the unit quiz	-Using notes to study
Lesson 14		Unit Quiz	

Unit 2 - Behavioral Psychology: Learning, Conditioning and Habit Formation

	Texts and Resources	Activities	Skills
Lesson 1: Classical Conditioning	-"Introduction to Learning" and "Classical Conditioning" (Wade & Tavris, 2003, p. 229-234)	-free write about automatic (unconditioned) responses -introduce and use vocabulary -skim, question, and compare prior and post-reading ideas -model and practice clarification	- using key terms for skimming and questioning -surfacing misconceptions to learn from text - clarification
Lesson 2: Classical Conditioning	-"Classical Conditioning" -"Classical Conditioning in Real Life" (Wade & Tavris, p.230-239)	- review annotations - Use diagrams from the textbook to talk through and take notes on examples - Create personal examples of Classical Conditioning	- using diagrams to study and learn from a textbook - creating hypothetical examples
Lesson 3: Classical Conditioning	-annotation models for "Classical Conditioning"	- presentations of personal examples -analyze sample annotations of an experiment -create annotation resolutions	-public speaking skills - listening and questioning -annotation, focused on experiments, paraphrasing, clarification and personal examples
Lesson 4: Operant Conditioning	-"Operant Conditioning" (Wade & Tavris, 2003, p.240-263)	-vocabulary logging - frontload Operant Conditioning with positive and negative behaviors - metacognitive conversation about skimming a long text -annotation coaching	- Skimming longer texts - annotation
Lesson 5: Operant Conditioning (3 day lesson)	-"Operant Conditioning" (Wade & Tavris, 2003, p.240-263)	-complete discussion journal for "Operant Conditioning"	-using textual evidence - providing definitions and examples for key

			terms - quotation sandwiches
Lesson 6: Operant Conditioning	-"Operant Conditioning" (Wade & Tavris, 2003, p.240-263) -"Operant Conditioning in Parenting" essay	- discuss "Operant Conditioning" using discussion protocol -analyze essay - write short essay applying operant conditioning to accessible life situation	- engaging in academic, text-based peer discussion - understanding essay structure and development - writing
Lesson 7: Operant Conditioning	-"Hey Kids! Go to School! Win Cars, TVs and Trips!" (Gottlieb, 2010)	-introduce and use vocabulary - timed CATW	-CATW skills (reading, annotating, brainstorming, organizing ideas, essay writing) -test time management
Lesson 8: Habit Formation	-cover page and table of context for The Power of Habit "The Craving Brain" (Duhigg, 2014)	- review vocabulary - Use cover page, table of contents and sections to skim a long chapter	- skimming and questioning
Lesson 9: Habit Formation	"The Craving Brain" (Duhigg, 2014)	- read and annotate	-using questions to guide annotation, focusing on paraphrasing, clarification, examples and summarizing
Lesson 10: Habit Formation (2-3 day lesson)	"The Craving Brain" (Duhigg, 2014)	-complete discussion journal for "The Craving Brain"	-using textual evidence - providing definitions and examples for key terms - quotation sandwiches
Lesson 11: Habit Formation	"The Craving Brain" (Duhigg, 2014)	- discuss "The Craving Brain" using discussion protocol - begin planning Habits Essay	- engaging in academic, text-based peer discussion - public speaking and presentation skills -brainstorming and organization of ideas
Lesson 12: Habit Formation	"The Craving Brain" (Duhigg, 2014)	-write Habits summary/analysis essay	-essay writing

Unit 3 – Selections from Cognitive Psychology: Learned Helplessness and Mindsets

	Texts and Resources	Activities	Skills
Unit 1: From behaviorism to cognitive psychology	-"Issues in Animal Experimentation" - "A History of Psychology"	-introduce and use vocabulary - animal experimentation debate -read about animal experimentation and its role in the transition to cognitive psychology	- -surfacing prior understandings to learn from text -read and annotating
Lesson 2: Learned Helplessness	"Learning to Be Helpless" (Seligman, 2006)	-review vocabulary - free write "helplessness" -skim, predict and question - read and annotate	-skimming, predicting, questioning, annotating
Lesson 3: Learned Helplessness	"Learning to Be Helpless" (Seligman, 2006) - learned helplessness video - Question stems	-annotation peer review - watch video with teacher's model of diagramming experiments - use question stems to write discussion journal questions	-diagramming experiments with multiple steps for understanding and studying - sophisticated questioning
Lesson 4: Learned Helplessness	"Learning to Be Helpless" (Seligman, 2006)	-review past discussion joural questions to choose questions	-sophisticated questioning
Lesson 5: Learned Helplessness	"Learning to Be Helpless" (Seligman, 2006)	-discussion journal question sort - answer student-generated discussion journal	- categorization -using textual evidence - providing definitions and examples for key terms - quotation sandwiches
Lesson 6: Learned Helplessness	"Learning to Be Helpless" (Seligman, 2006)	-introduce and use vocabulary - discuss "Learning to be Helpless"	- engaging in academic, text-based peer discussion - public speaking and presentation skills -brainstorming and organization of ideas
Lesson 7: Mindset	"The Effort Effect"	- review vocabulary	-reading strategies

	(Kravovsky, 2007)	- metacognitive conversation about reading strategies - strategies presentation and gallery walk - read and annotate	
Lesson 8: Mindset	"The Effort Effect" (Kravovsky, 2007)	-vocabulary logging -write questions using question stems - sort and select questions - answer discussion journal questions	- sophisticated questioning -categorization -using textual evidence - providing definitions and examples for key terms - quotation sandwiches
Lesson 9: Mindset	"The Effort Effect" (Kravovsky, 2007)	- discuss "The Effort Effect" using discussion protocol - study for the unit quiz	- engaging in academic, text-based peer discussion - public speaking and presentation skills -brainstorming and organization of ideas
Lesson 10: Unit Quiz		Unit Quiz	
Lesson 11	"Learning to Think Outside the Box" (Pappano, 2014)	Timed CATW	-CATW skills (reading, annotating, brainstorming, organizing ideas, essay writing) -test time management

Final Writing Assignment Lessons

	Texts and Resources	Activities	Skills
Lesson 1	**-Final paper assignment**	-read through and break down the assignment -connect scoring to CATW rubric - brainstorm details of hypothetical example	-How to approach long written assignments - understanding the elements of "good writing"
Lesson 2		- Take notes on texts - Create outline template - write hypothetical example paragraph	- Note-taking to prepare for assignments - organizing ideas
Lesson 3	**-Sample body paragraphs**	-analyze body paragraphs - brainstorm connections between texts and hypothetical examples - fill in outline	- organizing ideas and understanding text structure
Lesson 4	**-Introduction Template**	-analyze model introduction and - Begin writing paper	- understanding thesis and the parts of an introduction
Lesson 5		-The difference between an outline and a paper - writing with coaching	- practice with organization and development of writing
Lesson 6	-My portfolio reflection handout	- Creating a portfolio and self-reflection - Giving advice for the CATW	- deepened understanding of elements of good writing

Psychology Curriculum Bibliography

Readings

Psychology, 7th Edition, eds. Carole Wade and Carol Tavris, Prentice Hall, Upper Saddle River, NJ 2003

"The Craving Brain" excerpted from The Power of Habit, Charles Duhigg, 2014

"Learning to Be Helpless" excerpted from Learned Optimism, Martin Seligman, 2006

"The Effort Effect" by Marina Kravovsky, 2007, Stanford Magazine

CATW Readings

"Treating the Doctor's Bedside Manner" by Joan Swirsky, 4/25/99, New York Times

"Teen Depression Linked to Internet Overuse" by Nancy Shute, 8/5/2010 in US News & World Report

"Individuals in Groups" adapted from "In Groups We Shrink" by Carol Tavris, 1991, Los Angeles Times

-"Hey Kids! Go to School! Win Cars, TVs and Trips!" by Rachel Gottlieb, 9/11/2001, The Courant

- "Learning to Think Outside the Box: Creativity becomes an Academic Discipline" by Laura Pappano, 2/5/2014, The New York Times

Lesson Overview for Psychology Unit 1

Lesson 1
1) Psychology Unit goals
2) Free write: what is psychology & why study it?
3) "What psychology can do for you" (textbook); guided skimming and questioning
4)) Introduce Vocab. Set 1

Lesson 2
1) Review vocab: examples and non-examples
2) "Psychology and Pseudo-science"
      - Anticipation guide to bring out misconceptions)
      - Skim & question
      - model paraphrasing, questioning & annotation
      - read and annotate
      - revisit the anticipation guide

Lesson 3
1) Briefly re-visit anticipation guide
2) Free-write: dream job
3) vocabulary logging
4) Read "What psychologists do"

Lesson 4
1) Research mental health careers (on mynextmove.org)
2) Prepare for informational interview

Lesson 5
1) opinionnaire: people skills in health professions
2) timed CATW: "Treating the Doctor's Bedside Manner"

Lesson 6
1) Prepare and Deliver Career Research Presentations
2) Career Free-write

Lesson 7
1) Introduce vocab. set #2
      - skim and question
      - analyze model annotations

Lesson 8
1) Review vocabulary set #2

2) Discussion Journal questions #1 and #2 for "Psychology and Pseudoscience" and "How Psychologists Do Research
        - extensive modeling for DJ question #2

Lesson 9
1) Read "Experiments: The Hunt for Causes"
        - free-write: experiments
        - skim/question
        - introduce and model clarification strategies
        - read and annotate, emphasizing clarification strategies

Lesson 10
1) Review "Experiments: The Hunt for Causes"
        - share annotations and clarifications
2) Using Diagrams from the Textbook
        - talking through and labeling diagrams (model, peer, and individual practice)

Lesson 11
1) Analyze sandwich paragraph for Discussion journal question #3
2) Write discussion journal questions #4,5 and 6

Lesson 12
1) "Internet Overuse Leads to Teen Depression"
        - modeled close paraphrasing/charting information
        - writing about experiments
2) Discuss "Psychology and Pseudoscience" and "How Psychologists do Research"

Lesson 13
1) Timed CATW: "Individuals in Groups" or "Robots Ease Social Anxiety"
2) Brainstorm key terms for unit 1 chapter review

Lesson 14
1) Study for the Unit 1 Quiz
        - key terms review
        - key terms category sort
        - reverse note-taking

Lesson 15
Study for the quiz

Additional Materials: unit 1 content and vocabulary quizzes

Psychology – Unit 1, Lesson 1

Materials:
- Vocab. set 1 definitions and questions
- "What Psychology Can Do for You"

1) Revisit the syllabus
- Ask students to turn back to the syllabus you handed out on the first day of class. Tell them that you have just finished Language & Thinking; what unit comes next?
- Give them time to read the section of the syllabus about psychology, and ask questions if they have any.

2) Free write
- What do you know (or think you know) about psychology? Does it seem interesting or useful to study? Why or why not?
- Have students share ideas from their free write. You can have them share in pairs or groups, or just have a few share with the whole class.

3) "What Psychology Can Do for You"
Materials: "What Psychology Can Do for You" reading (PDF)

a) Skimming
- Tell students that textbook reading can be difficult, and that a lot of classes in college assign a lot of textbook reading. Skimming can really help you to get a big picture of what the reading is about. Read together through the bolded parts of "What Psychology Can do for You." When you have finished reading through the bold parts together, give students 3 minutes to write down predictions of what the section will be about (topics) and questions they want to answer when they re-read.

Have students share their predictions and questions, and write them on the board.   Some of their questions and predictions might look like this:

Predictions
-it will show what psych. can do for my life and what it won't do
- tell me about jobs, love life, learning

Questions
-what can psychology do for me? And what can't it do?
- How can I use psychology at my job?

Tell students to re-read and annotate this section. Remind them to make sure that they answer their questions, as well as paraphrase. Tell them that since this section is called "Psychology and You" it is very appropriate to include personal connections in your annotations.

- In small groups, have students share their annotations, and anything they found interesting

4) Vocabulary
Materials: Vocab. set 1
- Distribute vocabulary set 1 definitions and questions.
- Go over the definitions with students.
- have students work individually or in groups to answer the vocabulary questions.
- Remind students to use the vocabulary word in their answers, and make sure that the sentence shows the word's meaning (and check for this as you circulate).

Homework: finish reading and annotating "What Psychology Can Do" if necessary, and finish vocabulary worksheet.

<u>Vocabulary Protocol</u>

The vocabulary work in this curriculum is based on <u>Bringing Words to Life: Robust Vocabulary Instruction</u> (Beck, McKeown, and Kucan).   When teaching vocabulary, the teacher should help students learn the word by providing as much information as the student can absorb about the word, its meanings, and appropriate context. Dictionary definitions, which were formulated to save space, often do not provide helpful information to learners; rather, students who are starting out often need <u>explanations</u> with examples rather than short definitions.

After providing an explanation of the word, the teacher gives multiple opportunities (over several days) for students to use the new vocabulary word over and over again, and in multiple contexts. The teacher gives feedback to help the student understand the nuances of the word, as well as providing opportunities to locate the word within a broader web of words.

Step 1: Introduce the words and provide initial context for students to use the word

Material: Vocab. definitions and questions handout

a) Distribute vocabulary set definitions and questions.

b) The first two times you do this, model the process of reading definitions and answering the questions in the following way:
- Call on a student to read aloud the first definition.
- Tell students that instead of reading all of the definitions in a row, you are going to use the word while its meaning is fresh in our minds.
- Read the directions for the questions (complete sentence, use the vocab. word, show its meaning).
- Read the question, and tell all students to write a sentence answering the question.
- Call on a few students to share their sentences, and write them on the board. Check each sentence with the class to make sure that they are complete sentences, using the vocab. word, and showing the meaning. If necessary to make them clear and complete, have students add onto the sentences.   Point out that students can have different answers, and still be using the word correctly.

After the second time, students should be able to get the handout and begin to work independently.

c) Tell students to continue reading the definitions and using them to answer the questions.   Tell students that they should work individually, but if they get stuck (because they don't understand the definition or the question), they can ask a neighbor for help.

d) Have students finish the vocabulary for homework if needed.

Step 2 and 3: Teacher gives feedback on student vocabulary sentences during homework check, and students complete the vocabulary review handout, in which they select examples (and reject non-examples) of each vocabulary review.

Materials:
- vocab. review worksheet (examples and non-examples)
- Butcher paper poster with "process for checking vocab. answers"

a) Tell students to take out their vocabulary homework. (The vocabulary questions that they answered in complete sentences). Tell students to put their homework on the side of their desks, so that you can come around to check it while they work on reviewing the vocabulary.

b) Distribute the vocabulary review worksheet (examples and non-examples). **The first time you do it**, call on a student to read the directions. Ask students to complete the first example. Call on a student to explain the first example, and call on a few students to explain <u>why</u> one is an example of the word, and the other is not an example of the word. Tell students that while you circulate to check their homework, they should be working individually on the vocabulary review sheet, circling the examples of the vocab. words. **The second time,** simply remind students to circle the examples. **The third time,** students should be familiar with the process, and be able to complete the worksheet independently.

c) As students work on the vocab review, circulate to check that homework is completed; as you scan students' homework, check to make sure that students have written in complete sentences, using the vocabulary word and are showing the meaning. You can also check for gaps in student understanding and talk to students to help clarify misunderstandings as you circulate.

d) Make sure that the "Process for Checking Answers" is posted in a clear and visible place in the classroom.

"Process for checking answers: if you're not sure or have ANY disagreement"
1) re-read the definition aloud
2) re-read one example aloud. Talk about how it does or doesn't fit with the definition.
3) re-read the other example aloud. Talk about how it does or doesn't fit with the definition.

---

e) As students begin to finish the review sheet, assign students to groups (if they are not already in groups). Tell students that after they finish the review sheet, should work with their group to check their answers using the process posted on the board. **The first time you do this**, read through the steps, and then call on students to do the steps for the second example on the vocab review sheet

in front of the class. Then tell students to continue checking their answers in small groups. **The second time**, read through the steps and remind them to follow the steps.   **After that**, simply remind students to follow the process posted on the board, and remind them of the steps if you hear students not following the process when you circulate.

 f) Continue checking homework as students are working with their groups. Tell groups that finish early that they may begin studying for the vocab. quiz by writing one new sentence per word.

Step 3: Students write their own vocabulary sentences

Have students write a sentence for each vocabulary word. If at all possible, teacher or writing assistant reviews the students' sentences during homework check.

Step 4: Vocabulary Review discussion

Teacher preparation: think through possible questions and examples for difficult words; think of relationships between words that you might want to ask about

-Teacher leads a discussion in which students review the word's meaning, and the teacher asks questions using the vocabulary words, giving the students a new opportunity to use the words. There is a transcript of a sample discussion below.

Step 5: Vocabulary quiz (1 for every two sets of vocabulary)

Materials: vocabulary quiz

Step 6: Cumulative Review
At the end of the semester, students will have the opportunity to review all of the words by noticing and studying relationships among the words they have learned.

<u>**Sample Teacher-Led Vocabulary Review for the Quiz**</u>

In the following sample vocabulary review, the teacher:

a) Does not go over every single word. Instead, prioritizes going in-depth with difficult words (and takes input from students as well as using her own knowledge about which words students are struggling with). The review discussion takes approximately 30 minutes.
b) Starts by asking students to review the definition and a sample sentence.
c) Asks questions that help students use the vocabulary word in different contexts. Pushes students to use the vocabulary word and explain fully so that the meaning of the word is shown.

d) Differentiates by calling on weaker students to answer questions after a word has already been discussed.

e) Helps clarify confusing answers and re-directs students to focus on salient points (like whether you can have too much responsibility which would make for a <u>surfeit</u> of responsibility).

f) Occasionally offers corrections/clarifications to help students use the words in a more correct or nuanced way.

T: any words you want to go over?
S: expanse
T: Let's make sure everyone is on the vocab. review sheet.
S reads the definition of expanse.
S reads the sample sentence.
s: I don't get it.
T: what do you think it means?
S: like expands. I don't get it.
s: it's like the ocean – how it goes on forever.
T: where would you go if you want to see the ocean?
s: a mountain.
s: expanse sounds like expand. (Holds her arms out). So that gives you an idea.
T: give us a sentence.
s: I was on the mountain, and I saw an expanse of water.
T: could you see all of it, or just some?
S: all.
s (Brings it back to the student who was initially confused): Areli, if I wanted to see the expanse of NYC, where would I go?
s: up in an airplane.
S: a tall building.
S: ??? (couldn't hear)
s: when you go to the beach, you see an expanse of beach. It goes on forever.

T writes expansive vs. expanse on the board. Says: who can explain expansive?
s: friendly.
s: talkative.
s: expansive is an adjective that describes a person.
T: can you give a sentence?
s: I am an expansive person.
T: why?
s: b/c I am friendly.
s: Chris Brown is an expansive person because he loves to make people laugh.
T: Should the president be expansive?
s: yes, because he needs to talk to a lot of people and socialize.
T: I heard a lot of yes's.
s: being expansive is what draws people in.
S: if he's not expansive, he's not open with people, people won't like him.
T: do we have expansive people in this class?

A lot of s's: yes! Cristihan.
T: what makes them expansive?
s: they're funny.
T: you're saying that expansive means funny, but it's not quite the same. Think about how an expanse is open space. (T holds arms open wide). Expansive is like that, but in a person. A person who's open. So would you still say Cristihan is expansive?
S: yes. He's expansive because he's open with people. He'll talk to anyone about anything.
S: and he's interested in a lot of things. Like most of us like math or English, but he likes both. So he's open to different topics.
T: great explanation. And now you're showing that expansive isn't funny – it's a person who's open to people, or open to a lot of different things.
S's: will you tell us who you think is expansive in this class?
T laughs. Says no, in a very good humored way.

T: other words.
s: surfeit.
T: read the definition and sentence.
S reads. Says: I thought it meant a lot.
T: what else?
s: I go the same thing. A lot.
T: if you have a surfeit of HW, you have a lot of HW. What else can you have a surfeit of?
s: Money.
T: would that be a good or a bad thing?
s: it's bad because you don't want to carry a lot of money out with you.
T: but you can leave some of it at home. It's good to have a lot of money. (Many students nod in agreement).
T asks the students to read the definition again (too much). T explains that a lot could be good or bad, but a surfeit (too much) is a bad thing. T asks s to revise her example about money.
s: It's bad to have a surfeit of debt.
s: that's bad because then you owe a lot of money and you need it.
T: use it in a complete sentence.
s: Having a surfeit a lot amount of debt . . .
s: you don't need to say a lot because that's what it means.
T: can you rephrase?
s: having a surfeit amount of debt . . .
s: what else can you have a surfeit of?
s: stress!
T: give it in a complete sentence.
s: Having a surfeit . . .
T: can you say the sentence about you?
s: I have a surfeit of stress because (pauses)
3 other students shout – because we have too much homework!
T: who else has a surfeit of something in your life?
s: responsibility.
s: but that's not bad.
T: let's hear if it's a surfeit.
S says something confusing that I couldn't understand.
T: Is that bad? It could be good or bad. Let's focus on the surfeit part. Why is it bad?

s: it's overwhelming.

S's explain how you can have a surfeit of responsibility. s changes her answer to a surfeit of expectations when people expect a lot from you and it's hard to live up.

T: _____, do you have a surfeit of something?

s: stress and responsibility too.

T: put it in a sentence.

s: I have a lot of surfeit of stress and responsibility.

s: can you say 2 things – like a surfeit of responsibility and expectations.

s: but then you have to explain both of them.

T: Do you always have to explain your ideas?

S's: yes!

S explains why it's important to explain your ideas.

T: Other words?

s: indolence.

T: can someone read the def and the sample sentence. Someone who hasn't spoken._____ ?

S reads the def and the sample sentence.

S paraphrases: it's like people who are talented feel like they can be lazy because they're talented, but they can't. They are not going to succeed because they're indolent – they're lazy.

D:_____, give us a sentence with indolent.

Very long pause.

s: Indolent people cannot be succeed because they are passive in doing work. (T writes his sentence, changing succeed to successful).

T: _____, is this true?

s: Yes.

T: Why?

s: they are not doing what they are supposed to do. They are calm.

T: are calm and indolent the same?

S's have a confusing discussion about calm vs. indolent.

T: so can we say that indolent is the same as calm?

s: no because indolent is like you're just sitting there.

s: yeah, calm is like relaxed.

T: so you can be calm and hardworking or calm and indolent?

s: yeah.

T: which character was indolent in "Dates?"

Several students call out: the grandfather!

T: why?

S: he was sleeping.

s: yeah, he was the only one just sitting there while they were all harvesting the dates.

T: _____, what do you think?

s: yeah, that's correct.

T: why?

s: He was just sitting there, chilling.

T: use the vocab word?

s: can I talk about someone else?

T: yes.

s: my brother and sisters are indolent because when chores need to be done, they sit around.

T: anyone else have indolent brothers and sisters?

Heads nod around the room.

10

Psychology Vocabulary for Chapter 1

Explanations

1. Empirical (p.4): Empirical evidence is based observation and experiment

2. Veneer (p.4): surface; usually in contrast to what's underneath; for example, people talk about something having "the veneer of truth" when they mean that something is true on the surface, but not true if you dig deeper.

3. Jilted (p.6) –dumped or abandoned by a former girlfriend, boyfriend, husband or wife.

4. Vague (p.6): Open to broad interpretation, or not specific. For example, a vague explanation of what I did last night could be "I did stuff."

5. Inevitable: definitely going to happen. Can't be avoided.

6. Prevailing (p.6): Common. For example, "prevailing wages" means the salary that most people in a particular industry get.

7. Prevalent: common, something that is happening with a lot of people. For example, skinny jeans became prevalent several years ago.

8. Phenomena (p.37) – things that happen that can be observed by science
Singular = phenomenon (something that happens)
Plural = phenomena (things that happen)

9. Uniform – exactly the same or extremely similar

10. Irrelevant (p. 27 and 25) – unrelated to the topic; unimportant
Relevant - related to the topic or important

Answer each of the following questions in a complete sentence that uses the vocabulary word and shows its meaning.

1) Should people base their beliefs on **empirical** evidence? Why or why not?

2) Have you, or anyone you know ever been **jilted**? Explain what happened.

3) Explain an example of a time when it might be a good idea to give a **vague** explanation.

4) Would you like to be friends with someone who has only a **veneer** of loyalty?

5) What is something in life that is **inevitable**? Explain why it's **inevitable**.

6) What is something that is **prevalent** among politicians?

7) What **phenomena** might result in extreme weather?

8) Do twins usually have **uniform** personalities? Explain your answer.

9) Is it good to talk about **relevant** or **irrelevant** things on the CATW? Explain.

Materials

1) Vocab. review worksheet (examples and non-examples)
2) Butcher paper poster with "process for checking vocab. answers"
3) Anticipation guide for "psychology and pseudo-science"
4) Butcher paper/projector/document reader to project the first paragraph of "psychology vs. pseudoscience" and the teacher's annotations

1) Homework check and Vocabulary Review (See vocab. protocols)
Materials:
- vocab. review worksheet (examples and non-examples)
- Butcher paper poster with "process for checking vocab. answers"

f) Tell students to take out their vocabulary homework. (The vocabulary questions that they answered in complete sentences). Tell students to put their homework on the side of their desks, so that you can come around to check it while they work on reviewing the vocabulary.

g) Distribute the vocabulary review worksheet (examples and non-examples). Call on a student to read the directions. Ask students to complete the first example. Call on a student to explain the first example, and call on a few students to explain <u>why</u> one is an example of the word, and the other is not an example of the word. Tell students that while you circulate to check their homework, they should be working individually on the vocabulary review sheet, circling the examples of the vocab. words

h) As students work on the vocab review, circulate to check that homework is completed; as you scan students' homework, check to make sure that students have written in complete sentences, using the vocabulary word and are showing the meaning. You can also check for gaps in student understanding and talk to students to help clarify misunderstandings as you circulate.

i) **As students begin to finish the review sheet, post the Process for Checking Answers below:**

"Process for checking answers: if you're not sure or have ANY disagreement"
1) re-read the definition aloud
2) re-read one example aloud. Talk about how it does or doesn't fit with the definition.
3) re-read the other example aloud. Talk about how it does or doesn't fit with the definition.

---

j) Assign students to groups (if they are not already in groups). Tell students that after they finish the review sheet, should work with their group to check their answers using the process posted on the

board. Read through the steps, and then call on students to do the steps for the second example on the vocab review sheet in front of the class. Then tell students to continue checking their answers in small groups.

  f) Continue checking homework as students are working with their groups. Tell groups that finish early that they may begin studying for the vocab. quiz by writing one new sentence per word.

2) Reading "Psychology, Pseudo-science"
Materials:
- anticipation guide
- "Psychology and Pseudo-Science" textbook reading
- Butcher paper/projector/document reader to project the first paragraph of psych vs. pseudoscience and the teacher's annotations

a) **Anticipation guide**

- Tell students that one of the things we do when we read is think about our own ideas and opinions on a topic before reading about it. Then, when we read, we can see whether the author shares our ideas, or has a different idea. That helps us to be able to <u>listen to and learn from</u> the author.

- Disitribute the "Psychology & Pseudo-science" Anticipation Guide. Have students fill out the left-hand column. After students complete the left-hand side of the anticipation guide, have students discuss their answers with the whole group and **WHY** they decided that.

If you think students need to move a bit, write "AGREE" on one side of the board, and "DISAGREE" on the other side of the board. Read one statement from the anticipation guide aloud, and tell students to move to the correct side of the room, depending on whether they agree or disagree with the statement. Briefly interview students about why they are standing on the agree or disagree side of the room, and have them respond to each other. Then, read the next statement and have them move to the correct side of the room, and repeat the interview process.

Tell students that they will re-visit the anticipation guide after they read, to see if the author is saying similar or different things than what they first believed.

b) **Read "Psychology and Pseudo-science"**

- **Skim and question Guided Practice**
Remind students that they read a nonfiction text, it's important to skim to get the big picture so they know what's important and what to focus on when they re-read.   Remind them that to skim, they have to move quickly through the text, so they can't read every word. Instead, they should focus on the

14

words that will give them a sense of the big ideas. Ask students: which parts of the text will be more likely to give a signal of what the reading is about?

If students don't know, help them to talk about the following, and write them on the board:
- Titles and headings
- Introductions and conclusions
- Topic sentences
- Words in bold

-Distribute "Psychology, Pseudoscience and Popular Opinion"

-Give students 3-5 minutes to skim through "Psychology, Pseudoscience and Popular Opinion," write down the topic and a question they think will be important to answer when they re-read. Have students come to the board to write their questions.

-Ask students to read through the questions, and notice which questions are similar. There will probably be many versions of the question "What is the difference between psychology, pseudoscience and popular opinion?" Put these similar questions in a box, and ask students to find the bolded questions in the beginning of the textbook section.

Point out to students that the textbook selection starts with the two questions:
- How does "psychobabble differ from serious psychology?"
- How accurate are psychology's nonscientific competitors, such as astrologers and psychics?
Ask students which of these questions is similar to their questions. Add the textbook question "How does psychobabble differ from serious psychology?" to the list on the board, and put a box around that too. Tell the students that it's great that they are thinking like textbook writers, and that it will be really important to answer this question when they are finished reading.

    -Tell students that in their reading and annotating today, they are going to focus on paraphrasing and asking questions. Tell students that you will read the first paragraph aloud, and think about how you want to annotate as you're reading. Tell them to pay attention to what you're annotating and what you're thinking about as you annotate, so they can do the same with the rest of the section.

Read aloud the first paragraph and think-aloud/annotate as you go, emphasizing paraphrasing and questioning.

Sample Teacher Think Aloud for "Psychology, Pseudoscience and Popular Opinion"

Psychology, Pseudoscience, and Popular Opinion

15

In recent decades, the public's appetite for psychological information has created a huge market for what R.D. Rosen (1977) called "psychobabble": <u>pseudoscience and quackery covered by a veneer of psychological language.</u> ***This seems like a definition of psychobabble, so I'm going to underline it, and come back later and break it down.*** The examples of pseudoscience ***Ah, these are going to be examples*** that Rosen analyzed in the 1970s included group encounters designed to transform a person's rotten life in one weekend; "primal scream therapy" in which people are supposed to link their current unhappiness to the trauma of being born (this therapy still exists); and "Theta," whose leader asserted that no-one dies if they don't want to" – certainly the ultimate belief in mind over matter! ***These examples of pseudo-science sound crazy or stupid. You can't live forever just because you want to.***

Going back to the definition, psychobabble is "pseudoscience and quackery covered by a veneer of psychological language."
It sounds like psychobabble and pseudoscience are the same thing. I know that if something is "pseudo" it's fake. It's also saying that it's just "covered by a veneer of psychological language," so it's like it's just psychology on the surface. It's not <u>really</u> psychology, which fits with how the examples are crazy.
So for my paraphrase, I'm writing:
-psychobabble = pseudo-science = FAKE psychology
- Ex. Primal scream therapy, Theta – crazy ideas
I have two questions:
> ***- Is the author saying that pseudopsych are fake and not helpful?***
> ***- This is fake, so what is <u>real</u> psychology?***

Model Annotations

Post the following paragraph. You can use butcher paper, or you can project the paragraph using a computer and write the annotations on the board around it, or use a document reader if you have one. As you think aloud, show students how you would annotate.

Paraphrases	Psychology, Pseudoscience, and Popular Opinion	**Questions**
-psychobabble = pseudo-science = FAKE psychology	In recent decades, the public's appetite for psychological information has created a huge market for what R.D. Rosen (1977) called "<u>psychobabble</u>": <u>pseudoscience and quackery covered by a veneer of psychological language</u>. The	- Is the author really saying that pseudopsych is fake/not helpful? - If this is fake psych, what is <u>real</u> psych?
- Ex. Primal scream therapy, Theta – crazy ideas		

	examples of pseudoscience that Rosen analyzed in the 1970s included group encounters designed to transform a person's rotten life in one weekend; "primal scream therapy" in which people are supposed to link their current unhappiness to the trauma of being born (this therapy still exists); and "Theta," whose leader asserted that no-one dies if they don't want to" – certainly the ultimate belief in mind over matter!	

- Have students read and annotate the rest of the section, focusing on paraphrasing and questioning.

   c) **Revisit the Anticipation Guide**

Tell students that it's great for them to have their own opinions, but that when they read, they should also pay attention/listen to what the AUTHOR is trying to say, and sometimes the author will agree with us, but sometimes he/she will be saying something different, and we can learn from the author.

Read the instructions for the right-hand columns of the anticipation guide with students, and have them work individually to fill in the right-hand column. (Leave enough time for students to get a good start on it, but enough that most students will have at least a little bit left to do for homework)

Explain to students that it is very important for them to finish the anticipation guide, because tomorrow they will be sharing their answers with their classmates, so students who do not complete the homework will not be able to participate in groups.

HW: Finish the right-hand columns (author's opinion and quotation) columns of the anticipation guide for homework.

<u>**Vocabulary Review – Psychology Chapter 1**</u>

For each of the words below, circle the example that best matches the word.

1. **Empirical** Evidence

I have faith that God exists   Tylenol works because
                                    it always improves headache in lab tests

2. **Jilted**

A bride doesn't show up to her wedding   a woman is moving to California, so she
                                    breaks up with her boyfriend

3. **Vague**

Good person   Gave $4,000 to charity

4. **Veneer of professionalism**

The part hidden underneath a couch   The layer of wood on the top of a table

5. **Inevitable**

A promotion at work   Dying

6. A **Prevailing** Idea

Smoking is bad for you   Cars should be able to fly

7. **Phenomenon**

The earth rotates around the sun   I have to go to work later today

8. Uniform

Fashion models' height   The height and weight of the students in this
and weight   class

9. Relevant

Talking about Facebook in a CATW about hospitals   talking about Facebook on a
                                                          CATW about friendship

Anticipation Guide for "What is Psychology?"

Before we read, it's a good idea to think about our own personal opinions about a topic. Then, after we read, we carefully check the text to see if the author agrees or disagrees with our opinion (and why) so we can <u>learn</u> from the author.

Before Reading	Idea	After Reading: What does the <u>author</u> think?	Supporting Evidence
Agree/Disagree	Psychology means people talking about, and trying to improve, their thoughts and emotions	Agree/Disagree	p. ___ "
Agree/Disagree	Books in the self-help section of the bookstore, like "10 Days to a Happier You" are psychology books.	Agree/Disagree	p. ___ "
Agree/Disagree	Psychology is based on people's common-sense observations of how people act.	Agree/Disagree	p. ___ "

Psychology Unit 1, Lesson 3
Materials:
- Vocabulary logs
- "What Psychologists Do" (PDF)

1) **Collect the anticipation guides and look through them.** Notice who "learned something" from the article – ie, whose opinion about psychology was different, and then noticed that the textbook was actually saying something different.

2) **Do now - free write in response to the following prompt:** Write about your dream job. If you don't know what your dream career is, what kinds of careers or fields do you think you might be interested in?

3) **Review the anticipation guide**
- In pairs or small groups, have students share evidence from their anticipation guide.
- As you circulate, praise students for finding evidence, and especially for noticing when the author was saying something different from their original opinion. Point out to the class that this is learning – seeing that the author is providing evidence that contradicts something they thought before, but weighing the information and seeing if it supports or changes their original idea.
- Ask for volunteers to share what they learned about psychology – ie an issue on which they learned something new from the text.

4) **Vocabulary Review – context logging**
    Materials: Vocabulary Log
- Explain to students that the more times they see a vocabulary word, the more it becomes useful. When they study vocabulary, one effective way to study is to look back at where the word was in context. Tell students that they may find the word in a slightly different form in the text, and that that's OK. If they have questions about the differences between forms, they can ask the teacher.
-Distribute vocabulary logs, and practice 1 vocabulary word together. Tell students to log an additional 3-4 words individually in class. Note that students will not log all of the words.

5) **Reading "What Psychologists Do"**
    Materials: "What Psychologists Do" (PDF)
- Frontload "What psychologists do" – briefly have students share ideas from their free write, either by discussing in pairs, or by taking volunteers to read their free write to the class
    -if applicable, explain that even though no-one (or very few) students wrote about becoming psychologists, many of the jobs they did write about actually use psychology in some way. And there are even more jobs that you can do when you study psychology than people generally think.
- Reading "What Psychologists Do"

- Ask students what the class has been doing before and during reading; take notes on steps (such as skimming/fast reading/reading the headings, asking questions, making predictions, annotating, answering our questions, paraphrasing, etc.) on the board in a logical order, and lead students in a discussion about why we do these things
- Have students skim to question and predict. Ask students to share some of their questions with the class
- Have students read and annotate, making sure to answer their questions in their annotations.

- Group discussion
    Have students discuss with their group
        - What did they learn that was surprising?
        - What was interesting?

6) **Add to Free-Write**
Add on to your free-write; how could psychology help you in the career that you want to pursue?

Vocabulary Log

For each vocabulary word that we study, please log the word, its context, and the word's meaning in context. The first one has been done for you.

Vocabulary Word	Sentence from the Text	Explain what the word means in that sentence

<u>**Psychology Unit 1, Lesson 4 – Mental Health & Psychology Career Research**</u>

<u>**Materials:**</u>

- Computer lab (or laptop cart)
- Career Research Worksheet
- Setting Up and Informational Interview handout
- Informational Interview Prep Sheet

1. **Research Mental Health Careers (1 hour, 10 min)**

   Materials: computer lab (or laptop cart) and Career Research Worksheet

   - Remind students that yesterday they read about different types of psychologists. But you don't have to be a psychologist to have a career in psychology. Ask if anyone has heard the term "mental health" before. Call on a few students to define mental health.
   - Tell students that they will use a website called MyNextMove to research possible careers in mental health. If students say that they are not interested in mental health careers, let them know that they will also be doing an interview research project on a career that is completely their choice. Also, remind them that they may learn about a career that they didn't know about before, and it will be helpful just to know how to use this website to find out more about a career that they are interested in.
   - Have students go to the website http://www.mynextmove.org. Distribute the Career Research worksheet. Circulate to help students use the website to research careers in mental health, filling out the worksheet as they go.

2. **Prepare for Informational Interview**
   Materials: Informational Interview Prep Sheet
   - Setting Up and Informational Interview handout

-Explain that in addition to researching careers in mental health, they will be doing an informational interview. Ask who knows what an informational interview is. Take a few student responses. If it does not come up from the students, stress that an informational interview does not lead directly to a job. Instead, it's a great way to find out more about a career that you might be interested in. Just as importantly, it's a way to build contacts in the professional world. In other words, they will get to know someone in a professional setting in a field that interests them. Contacts can often be very helpful in finding a job later because lots of professionals hire people they know.

- Ask students what they think is the first step to an informational interview. Tell them that today, they will brainstorm a list of potential people they can interview. They will practice asking for the interview, and come up with questions for the interview. They will need to set up and conduct the interview for homework (post the deadlines).

- Tell students to spend 2 minutes individually making a brainstormed list of possible interviewees. Tell them that it can be someone they already know who works in the field, or they may interview someone in the department on campus. They may be able to interview someone they don't yet know at a place of business that they do know, for example a hospital or police station.   After 2 minutes, ask students to share out their lists.   Some possible interviewees might include: the CUNY Start counselor, the nurse who works on campus, a professor who spoke at the faculty panel, a restaurant manager in their neighborhood, the nurse at their doctor's office, etc. Tell students to circle three possible interviewees from their list (they can include ideas that their classmates' suggestions). Tell them that the first (or second) person they ask may say no, and that that's OK. They should just ask the second, or the third person on their list. Tell them that it's very likely that one of their top three choices will say yes, but they will need to keep asking until someone says yes.

- Tell students that they will now practice asking someone for an informational interview. Ask them to imagine that they are going to ask someone. What information will they need to give before they ask? Take notes on their ideas on the board.

- Give them a minute to imagine what they will say when they ask. Call on a few students to role play with you in front of the class. The teacher should play the informational interviewee (make sure to say no at least once so that they are prepared for that). If there is enough time, have students practice in pairs.

- Distribute the informational Interview Preparation handout. Tell students that they can leave the top part blank until they have set up their informational interview. During class, they will work with classmates to brainstorm questions to ask their interviewee. Read aloud the first category: job duties. Ask everyone to write down a question or two about job duties. Call on a few students to share their questions and write them on the board. If you do not get different types of questions, add a few questions of your own to the list on the board to show that you can ask different types of questions:

- What are your job duties?
- What is a typical day like at your work?
- What do you like about your job duties? What do you not like?

- Ask students if they plan to ask ALL of the questions, or just a few. (Just ask a few). Tell students to choose a question or two about job duties and write them in the "job duties category." Point out that as their interviewer talks, they will probably ask follow up questions,

like "tell me more about that." And "can you give me an example of that?" Write these follow up questions on the board, and ask students to write them on their interview sheet.

- Point out that the next category is not really a category. Tell the students that since we are studying psychology, and almost every job involves working with people in some way, most jobs will require using psychology in some way, so they will ask about that.

- Give students time to continue to brainstorm and write questions for each of the categories.

Homework: set up an informational interview. Finish writing at least one question for each category.

Career Research Worksheet

Go to http://www.mynextmove.org.

Search for careers with the key word **Mental Health.**

1. Read through all of the titles of the careers in the mental health field. What are 5 careers in the mental health field that look most interesting to you?

a.

b.

c.

d.

e.

2. Click on the symbol for bright outlook. What does "**bright outlook**" mean for a career?

3. Why might people want to pursue a career that is labeled "**bright outlook**?"

4. Click on the symbol for Registered Apprenticeship. What does "**registered apprenticeship**" mean for a career?

5. Why might people want to pursue a career that is labeled "**registered apprenticeship**?"

6. Click on a few of the careers that you are most interested in, and read through the information. Choose ONE career that interests you the most. **Which one career did you choose, and why did you choose it?**

7) Paraphrase the information you find about this career on the website:

a) What would you do at a job in this career?

b) What types of personalities tend to like this career?

c) What skills, education and training do you need for this career?

d) What salary range do you typically find for this career in New York?

e) Did you find out anything else about this career

After you have finished researching a mental health career, go back to the homepage (http://www.mynextmove.org). Use the other search tools on the website to find out more about careers that match your interests, or other careers. In the space below, write at least two things that you learned that were interesting, useful or surprising, or any questions that you have.

Setting Up An Informational Interview

My Brainstorm: People I might be able to informational interview:

Steps for Asking for An Informational Interview

    - Introduce Yourself (name and where you are a student)

    - Tell them what you want and why (about 30 minutes of their time to informational interview; explain why you want to interview them)

    - Ask directly: Could I conduct an informational interview with you?   [Give them time to say yes or no]

    - If yes, thank them and set up a time/place; If no, thank them for their time.

Informational Interview Preparation

Your Name: _____

Name of Interviewee (person you will interview):
_____

Where interviewee works:
_____

Date and time of interview: _____ In person   Phone (circle one)

Location of interview if in person:
_____

Job Duties

Question(s)	Answer

How does the interviewee use psychology or dealing with people on the job? _____

_____

_____

_____

_____

_____

Required education, experience and certification

Question(s)	Answer

Salary/Benefits/Hours/Opportunities for Advancement

Question(s)	Answer

Work environment

Question(s)	Answer

<u>**Psychology Unit 1, Lesson 5 – Timed CATW; prepare presentations**</u>

1) **Frontloading "Treating the Doctor's Bedside Manner"**

Materials: opinionaire (20 minutes)

- Distribute the opinionaire, and tell students to fill it out. Emphasize that there are no wrong answers, and students do not have to think too much about their answers because they will be able to change them later if they want. Give students 5 minutes to fill out the opinionaire.

- Share ideas from the opinionaire. The purpose of the opinionaire-share is for students to get more ideas and possible examples about doctor bedside manner and why it's important. These ideas/examples will help them get more ideas for writing the CATW.

-You can either have the students share in small groups, or have them do a walking share. (A walking share will take a bit more time, but will get them active and enable them to hear from the whole class). Either way, encourage students not just to share their opinion on each statement but WHY they feel that way, including examples.

-**Directions for the walking share:** If you want to do a walking share, write AGREE and DISAGREE on either side of the blackboard. Read one of the statements and have students walk to one side of the room, depending on whether they agree or disagree with the statement you just read.

2) Timed CATW (90 minutes)

Distribute "Treating the Doctor's Bedside Manner" and have students write a CATW. Collect the CATWs when 90 minutes are up.

"Bedside Manner" Opinionaire

For each of the following statements, circle whether you agree or disagree with it. There are no right or wrong answers – just answer based on your opinion and experience.

1. My experiences with going to the doctor have been mostly positive.   **AGREE/DISAGREE**

2. I have experienced a rude doctor.   **AGREE/DISAGREE**

3. I, or someone I know, have gotten confused about a prescription
or medical advice.   **AGREE/DISAGREE**

4. Doctors should think about their patient's religious or cultural backgrounds when
giving advice.   **AGREE/DISAGREE**

5. I think people can learn how to act nicer towards other people.   **AGREE/DISAGREE**

Treating the Doctor's Bedside Manner

By JOAN SWIRSKY

IT was bad enough that Maryanne had major abdominal surgery, ended up in the critical care unit for a bad reaction to medication and missed six weeks of work, and that her best friend never visited her in the hospital. The 40-year-old woman from East Williston, who asked that her last name not be used, said the worst part was that during her most difficult days she was never visited by a doctor who "listened to me, told me what was happening or even said hello."

It's a common complaint. While modern medicine has never been more advanced or life-saving, the one quality that seems to be missing in action is good old-fashioned bedside manner. But with increased patient grievances, malpractice lawsuits and media exposure about the pitfalls of medical care, teaching hospitals are taking note.

An innovative behavioral medicine program at Winthrop University Hospital is teaching the 66 residents in internal medicine advanced interviewing and communication skills.

"Medical schools traditionally teach their students only the basics of how to take a medical history," Dr. Mark J. Corapi, one of the program's founders, said. "But after graduating, residents may never learn the kind of advanced communication skills -- especially careful listening -- that can make all the difference between a good doctor-patient relationship and a poor one."

"Things are often so rushed," Dr. Terenzi said, "that a patient can be saying one thing but the doctor doesn't hear it because he has his own agenda." He added that the program has taught him that a patient's religious beliefs, social situation, family dynamics and psychological state are "sometimes more important than the physical diagnosis."

Time constraints for residents are always a problem, Dr. Caropa said, often blocking them from giving patients important information and understandable directions and or answering questions. "But some practical strategies go a long way in assuring quality care and patient satisfaction," he said.

For instance, instead of residents writing prescriptions outside the room and handing them to patients with no instruction, they are encouraged to write them in front of the patient, simultaneously explaining what the medication is for, how often to take it and what the common side effects might be.

"This saves the residents from being called back to answer the questions that inevitably arise," he said, "saving them time while simultaneously improving the patient's understanding and the doctor-patient relationship."

Psychology Unit 1, Lesson 6 – Career Research Presentations

Note that lesson 6 may need to be done later in the unit, in order to give students time to complete their informational interviews. Presentation Preparation may be done on the same day or on a separate day from the presentations.

1) Prepare and Deliver Career Research Presentations

Materials:
- poster board and markers
- timers for each group, if possible
-Presentation evaluation forms

-Remind students that they will give a presentation on part of the research they have done. After the presentation, their classmates who see the presentation should have a good understanding of one career and how it relates to psychology.

- Ask students to brainstorm criteria for what makes a good career presentation. They should brainstorm criteria for both **Style of Presentation** (for example: eye contact, loud enough, easy to understand, good/clear visuals) and **Content of Presentation** (for example: enough information, answers all of our questions about different areas; does not go over the time limit). Write their brainstormed lists on the board.

- Tell students that each presentation should take approximately 5 minutes. Ask students to decide – do they want to present information from their internet research, or from their informational interview? In groups, have students decide on questions that they will answer in their presentation. Each presentation must answer at least 4 questions, but no more than 6 questions.

-Tell students to individually create their presentation posters. Their posters should be visual, and help convey the information in their presentation. Point out that if they just write out 4 paragraphs, the poster will probably not hold anyone's attention.

- When most students seem to be finishing their poster, tell them that they will give their presentations soon, and they should practice.

- Have 1-2 students model the presentation format, and practice responding to presentations by asking for a volunteer to go first. Distribute the **Presentation Evaluation forms** and read aloud the categories. Tell students that they should listen carefully to the presentation. After the presentation, they will have a few minutes to fill out the evaluation form.

-After the model presentation, give students 2 minutes to fill out the form. Call on students to comment on the presentation and ask questions.

- Tell students that they will be giving their presentations in groups of four, but that they must make sure to stop after each presentation to give everyone time to fill out the evaluation form and give comments and questions to the presenters.

-Divide students up into groups for presentations. Circulate to make sure that they are filling out their forms, and give comments and questions out loud after each presentation.

2) Career Free Write

- After the presentations, tell students to take out their free write from lesson 3 (about their dream job), and add onto it. What have they learned about possible future careers or researching a career? What further questions do they have? What advice would they give other students?

After the free-write, ask a few student volunteers to share what they wrote.

Presentation Evaluation Form

Presenter's Name	One Thing I learned from this Presentation	Question for the Presenter	Style Score (1 = weak; 5 = best)	Content Score (1 = weak; 5 = best)	Comment for presenters

<u>**Psychology Unit 1, Lessons 7**</u>

Materials for lesson 7

- Vocab. set #2 – definitions and questions
- "How Psychologists do Research" (PDF)
- Sample annotations (PDF)

1) vocab. Set 2
Materials: vocab. set #2 – definitions and questions

Have students read the vocabulary definitions and work on the vocabulary questions using the process outlined in the **vocabulary protocol**.

2) Read and annotate "How psychologists do research"
Materials: "How Psychologists Do Research" excerpt from <u>Psychology</u> textbook (p. 35-39) **(PDF)**
- Sample Annotations (PDF)

a) **Skim and Question**
- o Give students 3-5 minutes to skim, write what they think the topic will be about and write a big question that they want to answer when they re-read.
- o Have students write their questions on the board.
- o Read aloud the big questions in the textbook found at the beginning of the section:
  - ▪ Where do psychological scientists get their hypotheses?
  - ▪ In what way are scientists risk takers?
  - ▪ Why is secrecy a big no-no in science?
  - ▪ What makes psychological research scientific?
- o Ask students to compare the student-written questions on the board with the questions in the textbook.
- o Note that there are some questions on the board that will be helpful, even though they aren't in the textbook. Point out 1-2 of those questions, and briefly explain why they are important. (For example, someone may ask "What is a hypothesis?," which is an important question since a lot in here seems to be about hypotheses).
  Point out that it's very helpful for them to use the questions in the textbook, and make sure they can answer them at the end, but by asking their own questions they will both understand the textbook's questions better, and also get better at asking questions that will guide them to information to focus on important information in the text.

b) **Analyze model annotations**
- Tell students that they will analyze your annotations of a page of the reading. Post the following questions for students to consider as they read the annotations.
  - o What do you notice?
    - ▪ What different kinds of annotations am I using?

- What do I do to annotate <u>quickly</u>? Circle abbreviations, symbols, or other shortcuts you see.

- Distribute the sample annotations handout, and ask students to read the annotations aloud in pairs. (Having them read through the annotations in pairs makes it more likely that they will read the notes in a way that makes sense, rather than just reading them word for word without filling in the missing words). Give students 5-10 minutes to read and analyze the annotations. If students finish very quickly, encourage them to label different kinds of annotations, such as "paraphrasing," "asking questions" or "personal example"
- Have students share out what they noticed with the full class. Take notes on <u>types of annotations</u> (for example, paraphrasing, summarizing, questions, examples) and <u>abbreviations/symbols</u>.

- Have students read and annotate all of "How psychologists do research," making sure to use a variety of the modeled annotation strategies, including paraphrasing, examples, and questions.

Psychology Vocabulary Set #2

Definitions

1. **Ecstatic (p.35)** – an intense emotion of happiness; out of your mind with joy

2. **Hypothetical (p.35)** – not strictly true; something you imagine to understand or prove something

3. **Cautious (p.37)** – careful

4. **Refute (p.37)** – to argue against; to show something is not true

5. **Falsify (p.37)** – in an experiment, this means to prove something is not true. (It can also mean that you are faking something, like if you falsify documents.)

6. **Confirm (p.37)** – to check to make sure of something

7. **Fluke (p.38)** – something that happened, but it's not a normal thing; it's very unusual.

8. **Verify (p.39)** – to check or show that something is true or real.

9. **Lucrative (p.39)** – something that brings in a lot of money.

Answer each question below in a <u>complete sentence</u>, <u>using the vocabulary word</u>; your sentence should <u>show the meaning of the word</u>.

1. Which do you think is more persuasive – a real or a **hypothetical** example?

2. If I say that the Yankees' winning the World Series was a **fluke**, do I think the Yankees are a strong or a weak team? Why?

3. Are you a **cautious** person? Give an example to explain why or why not.

4. Describe a time when you felt **ecstatic**. Make sure to explain why you felt ecstatic.

5. Do you think going to school will be **lucrative**? Why or why not?

6. Is it possible to **confirm** the existence of God? Why or why not?

7. If someone accused you of cheating, how could you **refute** their accusation?

8. Is it a good idea to **verify** instructions before you do an assignment? Explain why, and how you could verify the instructions.

Materials for Lesson 8

- Vocab. review #2 (examples and non-examples)
- Discussion journal for "Psychology, Pseudoscience" and "How Psychologists Do Research"

1) Vocab. homework check and vocabulary review

Materials:

- vocab. review worksheet for vocab. set #2
- posted procedure for checking vocab. examples

Check the vocabulary homework and help students review the vocabulary using the procedure set out in the vocab. protocols.

2) Discussion Journal
- **Materials:** Discussion journal for "Psychology, Pseudoscience" and "How Psychologists Do Research"

*Note that the discussion journal includes questions about both "How Psychologists Do Research" and "Psychology and Pseudo-Science;" the discussion journal should be completed in both lesson 5 and 7, using the "Discussion Journal Protocols, and discussed in lesson 8.

-Tell students that they are going to complete several discussion journals for different readings in this unit. A discussion journal is a way to record their thoughts about the reading. They will have several days to prepare the discussion journal before the big class discussion. The discussion journal will help them get their thoughts together and make sure that they have well-thought-out ideas before the big discussion.

For the first discussion journal, the class will work together as a whole so that they know how to answer the questions. But for other questions, and future discussion journals, they will complete the discussion journals on their own.   Tell them that it will be difficult and they will probably make mistakes, but that is exactly what good readers do. Having completed the discussion journal (even with mistakes) will help them see where they got confused and where they understood and help them to correct their mistakes and fully understand the text.

- Distribute the discussion journal for "Psychology, Pseudoscience" and "How Psychologists Do Research." Read aloud the first question, and ask a student or two to explain what to do. Give them 10-15 minutes to do it.

-Tell them that the next question can be quite difficult, so the class will do the first half of it together. Call on a student to read the directions.

Tell students that to make sure you have enough space, you will turn your paper to the side, and just copy one line at a time.

- Model copying the following chart onto the board and fill it in. Make sure to leave plenty of space to fill in the chart.

Big Idea from the text	Pseudo-science	Psychology

Ask: what is the first thing that I should find out about pseudo science? Help students see that they should read down the chart, so the first thing to find is a quotation from the text about pseudo-science.

Big Idea from the text	Pseudo-science
Quotation from the Text	p. "

Give students time to find a quotation from the text about pseudo-science. Call on a few different student to read their quotations about pseudo-science. If some quotations don't shed much light on the idea of pseudo-science, have students talk about which quotation is more helpful in understanding what pseudoscience is.   Write one of their quotations in the box for "quotation," making sure to put the page number. Give students time to write down the quotation for pseudo-science, emphasizing that they can use the class' quotation, or one of their own.

Ask students what to do next. At least some students at this point will be able to see that they should explain the quotation in their own words. Ask students to write their paraphrases in the box. Call on a few students to share their paraphrases, and write one in the box. Give students time to write down a paraphrase.

Ask students what to do next. At this point, most students will be able to see that they should give an example from the text. Give students time to find examples of pseudoscience to write in their boxes, and have students share different examples from the text. Point out that they can use any of these examples, as long as they are discussed in the text. Give students time to write down an example from the text.

Tell students that for the next box, they will need to come up with their own example. Ask students if they can use an example from the text for this one. For example, can they explain "Primal scream therapy" or "Theta?" in this box. (No – it has to be their own example).

Ask if any student has a real example that they've experienced or heard about, and let a few students share examples. Ask if anyone COULDN'T think of an example. Tell students that if they can't think of their own example, they can imagine an example. Tell students that imagining an example is different than lying. If you say, "one example from my life is that I tried to use pseudo-science to do something." That's not helpful because it's not specific. Imagining an example is helpful because you think about the definition, and what it WOULD be like in real life. Re-read the paraphrased definition, and talk about how pseudo-science is fake science that doesn't have proof. Model asking, so what would that be like?

So, maybe if I wanted to help people feel better when they are having trouble focusing or . . . (get a few student responses: when they are depressed . . . when can't sleep . . . when they feel anxious). But I don't have to really prove it. So I just say, if you sing when the moon is full, you'll [feel less depressed or be able to sleep]. That would be an example of? [Pseudo-science].

Give students time to fill in the "my example" box.

Ask students what is the last category to fill in? (Related words in the text).

Tell students that a lot of time, authors use different words for the same idea, so it is helpful to find all of the words that mean similar things. That way, they can see an example of all of these different words. Give them time to look for words in the text that have a similar meaning as pseudoscience.

Have students share the words they come up with. They may come up with words that are similar (pop psychology, psychobabble), or they may come up with unrelated words, or words that actually mean the opposite (like science). If students are struggling to come up with similar words (or have some that are not similar), tell them that to make sure our words really are similar to pseudoscience, we need to read more about the words we came up with. Have them read the part in the text where they came up with the word, and talk about why it's similar to pseudoscience.

Tell students to complete the right-hand column of the chart about psychology following the same steps that they did for pseudoscience. Have them do it in individually in silence, while you circulate to help any student that gets stuck.

Homework: finish discussion journal questions #1 and 2.

Review for Psychology Vocabulary Set #2

For each of the following word, circle the example that best fits with the vocabulary word.

1. Lucrative

Flipping burgers at McDonald's   being a surgeon

2.Fluke

Passing a multiple choice test when   Getting an A on a paper
you didn't read the questions   you worked very hard on

3. Cautious

Reading a book, and taking its advice   Reading several books before taking
the advice   book's advice

4. **Hypothetical** Scenario

If I won the lottery, I would move to Hawaii   I love the beach, so I'm saving my money to
and sit on the beach for the rest of my life   take a vacation someplace warm

5. **Confirm** an appointment

The doctor's office called to make sure   She had to wait for an hour at the doctor's
she would show up on time for her appointment   office, even though she had an appointment

6. **Falsify** a hypothesis

One scientist came up with a hypothesis, but other scientists believed it wasn't true

A scientist did an experiment to check her idea, and found that it wasn't true

7. Ecstatic

Went to a movie and had a nice dinner

fell in love for the first time

8. For each of the following vocabulary words, circle the synonym (word with the same meaning):

Confirm: refute /verify /hypothesize

Falsify: refute /verify /hypothesize

Discussion Journal: Rationale and Uses

Student Development Goals

- to enable students to slowly improve and become more independent over time by using a **repeating structure**
- to **enable all students to participate** in discussion by providing them with ample independent preparation time so that they can formulate their own ideas and support for their ideas before engaging with others' ideas
- to build students' **confidence** in their ability to learn independently from a text, while also demonstrating the **value of making mistakes and staying open to changing your ideas** when confronted with new evidence

Reading Goals

- Give students repeated practice with the **questions specific to the discipline** (in psychology, that includes: definitions of ideas/theories, examples, experiments, and implications of those theories); eventually students are able to ask effective questions independently by using question stems.
- The questions are open-ended, but by providing **multiple points of entry into a text**, they provide **multiple opportunities for students to independently and successfully interpret a text**.
- Help students **start with text and work towards an interpretation**, and then move back and forth between textual evidence and a bigger picture.
- Motivate/persuade students to **re-read a text multiple times**, and to help students see the value of re-reading when it leads them to self-correct misinterpretations.

Writing Goals

- To **provide textual evidence in conventional ways**, including effective transitions, attributions and context for quotations
- To **provide fully articulated explanations**, including detailed analysis of evidence, full explanations of examples and experiments, and explanations of the implications of ideas
- To provide the **building blocks for a longer analytical paper**; however, the discussion journals are not in themselves written as papers (ie, no introductions, conclusions or transitions are needed).

Protocols for Completing Discussion Journals

1) Students should read and annotate the text before beginning the discussion journal.

2) Students should be given <u>time in class</u> to work on the discussion journal. Giving students time in class to complete the discussion journal helps to ensure that students will actually do it, and enables teachers to make sure that students understand the questions. For homework, students can complete discussion journal questions that they started in class.

3) When calculating class time, teachers should assume that it will take students a <u>minimum</u> of 20 minutes per question to complete discussion journal questions. (Some students will take much longer). Students should be assigned no more than 2-3 discussion journal questions per day (to complete the discussion journal over 2-3 days) for at least the first 3 discussion journals. This will help with pacing, give students more processing time, allow interleaving, and give students who are absent a chance to catch up.

4) Students should complete all discussion journal questions <u>individually</u> before discussing them with the group. One of the major goals of the discussion journal is to force students to re-read multiple times. If students are allowed to do the discussion journals together, then students rely on each other's reading after the initial read, so weaker students don't take the time to re-read multiple times – they just accept their partners' ideas. If students start working together spontaneously, say: " We are going to be discussing this reading at the end of the week; if you discuss your ideas now, you'll all have the same ideas, and the discussion will be very boring. Instead, we want everybody to read the text many times on their own to get their OWN ideas. It's ok to make mistakes! Good readers get read and get ideas about what they read, and then we often change our ideas after we discuss and read more. But first you have to re-read a bunch of times to come to ideas on our own."

5) Helping students know how to write discussion journals. The discussion journals are meant to help students move from textual evidence to a deeper/big picture understanding of the ideas of a reading. However, students can easily get confused about what the questions are asking or about how to format their responses. As a result, it is appropriate to model in the first few discussion journals, moving towards greater student independence later in the semester.

Protocols for Discussing Text Following Completion of Discussion Journals

1) All students who participate in discussions must have completed at least 75% of the discussion journal before the discussion. In high school, many verbally skilled students never learn to read well because they can get away with "discussing" things they haven't read. In CUNY Start, students must be given the opportunity to individually read, re-read and think. Therefore, **students who have not completed at least 75% of the journal should** sit apart from the other students during small group discussion time **to work independently on their discussion journal**. This should be done in a non-judgmental way, acknowledging the demands on our students' time, but also emphasizing that their ideas are too valuable not to read for themselves.

2) We cannot expect students to start class knowing how to engage in a text-based discussion. Therefore, we explicitly **teach students the protocol for discussion.** Make sure to post the discussion protocol in a visible place in the classroom for each discussion. Before the first few small group discussions make sure to spend time going over the protocol with students.

Protocols for Discussion

Read the question aloud and answer the question in your own words. Then ask **follow-up questions**:

a) Can you show me the evidence in the text?
b) can you explain that in your own words?
c) can you give an example? (If it makes sense!)
d) Where else do you see that in the text?
e) How does that relate to the big ideas of the article/chapter?

*Everyone in the group should look for evidence, and anyone can read and explain evidence (it doesn't all have to be the first person who spoke).

You can also work with your writing assistant, adviser or coteacher to model a good discussion for students in the beginning, and have students pay attention to what you do.

3) Small Group Discussion

Divide students who have completed at least 75% of their discussion journal into small groups of 3 or 4. **Assign each group 2 questions from the discussion journal.** (This can provide an opportunity for differentiating since some questions may be more or less difficult). Groups

should not answer all of the questions since you want them to delve deeply into each question. Give students approximately 30-40 minutes to discuss their two questions. This will enable them to go in depth without completely disengaging.

4) After the small group discussions, the full group should discuss the text. Some CUNY Start teachers lead the discussion, weaving together an interpretation by calling on students from different groups to share their ideas. Other teachers choose one group of students to present their ideas at the front of the class. The one group's ideas become the starting point for a full class discussion/debate.

As you facilitate or lead the full group discussion, so things to keep in mind include:

a) Help students respond to and listen to each other's ideas.
b) Help students understand when they have similar and different interpretations from each other.
c) Help students support their ideas with evidence from the text, and explain their ideas with details and examples.
d) Help students go back and forth between small and big picture thinking about a text.

5) After the large discussion, give students 10-15 minutes to write individually to solidify and notice their understanding. You might have them write about new ideas and questions that came up during the discussion, or add to one of their discussion journal questions, or write about how they understand the text now.

Protocols for Revising Discussion Journals

You should set aside <u>20-30 minutes of class time for in-class revising of discussion journals</u> 2-3 days after the class discussion. Revising time should happen soon enough after the class discussion that students still remember the discussion (but long enough after that you have enough time to comment on the discussion journals).

Discussion journals allow students numerous points of entry for understanding a text (or independently correcting their misinterpretation). That's why it is so important for students to complete the full discussion journal before discussing the text.

However, the goal of revising the discussion journal is not for students to have a perfect discussion journal. Instead, the goal of revision is for students to improve students' component skills:

a) To providing textual evidence for their ideas
b) To provide textual evidence in clear and appropriate ways, including effective transitions, attribution, and providing context for quotations
c) To provide fully-articulated explanations, including analyzing evidence in detail, explaining examples, and explaining the implications of an idea
d) Ability to give and explain relevant real or hypothetical (imagined) examples that support their understanding of text
e) To re-read effectively, and see re-reading as an effective comprehension strategy

Thus, rather than giving feedback on all of a student's mistakes, skim the full discussion journal, but do not comment on the entire journal. Instead, <u>choose 1-2 questions where the student's responses can be most improved</u>. Often, this means a question where a student has a good idea but is not supporting it effectively. Provide specific comments on only the 1-2 questions that you want the student to revise. Give students 20-30 minutes <u>in class</u> to revise their 1 or 2 questions.

Periodically, ask students to write metacognitively after they revise their discussion journal response. What can they focus on doing even better when they do the next discussion journal? (For example, maybe they want to work on giving evidence. Or giving context for their evidence. Or more fully explaining their ideas).

Discussion Journal for "Psychology, Pseudoscience, and Popular Opinion" (p.4-6) and "How Psychologists Do Research"(p.35-39)

Getting the Big Picture

1) Make a list of the headings and subheadings from **both readings**. Then, in your own words (and without looking at the text), write 1-3 sentences of what you think the text will be about.

Understanding Key Terms

2) Copy the following chart onto a separate sheet of paper and fill it in. Make sure to leave plenty of space to fill in the chart.

Big Idea from the text	Pseudo-science	Psychology
Quotation from the Text	p. "	p. "
Explanation of the quote in my own words	This means that . . .	This means that . . .
Example from the Text	One example of pseudo-science in the text is . . . This is an example of pseudo-science because . . .	One example of psychology in the text i psychology because . . .
My own example	One example of pseudo-science that I've heard of/ I can imagine is . . . That is an example of pseudo-science because . . .	One example of psychology that I've he is an example of psychology because . .
Related Words in the Text	Some words that are related to, or mean the same things as pseudo-science include . . .	Some words that are related to psychol

3) **Understanding Details**

What is a Falsifiable ("risky") prediction, and why is it important in psychology? Give at least one piece of evidence to explain your answer.

4) Explaining an example from the text:

Carefully re-read p. 35-36. What was "facilitated communication?" How was it supposed to help with autism? What does it show about psychology vs. pseudo-science? Give at least one piece of evidence to support your ideas.

5) Understanding the Other Side

What are some reasons the text gives for why people might not be scientific? Explain two reasons, and give evidence for each.

6) Applying the text to a new example

A friend posts a link to an article that claims to explain the best 10 ways to be happy. How can you or a psychologist find out if the article is based on science or pseudoscience? Give two pieces of evidence from the text to support your answer.

Psychology Unit 1, Lesson 9

1) Read "Experiments"

Materials:

1) "Experiments" p. 50-53 (PDF)
2) Clarification Strategies note-taking handout

- Frontload briefly by having students **free-write** about what an experiment is, and why psychologists do experiments. Have students share their ideas with the class.

-Skim/question Give students 5 minutes to skim the reading and write down topics/questions. Have them share the topics and questions that they came up with in small groups.

- Introduce Clarification and Clarification Strategies

Ask students if there was anything in the reading that might be confusing. (No need to talk now about what's confusing). If many say yes, praise them for noticing that. If they say no, tell them that you thought there were confusing parts when you read, and remind students that everyone gets confused at least sometimes when they read. The important thing is to pay attention and notice when you got confused. Ask students what they usually do when they are confused.

Take notes on the board on the students' strategies, grouping similar strategies so that you have a clear list. (For example, if two different students say "read ahead" and "read a later part" you can group those into one). As the students list strategies, talk about when/why to use each one.

The strategies should include:

1) read on and come back later
2) go back to read an earlier part
3) connect this part of the text to a different part that you do understand
4) re-read and break into smaller bits
5) make a picture or a chart to keep track of information

Distribute the "Clarification Strategies Note-Taking" handout. Give students time to take notes on the clarification strategies that are on the board.

- Model Clarification

Tell students that you are going to read aloud the first paragraph of the reading to show what you mean by clarification. Read the paragraph aloud and model clarification. You can use the sample think-aloud below to model.

If possible, post the first paragraph on the board so that students can follow along in your think-aloud without looking down at their papers.

Think Aloud: Modeling Clarification

Experiments: Hunting for Causes
Researchers gain plenty of illuminating information from descriptive studies, but when they want to actually track down the causes of behavior, they rely heavily on the experimental method. An experiment allows the researcher to control, or manipulate, the situation being studied. Instead of being a passive recorder of what is going on, the researcher actively does something that he or she believes will affect people's behavior and then observes what happens. These procedures allow the experimenter to draw conclusions about cause and effect – about what causes what.

Wait, I kind of got lost. I think I got lost when it started talking about being a passive recorder. I think I understand the idea – that experiments help you learn about what causes what, so I'm not going to read forward, and there's not much that came before. I'm just not sure about THIS PARTICULARLY SENTENCE. So I'm going to break it into smaller bits.

"Instead of being a passive recorder of what is going on," – *Instead of – that means that they're NOT talking about this one.* Instead of being a passive recorder. **Passive means you're not active – like you just sit there, and a recorder is someone who records, or takes notes on what's going on. But the researchers <u>don't</u> just sit there watching.** *Instead,*

"the researcher *actively does something* that he or she believes will affect people's behavior" – *they do something to make people act a certain way.*

So, I broke it down into smaller parts and paraphrased, and now I'm going to test to see if I can really understand it by coming up with my own example. So if you want to do an experiment about how people act when they're angry, you don't just wait for them to get angry. You have to make them angry. That must be why so many experiments sound so weird. You're putting people in a particular situation – like you don't let them sleep, or you have them listen to music that makes them sad or whatever.

Model annotating the paragraph:

Model Annotation

Experiments = researchers put people in a situation to see how they'll act

Ex. to test how ppl. act when they're angry, experimenters would <u>do something</u> to make people feel angry and measure how they act

Silent Read and annotate with clarification

Tell students to read and annotate silently for about 15 minutes. They should make sure to use clarification strategies as they go along and mark places in the text where they clarified.

Peer Learning – Clarification

-Ask students if anyone clarified something by continuing to read. Give students a minute to look back to see what they were confused about before but now makes sense. Have a few students share, if possible.

- Tell students that they will now work with a partner to clarify a confusion that they still have. Give students time (5 minutes) to re-read to find something in the text that they tried to clarify, but still aren't sure about. The students should read aloud to their partner something that confused them. The partner should suggest a clarification strategy that they can do together to try to clarify the confusion. Each partner should share at least one confusion that they problem-solve together.

While students are talking, circulate to help students talk about their clarifications. Some students may say that they weren't confused about anything, in which case you might ask if there was something that confused them even for a minute. If so, they can talk about that, and share which clarification strategy helped them. If they say they weren't ever even confused for a minute, point out places that *you* thought were confusing for you, and ask about those areas. Affirm that everyone gets confused about something when they read.

Homework: finish reading and annotating "Experiments"

Reading Strategy: Clarification

Everyone gets confused when they read! The important thing is that we pay attention and notice when we're confused, so that we can use a fix-up strategy.

Fix-Up Strategies

1.

2.

3.

4.

5.

Psychology Unit 1, Lesson 10: Review "Experiments"

Materials:

- Diagram A, B and C
- If possible, a projector to project the diagrams
- Sleep deprivation/overeating experiment write-up
- "Felt-tipped pens" experiment write-up

1) Review "Experiments" reading

Ask students to take out their annotations for "Experiments." Ask them to share their annotations. What did they paraphrase or summarize? What questions did they ask, or what did they clarify? What examples did they come up with? They can also work together to clarify things that are still confusing.

2) Using Diagrams from the Textbook

Materials:

- Diagram A, B and C
- If possible, a projector to project the diagrams
- Sleep deprivation/overeating experiment write-up
- "Felt-tipped pens" experiment write-up

A)Actively Using diagrams: model and guided practice

-Ask students who has noticed that there are often diagrams in the textbook. Tell students that the diagrams can be really helpful as study guides, but we have to use them actively. Tell them that to practice using diagrams actively, you have made copies of just the diagram, with some of the words taken off.

-Tell students to close their texts, and distribute Diagram A, the diagram of the smoking/driving experiment. If possible, project the diagram onto the board. Tell students that you left in the notes describing the experiment, but to make sure it makes sense, you will practice talking through what happened together. Tell students that you will talk through half, and then ask them to talk through the other half. They should listen carefully, because they will be talking through an experiment on their own next.

Modeling and Guided Practice for "Talking through" the diagram

- **Point to the top of the diagram.** Up here it says "nicotine impairs driving ability" because that's our prediction. Through the experiment, we are trying to find out if it's true that smoking nicotine makes people drive worse.
- This, over here **(POINT TO THE LEFT SIDE OF THE DIAGRAM)** is the group that we're doing the experiment on. They smoke REAL cigarettes with nicotine in them.
- Then, we don't really want to cause accidents, so we put them in a video game where it's LIKE

---

they're driving, and we see how many crashes they cause. Say, maybe they cause 20 crashes.
- But we don't know if our prediction – that nicotine makes you drive worse – is really true, because we have to look at people who are driving WITHOUT nicotine.
- So, what do we do with THIS group here? **[POINT TO THE RIGHT SIDE OF THE DIAGRAM]**
- **Have students use the same steps talk through the narrative of the control group (right-hand) side of the diagram and the findings.   Point to different parts of the diagram down the right-hand side and ask them about what's happening in that part of the experiment.**

- Write or post the following on the board:

     - Hypothesis, control group, experimental group, independent and dependent variable

- Tell students to label the different sections of the diagram with these words. They should attempt to do it from memory. After they finish labeling, they should open their textbooks, and check that they've labeled things correctly.

 B) Actively Using diagrams: individual practice

- Distribute Diagram B, and if possible, project it or draw it onto the board. Ask students what differences they notice between this diagram and the last diagram. Among other things, they should notice that this diagram has the "experiment words" on it, but no information about the experiment.

Tell students that they will now practice taking notes on a <u>different</u> experiment and talk about the experiment with a partner. Distribute the "sleep deprivation/overeating" experiment, and give them time to read through the experiment.

After students have read through the experiment, point to the top of the diagram and ask students what a hypothesis is.

If necessary, remind students that a hypothesis is a prediction, so it should be a statement (not a question). Ask students to come up with a hypothesis for the experiment. (it might be something like this: **Being sleep deprived causes people to eat more.)** Write the hypothesis in the box for "hypothesis" on the diagram on the board, and tell students to write it down on their diagrams as well.

-Tell students to finish taking notes on the diagram. As students fill in the diagram, circulate to help them take notes of an appropriate length (some students will write just 2 words for each step, while others may have trouble shortening).

C) Pairs Practice – talking through the diagram

 After students have finished individually labeling the parts of the experiment on the diagram, tell them to turn over the slip of paper describing the experiment. Tell them that now they will practice talking through the experiments using their diagrams by explaining to a partner what is happening at each step and why.

Point to the "hypothesis" box, and say, for example, I would say that "the <u>hypothesis</u>" is that being sleep deprived makes people overeat – in other words, the experimenters wanted to know if not sleeping makes people eat more.

Have students talk through their experiments in pairs, with each partner taking turns explaining a step. Students should make sure to correct any mistakes as they go.

D) Challenge practice (for students who finish quickly)

Give students who finish quickly the "felt-tipped pens" experiment (p.254-255) and blank template. They should read through the experiment, take notes on the experiment in the template, label the parts, and practice talking it through with a partner.

E) Presentations

Have a pair of students present their diagram of the sleep deprivation experiment. Students in the audience should listen carefully to check for any mistakes. If time permits, and students have done the challenge practice (felt-tipped pens"), you can also have a pair present the pens experiment.

F) Metacognitive conversation

Have students write a brief reflect about how they used the diagrams. What steps did they take, and how was it helpful in learning/remembering what they read?

Sleep Deprivation/Overeating Experiment

Researchers want to find out if people who are sleep deprived eat more calories. They have recruit two different groups to participate in the study. One group sleeps in dark, quiet rooms. The other group does not get to have a restful night's sleep. Instead, the researchers wake them up every hour by flashing the lights on and off and blasting loud music.

In the morning, both groups are offered an unlimited breakfast buffet, and told to eat as much as they would like. Participants' plates are secretly monitored to measure the number of calories each participant eats.

Psychology Unit 1, Lesson 11

Discussion Journal for "Psychology, Pseudoscience" and "How Psychologists Do Research"

Materials: Analyzing a Sandwich paragraph handout

-Tell students that they will be going back to, and continuing to work on their discussion journal for "Psychology, Pseudoscience" and "How Psychologists Do Research."

-Tell students to take out their discussion journal questions, and call on a student to read aloud question #3. Ask students what the question means by "evidence." Students may already know from their CATWs that evidence refers to the author's words. If not, tell them that in this case, evidence means the author's exact words (a quotation) to prove that this is what the author means by falsifiable predictions. Give students some time to re-read the sections on falsifiable predictions to find a quotation that shows what it means.

Call on several students to read and explain their quotations that explain what falsifiable predictions are. Tell students that they have done a good job answering the question, which is "what is a falsifiable prediction," but there is still one more question that we have to answer. ("Why is it important?")

Call on students to talk about what it's important. If students aren't sure, give them time to re-read again, and think about it.

Tell students that whenever the discussion journal questions ask them to use evidence, they are going to write in something called <u>sandwich paragraphs</u>. To show them what this means, they are going to analyze a sample sandwich paragraph written by a teacher.

Distribute the "Analyzing a Sandwich Paragraph" handout, and read through the directions together. Have students complete the handout individually, and then discuss their answers in partners or groups.

Point out to the class that it's called a sandwich paragraph because there is something in the middle. Ask: the top part of the sandwich paragraph – whose words is it in? (our own words.) What about the bottom – whose words? (our words.) And the author's words are quoted in between.

Tell students that they are going to individually work on questions 4, 5 and 6, and they are going to write in sandwich paragraphs. Call on a student to read the question for #4 aloud, and tell them to get started. Remind them that they should be working individually, and that it's OK to make mistakes. The important thing is that everybody brings their own ideas to the discussion. If they work together and all have the same ideas, it would be a very boring discussion.

Give students 45 minutes to an hour to work on questions 4,5 and 6. While students are working, circulate to make sure that students understand what they are looking for and that they are using sandwich paragraphs.

Homework: finish discussion journal. (Remind students that they must have finished the discussion journal to participate in the big class discussion.)

Sandwich paragraph for Discussion Journal Question #3

3) What is a Falsifiable ("risky") prediction, and why is it important in psychology? Give at least one piece of evidence to explain your answer.

A falsifiable prediction is when a scientist says that they think something is true, but plans an experiment that can show whether it's right *or wrong*.   According to Wade and Tavris, part of what makes an idea scientific is that "the theory must predict not only what will happen, but also what will not happen" (p.37). In other words, we can only know that an idea is true if there is an opportunity to prove it wrong. For example, Wade and Tavris talk about psychics who say they can find water underground with a special stick called a dowser. But these psychics don't make falsifiable predictions, because whenever they don't find water, they just blame it on something else. So there is no way of really knowing if they are psychic or not. Falsifiable predictions are important because scientists can only find the truth if they make sure that they know when they made a mistake.

After you have read the sandwich paragraph, please analyze it by doing the following:

1. Underline the topic sentence.

2. Is the topic sentence in the author's words or in the student's own words? _____

3. In the paragraph, circle each of the following:

   - the transition to the quotation
   - the quotation marks at the beginning and end of the quotation
   - the words that tell you who originally said the quotation
   - the page number where the student read the quotation

4. Squiggle underline all of the explanation, where the student explains the quotation in detail.

5. Put a check mark next to where the writer explains why the idea is important or how it applies to the real world.

<u>**Psychology, Unit 1, Lesson 12**</u>

1) Writing About Experiments

> **Materials**: "Internet Overuse/Teen Depression" and writing about experiments
> handout
> -a way to post experiment paragraph from "Internet Overuse" if possible

a) Understanding the Experiment

- Tell students that they have been reading a lot about experiments, and that in college (and on the CATW), they will often be asked to write about experiments. Explain that when you read about experiments, there might be confusing things in it, or a lot of numbers, but when you write about experiments, it's important to make it simple so the reader can understand the point.

-Tell students that today they will practice reading a short article and then writing about the experiment in it. Distribute "Internet Overuse," and tell students to read and annotate, making sure to skim and write questions first.

- After students have read and annotated, ask if any of the students asked questions about the experiment. Students may have questions about "pathological." You can provide a definition of pathological, or you can coach them to closely read the text following the more involved process below.

-First, ask students to talk with a partner about what the experiment showed about the 94% and 6%. It's likely that some students will think that 94 percent of the teens were dependent users and got depressed, because that relates to the big idea of the article. More carefully readers will see that most teens were NOT considered dependent, and did not get depressed. If students see that there are 2 different interpretations, they will see the need to read more carefully.

- Tell students that since there are 2 different ideas, they are going to re-read the paragraph carefully, paraphrasing line by line and keeping track of the information with notes. You can use the following think-aloud to help them paraphrase closely:

It's talking about two different groups, the 94 percent and the 6 percent, but the information is really confusing, so I'm going to draw a chart to keep track of the information about both groups. (Draw chart on the board). One group is talking about 94% of teens, so I'll put 94% on one side, and what percent on the other side? (6%).

- 94% of users	-6% of users

The vast majority of teens, 94%, *weren't* pathological internet users. *So I'll put NOT pathological with the 94% side.* But 6% - *"But" shows that it's changing directions and talking about the other side, so which side IS pathological? (the 6%).* Were moderately at risk. *So I'll put with the 6%, pathological and moderately at risk.*

- 94% of users	-6% of users
- Not pathological users	- pathological users
	- moderately at risk

Nine months later, those students were one and a half times more likely to have symptoms of clinical depression. *Which are THOSE students? The 6 percent, because that's the group it was talking about right before THOSE.*

- 94% of users	-6% of users
- Not pathological users	- pathological users
	- moderately at risk
	-1.5 times more likely to get depressed

And it's comparing THOSE more likely to depressed students with teens "who

were less dependent on the internet.*" Which group was less dependent on the internet?* *(the 94%)*

-94% of users	-6%
- not pathological	- moderately at risk
- less dependent on the internet	-pathological
	- 1.5 times MORE likely to be depressed
	- dependent on the internet

-After you have charted the information, ask students to write down:

     - what does pathological mean?

     - were most of the teens overusing the internet in a serious way? Were most of them getting depressed?

b) Writing about the experiment

-Distribute the "Writing about Experiments." Go over the different sections with the students, and give them time to write.

As students finish their paragraphs, they should write a brief metacognitive reflection on the back. What is important to look for when you're reading an experiment? What is important to write about (and not write about) when they write about an experiment?

2) Discuss "Psychology vs. Pseudoscience" discussion journal

     Materials: posted follow-up questions

Use the Discussion Journal protocol to structure the discussion.

Teen Depression Linked to Internet Overuse

by Nancy Shute

Teenagers who have an unhealthy dependence on the Internet are almost twice as likely to become depressed as other teens, giving parents yet another reason to limit kids' screen time. That's the news from a study in *Pediatrics*, which tracked the Internet use of teenagers in China, where "Internet addiction" is considered a serious and growing problem.

The researchers tracked 1,041 teenagers, finding out how much they used the Internet and whether that use was unhealthy. They used surveys similar to those used with pathological gamblers. A typical question asked: "How often do you feel depressed, moody, or nervous when you are offline, but immediately better once you are back online?" The vast majority of the teens, 94 percent, weren't pathological Internet users. But 6 percent were considered moderately at risk. Nine months later, those students were one-and-a-half times more likely to have symptoms of clinical depression than teens who were less dependent on the Internet, though they had not been depressed before.

Depression is common among teenagers; each year, an estimated 2 million teens and preteens develop clinical depression, and last year the federal government recommended that all teenagers be screened for depression. So parents may want to note the link between Internet addiction and depression "and keep a closer eye on children who depend on screen time as a pacifier or mood stabilizer."

"Think of the media as a stranger being invited into your home to teach your kids for seven hours a day," says Victor Strasburger, a pediatrician who studies the effects of media violence and is chief of The Division of Adolescent Medicine at The University of New Mexico's School of Medicine. "Your kids could be learning 'good' things or potentially harmful things, or a combination of both." His advice: "Keep TV sets and Internet connections out of children's bedrooms, and no screen time for children under 2."

Adapted from USNews.com

Writing about an experiment

When we write about an experiment, we want to explain it in the simplest way possible (and without numbers), so that the reader can understand the point of the experiment. Try writing about the experiment in "Teen Depression" using the following template:

The researchers were trying to find out if _____

_____ .

To find out, they _____

_____. Through the study, they found

that most teenagers _____ ,

but a few teenagers _____ .

This is important because _____

_____

Psychology – Unit 1, Lesson 12-15 – Timed CATW and Review Lessons

Materials:

- CATW article (either "Individuals in Groups" or "Robots Ease Social Anxiety"
- Key Terms checklist
- a set of flashcards for each student (and paperclips or envelopes for them to keep the flashcards separate)

Day 1

1) **Timed CATW**

Materials: either "Individuals in Groups" (difficult) or "Robots Ease Social Anxiety" (Easy)

2) Brainstorm Key Terms to Review (30 minutes)

Explain that when they review, they should choose big ideas to study and test themselves about. Tell them that today, they will review the chapter and choose key terms (phrases or ideas) and make a list, and tomorrow they will begin to study those terms. They must choose between 12-20 key terms. **They should choose terms that might come up on a test – they might be terms in bold, or big ideas that get talked about a lot.** The reason for this is that they want to make sure that you are studying enough material, but not too much material. Therefore, they have to decide what's important and what's not as important.

2) As students are making their lists, circulate. If students are choosing a lot of terms, that's a fine way to start, but make sure that they go back over their list to narrow it down to 20.

3) After they have their lists, students should alphabetize (this is not completely necessary, but will make it easier to check against the master list tomorrow).

Day 2 – Make Flashcards (approx. 1 and a half hours)

1) **Check Key Terms Against the Teacher's Model (25 minutes)**
    Materials: Teacher's list of key terms

Explain that you also made a list of key terms from the chapters. Tell the students that to make sure that everyone is working from the same list of terms, the students will check their lists against your list. This does not mean that your list is the only way to do it, but you tried to choose terms that were the most important – that you thought might come up on a test of the material, and that you paid attention to terms in bold, and ideas that got talked about a lot.

Hand out the teacher's key terms and let students check their lists against yours. Take some time to answer questions about why you did or didn't choose particular terms, again emphasizing that your list is not the perfect one.

2) Category Sort (20 minutes)
   Materials: Sets of flashcards

Distribute cards to the students. Each student should get their own set of cards (and paperclips or envelopes to keep the categories separate), but they should work together in groups to categorize them. In groups, students should sort the cards into categories. As they sort, they should talk about the categories for their sort.

After they have finished sorting the cards into categories, students should make a cover card for each category. Model how to make a cover card for each topic/category. On that card, explain the big idea of this section in 2-3 sentences, and make sure to include why this is an important topic. For example:

All of the cards in this section are about **careers in psychology**. There are lots of different careers that use psychology.

3) Reverse Note-Taking (40 minutes plus time to finish for homework)

Model writing an explanation on the reverse side of the flashcard. For each term, students should write an explanation in complete sentences. Wherever possible, include an example (or examples). Note that psychology tests often ask you to apply ideas to your own life.

Encourage students to re-read the section of the text, but they must not look at the text when they are writing their explanations and examples on the back.

Note that as they try to write explanations, they may discover questions about particular terms. Write the questions on a separate sheet of paper labeled questions.

Day 3 – Study for the Quiz - 45 minutes

In groups, students should share and answer each other's questions.

After answering all of their questions, students should test each other using flashcards. Encourage students to come up with as many examples of each idea as possible.

Timed CATW

Individuals in Groups

Something happens to individuals when they are in a group. They think and act differently than they would on their own. Most people, if they observe some disaster or danger on their own—a woman being stabbed, a pedestrian slammed by a hit-and-run driver—will at least call for help; many will even risk their own safety to intervene. But if they are in a group observing the same danger, they hold back. The reason has more to do with the nature of groups than the nature of individuals.

In one experiment in behavioral psychology, students were seated in a room, either alone or in groups of three, as a staged emergency occurred: Smoke began pouring through the vents. Students who were on their own usually hesitated a minute, got up, checked the vents and then went out to report what certainly seemed like a fire. But the students who were sitting in groups of three did not move. They sat there for six minutes, with smoke so thick they could barely see, rubbing their eyes and coughing.

In another experiment, psychologists staged a situation in which people overheard a loud crash, a scream and a woman in pain, moaning that her ankle was broken. Seventy percent of those who were alone when the "accident" occurred went to her aid, compared with only 40 percent of those who heard her in the presence of another person.

Psychologists call this "diffusion of responsibility" or "social loafing." The more people in a group, the lazier each individual in it becomes. Often, observers think nothing needs to be done because someone else has already taken care of it, and the more observers there are, the less likely any one person is to call for help.

Adapted from "In Groups We Shrink" by Carol Tavris. Originally published in the Los Angeles Times, 1991.

Using a Robot to Ease a Child's Pain

Health care workers have a new tool to ease needle anxiety in children: a talking robot.

The robot, named MEDi, is programmed to greet a child with a high-five, collect toys from a tray and ask questions like "Do you like movies?" Children who engaged with the robot while receiving a flu shot had much less pain and distress than children who got a shot the usual way, according to a study published in the June issue of Vaccine.

"It's the first robot to help children manage painful medical procedures," said Tanya Beran, a professor of community health sciences at the University of Calgary in Alberta and the principal investigator of the study, which was conducted at Alberta Children's Hospital. Research suggests that children who experience distress in a medical setting at a young age are less likely to access health care in adulthood, so she says it's important to find ways to reduce pain during pediatric care.

The researchers randomly assigned the children to one of two groups: one with routine vaccination protocol administered by a nurse, and the other with the addition of MEDi in the room. In the MEDi group, the robot would converse with the child and pick up a toy, noting that it was dusty. As the nurse rolled up the child's sleeve and swabbed the arm, MEDi would have the youngster blow on the toy to help clean it, timing the request to exhale for the moment the nurse injected the needle.

"The robot was distracting the child during distress, but also giving instruction for how to cope," said Dr. Beran.

Children, parents, nurses and researchers who were in the room were asked to rate the child's distress, and all indicated significantly decreased pain and distress among those in the robot group compared to those getting routine care.

"No one in the world has done this before," said Dr. Beran. "You're creating a new area of research that people will start to work in."

by SOPHIE EGAN

from The New York Times

Key Term Checklist

Compare your list of terms to the teacher's list of terms below. Jot down questions about why the teacher included (or didn't include) particular terms.

- Academic/research psychologists
- Benefits of psychology
- Clinical psychologists
- Control condition (control group)
- Empirical evidence
- Experiment
- Facilitated communication
- Hypothesis
- Independent and dependent variables
- Placebo
- Pop psychology
- Principle of falsifiability
- Pseudo-science
- Psychologists in industries or law
- Psychology
- Random assignment
- Theory

Academic/research psychologists	**Benefits of psychology**	**Clinical ps**
Control condition (control group)	**Empirical evidence**	**Exper**
Facilitated communication	**Hypothesis**	**Indepen dependen**

Placebo	**Pop psychology**	**Principle of
Pseudo-science	**Psychologists in industries or law**	**Random a

Theory		

Psychology Unit 1 Quiz

1) What is one mental health or psychology career that you could be interested in? Explain the career, and why you might be interested in it.

2) Explain one problem that you or someone you know has had in your life. How could (or did) psychology help you?

3) Explain the difference between psychology and pop psychology. Make sure to give an example of each, and explain them.

4) What is the purpose of an experiment?

5) Read the following article; then answer the questions below. <u>Questions</u>
a) In your own words, what was the hypothesis in the experiment described below?

b) In your own words, explain the control group in the experiment described below. Why did the researchers include this control group in the study?

In Rat Experiment, New Hope for Spine Injuries

Excerpted from the New York Times
http://www.nytimes.com/2012/06/01/health/in-rat-experiment-new-hope-for-spine-injuries.html

Rats with a spinal cord injury that left their hind legs completely paralyzed learned to walk again on their own after an intensive training course that included electrical stimulation of the brain and the spine, scientists reported on Thursday.

The new study is the most comprehensive and rigorous presentation to date of what is possible, and the Swiss research team is already working on technology to test the techniques in humans.

The report, published online on Thursday in the journal Science, provides a striking demonstration of what until recently few scientists thought possible: complete rehabilitation after a disabling blow to the spinal cord. After weeks of training, many of the rats could walk as well as before the injury, and some could run.

"This is a very exciting study, and my first thought is that it is a proof of principle for treating spinal cord injuries from a wide variety of conditions, including cancer and even multiple sclerosis," said Dr. Vineeta Singh, a neurologist at San Francisco General Hospital and the University of California, San Francisco, who was not involved in the study. "There's a huge potential to refine this model to mimic more humanlike conditions."

In the study, a research team led by Grégoire Courtine of the Federal Institute of Technology in Lausanne, known as EPFL, gave a group of 10 rats an injury, cutting all direct nerve connections to the hind legs but stopping short of severing the spinal cord. The rats lost the use of their hind legs, but not their front legs.

The rats then began a daily regimen. Outfitted with tiny vests, held upright on their back legs but left to bear their full weight, the rats tried to move toward a piece of cheese that beckoned nearby. They lurched forward like furry paratroopers, unsteady on their feet after a hard landing.

The scientists provided stimulation in three places: electrically, in the motor area of the brain and in the spinal cord below the injury, and chemically, infusing the wound area with drugs thought to promote growth.

And growth is what they got. After two to three weeks of 30-minute daily sessions, the rats began to take their first voluntary steps. After six weeks, all of the rats could walk on their own, and some could run and climb stairs.

A comparison group of rats that trained more passively on a treadmill did not recover nearly as well. Voluntary motion — hard work combined with sustained stimulation — was necessary for the brain to re-establish command over the limbs.

"The way I think about it is that there is this little island of spare tissue in the injured area, and the neurons in that island begin to act as a relay center, bypassing the injury," Dr. Courtine, who is also affiliated with the University of Zurich, said in a telephone interview.

In effect, he said, the training forces the brain to recruit what is left of the neural system to get the job done. Neurons sprout like seedlings on a Chia Pet when they are seeking new connections, and the scientists found increases of 300 percent and more in projections in the brain stem and around the injury — evidence that the nervous system was remapping its connections.

Dr. Courtine's group has demonstrated such recoveries in some 100 rats and is now developing technology for a human trial.

For each of the following questions, answer in a *complete sentence* that *uses the vocabulary word and shows the word's meaning*.

1) Can a **prevailing** idea be wrong? Give an example (from now or the past), and explain why or why not.

2) Should students have opinions that are **uniform** with their teachers'? Why or why not?

3) Do you think being a scientist is **lucrative**? Explain why or why not.

4) What can a scientist do to be **cautious** in their research? Name at least two steps.

5) Which scientist is more likely to eventually **verify** their ideas?

   a) A scientist who does an experiment, and **falsifies** their first idea.
   b) A scientist who never tries to **refute** any of their own ideas.

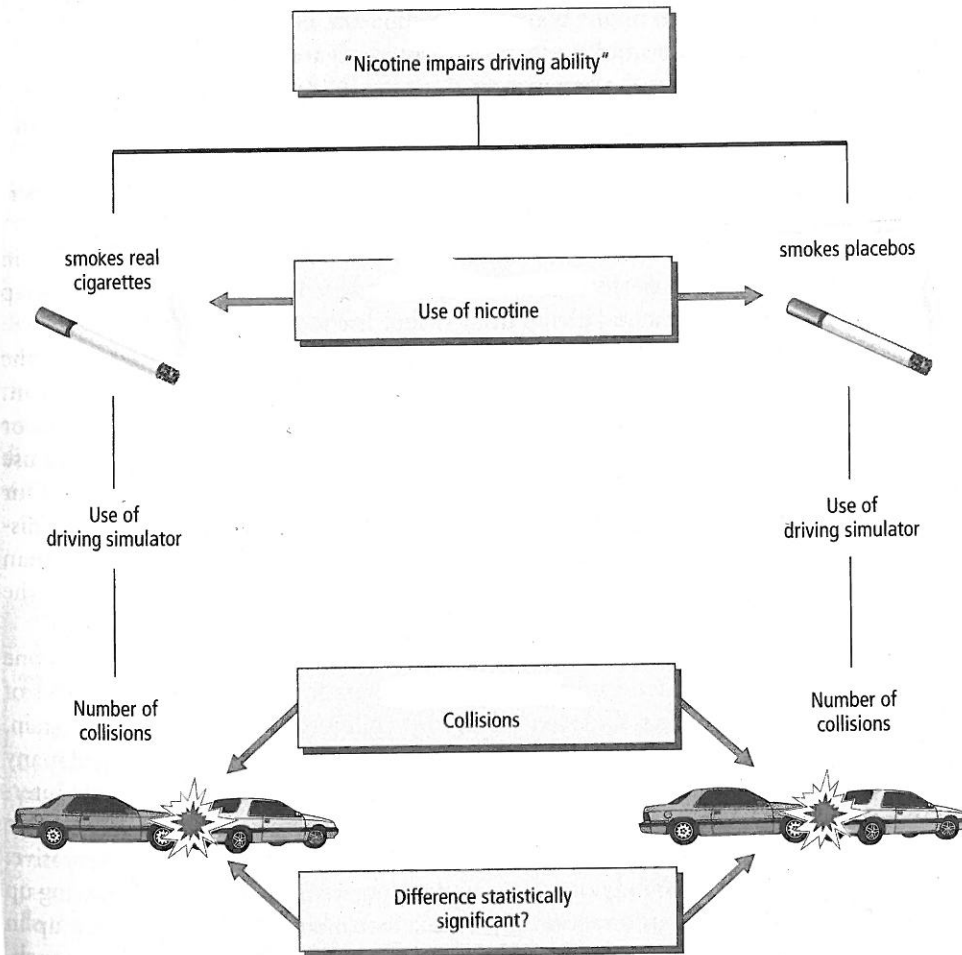**Explain your answer:** _____

_____

_____

6) Is faith **relevant** to science? Explain why or why not.

7) Do you think the extremely cold weather this winter was a **fluke**? Why or why not?

8) Do you want your writing to have a **veneer** of truth? Why or why not?

9) Describe a **hypothetical** situation that would make you **ecstatic**.

Diagram A

"Nicotine impairs driving ability"

smokes real cigarettes

Use of nicotine

smokes placebos

Use of driving simulator

Use of driving simulator

Number of collisions

Collisions

Number of collisions

Difference statistically significant?

Figure 2.3
DO SMOKING AND DRIVING MIX?
The text describes this experimental design to test the hypothesis that nicotine in cigarettes impairs driving skills.
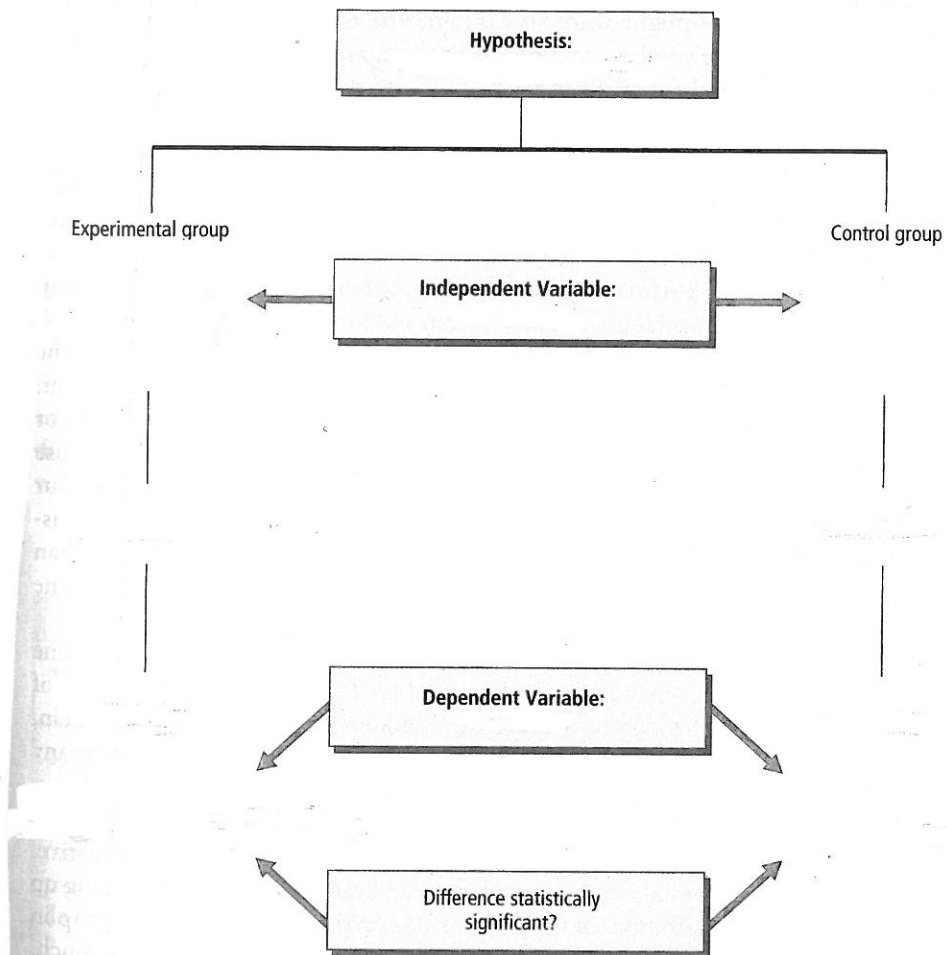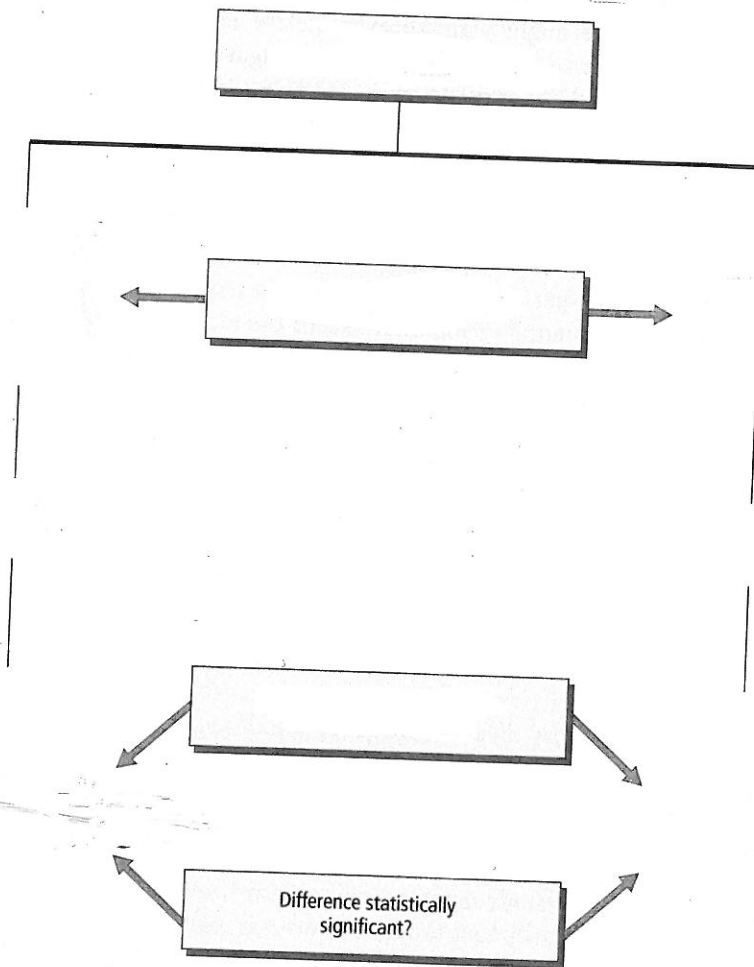
Diagram B

```
                        ┌─────────────────────────┐
                        │       Hypothesis:       │
                        └─────────────────────────┘
                                     │
              ┌──────────────────────┴──────────────────────┐
              │                                              │
    Experimental group                               Control group

         ◄──┌─────────────────────────┐──►
            │   Independent Variable:  │
            └─────────────────────────┘
            ¦                         ¦
            ¦                         ¦
            ¦                         ¦
            ¦                         ¦
            ┌─────────────────────────┐
            │    Dependent Variable:   │
         ◄──└─────────────────────────┘──►

         ◄──┌─────────────────────────┐──►
            │  Difference statistically │
            │       significant?       │
            └─────────────────────────┘
```

Diagram C

Difference statistically significant?

at the same time praise the child for doing something else that is incompatible with video-game playing, such as reading or playing basketball.

The Problems with Reward

So far, we have been praising the virtues of reinforcement. But like punishers, rewards do not always work as expected. Let's look at two complications that arise when people try to use them.

Misuse of Rewards. Suppose you are a fourth-grade teacher, and a student has just turned in a paper full of grammatical and punctuation errors. This child has little self-confidence and is easily discouraged. What should you do?

Many people think you should give the paper a high mark anyway, in order to bolster the child's self-esteem. Indeed, teachers everywhere are handing out lavish praise, happy-face stickers, and high grades in hopes that students' academic performance will improve as they learn to "feel good about themselves." In a new educational fad, "up-front" reinforcement, teachers are even providing rewards before students have done anything to merit them—much as our student's parents punished their children "in advance." One obvious result has been grade inflation at all levels of education. In many colleges and universities, Cs, which once meant average or satisfactory, are nearly extinct.

The problem, from a behavioral point of view, is that to be effective, *rewards must be tied to the behavior you are trying to increase.* When rewards are dispensed indiscriminately, without being earned, they become meaningless because they no longer reinforce desired behavior; all that teachers get is minimal effort and mediocre work. Real self-esteem emerges from effort, persistence, and the gradual acquisition of skills, and is nurtured by a teacher's genuine appreciation of the *content* of a child's work (Damon, 1995). In the case of the child who turned in a poorly written paper, the teacher could praise its strengths but also give feedback on the paper's weaknesses and show the child how to correct them.

GABLE
THE GLOBE AND MAIL
Toronto
CANADA

Why Rewards Can Backfire. A little girl we know came home from school one day in a huff after her teacher announced that good work would be rewarded with play money that could later be exchanged for privileges. "Doesn't she think I can learn without being bribed?" the child asked her mother indignantly.

This child's reaction illustrates another problem in the use of reinforcers. Most of our examples of operant conditioning have involved **extrinsic reinforcers**, which come from an outside source and are not inherently related to the activity being reinforced. Money, praise, gold stars, applause, hugs, and thumbs-up signs are all extrinsic reinforcers. But people (and probably some other animals, too) also work for **intrinsic reinforcers**, such as enjoyment of the task and the satisfaction of accomplishment. As psychologists have applied operant conditioning in real-world settings, they have found that extrinsic reinforcement sometimes becomes too much of a good thing: If you focus on it exclusively, it can kill the pleasure of doing something for its own sake.

Consider what happened when psychologists gave nursery-school children the chance to draw with felt-tipped pens (Lepper, Greene, & Nisbett, 1973). The children

extrinsic reinforcers Reinforcers that are not inherently related to the activity being reinforced.

intrinsic reinforcers Reinforcers that are inherently related to the activity being reinforced.

already liked this activity and readily took it up during free play. First, the researchers recorded how long each child spontaneously played with the pens. Then they told some of the children that if they would draw with felt-tipped pens for a man who had come "to see what kinds of pictures boys and girls like to draw with Magic Markers," they would get a prize, a "Good Player Award" complete with gold seal and red ribbon. After drawing for six minutes, each child got the award, as promised. Other children did not expect an award and were not given one.

A week later, the researchers again observed the children's free play. Those children who had expected and received an award were spending much less time with the pens than they had before the start of the experiment. In contrast, children who were not given an award continued to show as much interest in playing with the pens as they had initially, as you can see in Figure 7.6. Similar results have occurred in other studies, when children have been offered a reward for playing with a toy or at an activity they already enjoy (Deci et al., 1999).

Why should extrinsic rewards undermine the pleasure of doing something for its own sake? One possibility is that when we are paid for an activity, we interpret it as work. It is as if we say to ourselves, "I'm doing this because I'm being paid for it. Since I'm being paid, it must be something I wouldn't do if I didn't have to." When the reward is withdrawn, we refuse to "work" any longer. Or perhaps, because we regard extrinsic rewards as controlling, they reduce our sense of autonomy and choice ("I guess I should just do what I'm told to do—and *only* what I'm told to do") (Deci & Ryan, 1987). A third, more behavioral explanation is that extrinsic
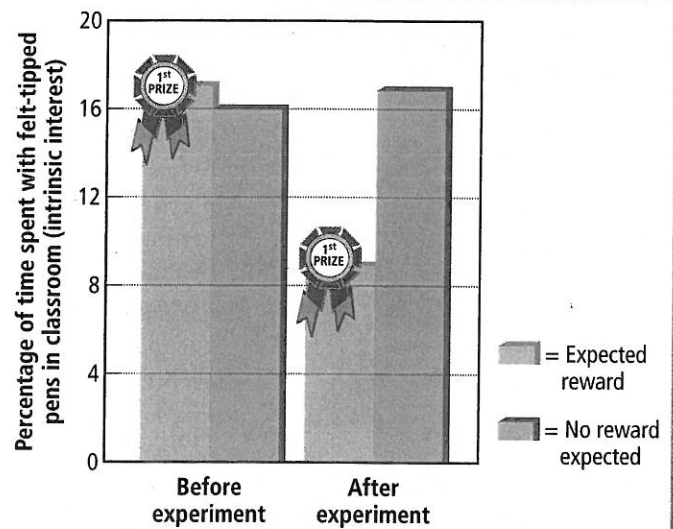

Figure 7.6
TURNING PLAY INTO WORK

Extrinsic rewards can sometimes reduce the intrinsic pleasure of an activity. When preschoolers were promised a prize for drawing with felt-tipped pens, the behavior temporarily increased. But after the children got their prizes, they spent less time with the pens than they had before the study began.

Get Involved

What's Reinforcing Your Behavior?

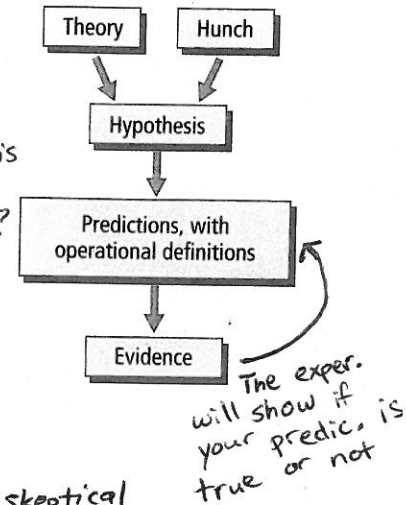For each activity that you do, indicate whether the reinforcers are extrinsic or intrinsic.

Activity	Reinforcers mostly extrinsic	Reinforcers mostly intrinsic	Reinforcers about equally extrinsic and intrinsic
Studying	_____	_____	_____
Housework	_____	_____	_____
Worship	_____	_____	_____
Grooming	_____	_____	_____
Job	_____	_____	_____
Dating	_____	_____	_____
Attending class	_____	_____	_____
Reading unrelated to school	_____	_____	_____
Sports	_____	_____	_____
Cooking	_____	_____	_____

Is there an area of your life in which you would like intrinsic reinforcement to play a larger role? What can you do to make that happen?

A hypothesis, in turn, leads to predictions about what will happen in a particular situation. In a prediction, terms such as *anxiety* or *threatening situation* are given **operational definitions**, which specify how the phenomena in question are to be observed and measured. "Anxiety" might be defined operationally as a score on an anxiety questionnaire; "threatening situation" might be defined as the threat of an electric shock. The prediction might be, "If you raise people's anxiety scores by telling them they are going to receive electric shocks, and then give them the choice of waiting alone or with others in the same situation, they will be more likely to choose to wait with others than they would be if they were not anxious." The prediction can then be tested, using systematic methods.

(handwritten left margin: Must be able to measure it)

(handwritten: What is my own examp.?)

(handwritten: ex. "anxiety = choose to be with people")

2 *Skepticism.* Scientists do not accept ideas on faith or authority; their motto is "Show me!" Some of the greatest scientific advances have been made by those who dared to doubt what everyone else assumed to be true: that the sun revolves around the earth, that illness can be cured by applying leeches to the skin, that madness is a sign of demonic possession. In the world of the researcher, skepticism means treating conclusions, both new and old, with caution. Caution, however, must be balanced by an openness to new ideas and evidence. Otherwise, the scientist may wind up as shortsighted as the famous physicist Lord Kelvin, who at the end of the nineteenth century reputedly declared with great confidence that radio had no future, X rays were a hoax, and "heavier-than-air flying machines" were impossible.

(handwritten: Don't just accept ideas - look for proof!)

(handwritten: How skeptical is too skept.?)

(handwritten right: The exper. will show if your predic. is true or not)

3 *Reliance on empirical evidence.* Unlike plays and poems, scientific theories and hypotheses are not judged by how pleasing or entertaining they are. An idea may initially generate excitement because it is plausible, imaginative, or appealing, but eventually it must be backed by empirical evidence if it is to be taken seriously. A collection of anecdotes or an appeal to authority will not do. Nor will the "intuitive" appeal of the idea, or its popularity. As Nobel Prize–winning scientist Peter Medawar (1979) once wrote, "The intensity of the conviction that a hypothesis is true has no bearing on whether it is true or not."

(handwritten left margin: Just b/c an idea is popular ≠ true)

(handwritten: ex. Can't just say Tylenol works - have to experiment to show)

4 *Willingness to make "risky predictions."* A related principle is that a scientist must state an idea in such a way that it can be *refuted,* or disproved by counterevidence. This principle, known as the **principle of falsifiability**, does not mean that the idea *will* be disproved, only that it *could be* if contrary evidence were to be discovered. Another way of saying this is that a scientist must risk disconfirmation by predicting not only what will happen, but also what will *not* happen. In the "misery loves company" study, the hypothesis would be refuted if most anxious people went off alone to sulk and worry, or if anxiety had no effect on their behavior (see Figure 2.1 on page 38). A willingness to make "risky" predictions forces the scientist to take such negative evidence seriously. Any researcher who refuses to go out on a limb and risk disconfirmation is not a true scientist; and any theory that purports to explain everything that could conceivably happen is unscientific.

(handwritten: Have to try to prove our ideas wrong to know if they're right)

The principle of falsifiability plays a central role in science, because all of us—even scientists—are vulnerable to the **confirmation bias:** the tendency to look for and accept evidence that supports our pet theories and assumptions and ignore or reject evidence that contradicts our beliefs. The principle of falsifiability compels researchers to resist the confirmation bias and to consider counterevidence.

(handwritten left margin: we want to think we're right)

If you keep your eyes open, you will find many violations of the principle of falsifiability in everyday life. For example, during the 1990s, some police officers and therapists argued that murderous satanic cults were widespread, even though research psychologists, the FBI, and police investigators were never able to substantiate this claim (Goodman et al., 1995; Hicks, 1991). Believers said they were not

(handwritten bottom: ex. belief in God - can't prove there's no God, so that's not scientific)

operational definition A precise definition of a term in a hypothesis, which specifies the operations for observing and measuring the process or phenomenon being defined.

principle of falsifiability The principle that a scientific theory must make predictions that are specific enough to expose the theory to the possibility of disconfirmation; that is, the theory must predict not only what will happen, but also what will not happen.

confirmation bias The tendency to look for or pay attention only to information that confirms one's own belief.

[Diagram with boxes: Theory, Hunch → Hypothesis → Predictions, with operational definitions → Evidence]

Psychology Unit 2 Overview

Lesson 1

1) Introduce vocab. set #3
2) Skim Chapter 7 ("Learning and Conditioning")
- Student-created anticipation guide for "learning"
- Annotate the introduction to chpt. 7
3) Free-write: Tastes/smells you hate or love
4) "Classical Conditioning"
- Skim/question
- Model clarification
- Read and annotate with an emphasis on clarification

Lesson 2

1) Review vocab. set #3 – examples & non-examples
2) Review "Classical Conditioning"
- Share annotations and metacognition with clarification
3) Read and annotate "Classical Conditioning in Real Life"
4) Using diagrams from the textbook

Lesson 3

- Review Classical Conditioning
    a) Annotating experiments (analyze annotations for "Little Albert")
       OR
    b) Re-Quest
- Creating Hypothetical Examples: Conditioning a Kid To
- Analyzing model annotations and creating an annotation resolution

Unit 2, Lesson 4 – Operant Conditioning (6 day lesson)

Day 1
1) vocab log
2) "Operant Conditioning"
- Frontload operant conditioning (create lists of behaviors)
- Long skim of "Operant Conditioning" (p.240-263)
- Metacognition on skimming and gallery walk
- Reading and annotation with teacher coaching

Day 2-4 - work on the "Operant Conditioning" discussion journal

1) Comprehension Self-assessment
2) Work on the Operant Conditioning discussion journal (2-3 questions per day

Day 5
1) discuss Operant Conditioning (using the discussion journal)
2) plan and begin Operant Conditioning essay (to finish for HW)

Day 6

1) analyze "Operant Conditioning in Parenting" student paper
2) revise Operant conditioning essay
3) revisit comprehension self-assessment

Lesson 5
1) Introduce vocab. set #4
2) Timed CATW – "Hey Kids! Go to School! Win Cars, TVs and Trips!"

Lesson 6 (A 6 day lesson): Discussion Journal for "The Craving Brain" from The Power of Habit

Day 1
1) Review vocab. (examples & non-examples)
2) Skimming a long chapter ("The Craving Brain")

Day 2:
1) Begin vocab. logging vocab. set #4
2) Using class skim questions to re-read and annotate "The Craving Brain"

Day 3-5: Work on the discussion journal

Day 6: Discuss "The Craving Brain"

Additional Materials: Vocabulary Quiz for vocab. sets #3 and 4

Psychology Unit 2, Lesson 1

Materials:

- Vocab. set 3 (definitions and questions)
- Textbook chapter on "Learning and Conditioning"
- Projector to project the first paragraph of "Classical Conditioning"

1) Introduce Vocabulary Set #3
   Materials: vocab. set #3 (definitions and examples)

Introduce the vocab. for set #3 following the vocabulary protocol.

2) Introduction to "Learning/Conditioning"

Materials: textbook chapter 7 ("Learning & Conditioning")

Ask students how they feel about reading from a textbook so far. Remind students that it helps to SKIM through the headings to get a big picture of what the textbook is about. Tell them that questions and predictions give a purpose to their reading because as they begin to re-read, they can answer their questions and check if their predictions are true or not. That will help them focus as they read.

Ask students to skim the headings of chapter 7, underlining the headings. Then, ask students to list the headings aloud. Write the headings on the board. Headings may come up that are not really headings (they may be text features such as cartoon captions or graphs). Affirm students' efforts, and clarify which are headings and which are not.   You may want to explain that textbooks often have text features like cartoons and pictures, which can distract from the main ideas. It's better to read those on a later read.

a. Questioning

Ask students what they think are some of the key words that come up over and over again in chapter 7. Make a list on the board with their answers.

Some of the key words that will probably come up in the skim include *learning* and *conditioning* (both classical and operant). Note that these words repeat a lot, so they are probably important in the chapter.   Tell students that you are going to ask questions that focus on those key words (*learning* and *conditioning*), since they will be able to get more out of the text if they focus on words that come up a lot. Write the following questions on the board:

What do they mean by learning?

What is conditioning?

Tell students that you asked very basic ("what") questions because you first want to know basic information. And for *learning*, explain that since it's a word that we're all familiar with, you asked a "what" question, but you want to know what the *writer* means by learning, since it might be different than what we normally mean.

Tell students that because they already have an idea of what learning means, it's also good to think first about what they know about it before they read. **Tell the students to spend 2 minutes writing down what they think learning means**. Tell students that there are NO wrong answers. Just get their ideas about learning down as fast as possible.

After a few minutes, stop the class, and have a few students share out their responses. Take notes on the board, creating a list called "Our ideas about learning BEFORE reading."

If any students have ideas about "conditioning," you can take notes on those as well.

c. Read and annotate

-Point back at the questions on the board ("What do they mean by learning and what is conditioning?")

 -Tell students to read the introduction to "Learning and Conditioning;"(p. 229 only), and tell them to annotate the answers to the questions about learning and conditioning. In other words, they will be finding and underlining quotes that explain learning and conditioning, and paraphrasing next to their underlined quotes. After reading and annotating, students should share their annotations with their groups.

Bring students' attention back to the list on the board of their original ideas about learning. Remind them that before they read, they thought about THEIR ideas about learning. Ask a few different students to share out their quotes and annotations about what the text means by learning.

-Ask students: was the learning in the text the same way we think about learning? Call on a few students to explain their answers.

Remind students that after they read, it's important to check the text to see what they LEARNED. In this case, many of them learned that "Learning" has a specific/different meaning in psychology than it does in everyday life.

-If "conditioning" has already been defined in the course of this discussion, go ahead with the next activity. Otherwise, briefly have students quote and paraphrase to explain conditioning.

3) **"Classical Conditioning"**

   Materials: projector or large print poster of the first paragraph of "Classical Conditioning"

   A. **Frontloading Classical conditioning**

Transition: Explain that in the next section of the class, we are going to find out more about one kind of "learning" that psychologists think we do, and we've all experienced it.

Free Write: Tell students that this kind of learning, called "Classical conditioning" involves automatic responses that we can't help. Write on the board:

Briefly free-write about a taste or a smell that either makes your mouth water, or makes you feel sick. Try to describe it, and also what situations you have experienced that smell or taste in.

Tell students to make sure to keep their free-writes. They will be coming back to them in a few lessons, after they have learned more about what these tastes or smells might have to do with <u>classical conditioning</u>.

B) Skim and Question

Note: If students seem overloaded at this point, or if you are short on time, you can just have them skim and question on their own, without sharing out, and go straight to the clarification model.

Tell students to re-skim "Classical Conditioning" (p.230-234), write the topic, and a big question that they want to answer when they re-read.

- Have students share their topics and questions in pairs. Then, tell students to read the "What's Ahead" questions at the top of p.230 and compare their questions with the textbook questions. Does comparing these questions lead them to any new questions? [Note: their old questions will probably be things like "What is classical conditioning?" or "What is a reflex?" Their combined questions could be more like, "what do salivating dogs have to do with Classical Conditioning?" or "Is saliva a reflex?")

- if any groups come up with a new question, write their questions on the board.

C. Model and Practice Clarification Strategies and annotation

- Tell students that the reading will answer most of their questions, but that there will probably be some confusing parts along the way. Ask students to take out their clarification strategy notes from unit 1. Tell students to read through the strategies, and briefly discuss with a partner which strategy they generally use and why.

While students are talking, circulate to listen to their conversations and give advice as appropriate.

Tell students that you are going to read aloud and think-aloud to show one of the ways that you use clarification. They will then continue reading on their own, using clarification strategies and annotating.

-Tell students that as you read, you are going to keep in mind your big question from the skim, which is: What is classical conditioning and how does it work?   Write this question on the board. Tell them that this will help you focus on the important parts of the text.

<div style="border:1px solid black; padding:10px;">

Sample Teacher Think-aloud: Modeling Clarification

Classical Conditioning

At the turn of the century, the great Russian physiologist Ivan Pavlov (1849-1936) was studying salivation in dogs, as part of a research program on digestion. His work would shortly win him the Nobel Prize in physiology and medicine. One of Pavlov's procedures was to make a surgical opening in a dog's cheek and insert a tube that conducted saliva away from the animal's salivary gland so that the saliva could be measured. To stimulate the reflexive flow of saliva, Pavlov placed meat powder or other food in the dog's mouth. This procedure was later refined by others.

Whoah. I think Pavlov was measuring dogs' drool and putting meat powder in their mouths. That's disgusting. Was he really doing that? And I'm also really confused, because what does this have to do with classical conditioning? This is pretty near the beginning, so I'm going to <u>***read on***</u> ***to see if I can figure out the connection between dog drool and classical conditioning later. Then I'll come back to check if he was really putting meat in dogs' mouths and measuring their drool.***

</div>

Write the following annotations next to the paragraph that is posted/projected on the board.

-Was P. measuring dog drool?

- connection b/t dog drool and classical conditioning??

Call on a student to read each of the question, helping students to read through the abbreviations (read P. as Pavlov, for example) if that is difficult for them. Tell students that they will continue to read on their own, and when they find the answers to these questions, they should annotate them to share at the end of the reading time.

Tell students that in addition to answering your questions, they should make sure to annotate their own confusions and clarifications as they go.

Give students significant time to read "Classical Conditioning" (p.230-234)

D) Debrief Clarification Practice

Bring students' attention back to your annotations from paragraph 1. Ask students if anyone has found the connection between dog drool and classical conditioning. Call on a few students to explain the connection, and model how to annotate the clarification. (You can either use an arrow to connect different parts of the text, or simply answer the question.

Then ask if Pavlov was measuring dog drool, and annotate your answer. If students seem shaky on why this was important, it might be good to have a few students talk again about how the measuring dog drool relates to classical conditioning.

Thank the students for helping you to clarify your confusion, and tell them that they will soon be working in pairs to share confusions or clarifications. Give them time to re-read silently and find a place that confused them when they were reading; it can either be a confusion that they figured out using a strategy, or something that they are still confused about.

Divide the class into pairs. Tell students to point their partners to the part that confused them and explain what confused them; partners should either share what they did to clarify their confusion, or figure out together how they might clarify.

Homework: re-read and re-annotate "Classical Conditioning." Use paraphrasing and summarizing, as well as clarification strategies.

Psychology – Vocabulary Set #3 – Learning & Conditioning

1. **to alter** (p.229) – to change, usually in a fundamental or important way

2. **to associate** (p.229) – to connect one thing with another in your mind. For example, I **associate** the smell of chicken soup with my mother because she made it a lot when I was a kid.

3. **Reflexive** (p.231) – when you do something without thinking – it's automatic or <u>in</u>voluntary. A reflex is when your body does something automatically (if someone taps your knee in the right place, your leg kicks by reflex).

4. **inborn** (p.230) – something that is in you from birth in you and can't be changed.

5. **Inherent** – part of the very basic nature of something so it can't be changed

6. **Speculate** (p.231) – to make a guess about something. It can be good to speculate if you are going to try to find out whether your **speculation** is true (like in science), but **speculation** can also be gossipy.

7. **Implications** – consequences, or reasons why something is important

8. **Deter** (p.252) – to discourage or prevent something

A **deterrent** is something that discourages or prevents something

9. **Consistent** (p.252) – doing something every time

10. **Intermittently** (p.252) – It happens, but not all the time

11. **Sparing** (p. 256) – not using a lot of resources, or not using or doing something too much

Answer the following questions in complete sentences. For each answer, make sure to use the vocabulary word and show that you know its meaning.

1. Do you think people should have to **alter** their appearance for a job? If so, what kinds of **alterations** should and shouldn't they have to make?

2) What do you **associate** with school, and why?

3) Write about a time when you responded in a **reflexive** way, and why.

4) Do you think people are **inherently** selfish? Explain.

6. Do you think magazines should **speculate** about famous people's lives? Why or why not?

7. Which do you prefer, **consistent** or **intermittent** rain? Why?

8. What is something you did in your life that had big **implications**? Explain.

8. What could a friend do to **deter** you from doing well in school?

9. Do you do your homework **consistently** or **intermittently**? Explain.

10. Should you use electricity **sparingly** or **unsparingly**? Why?

1) Homework check and Vocabulary Review
Materials: vocabulary review (examples and non-examples)

Check students' vocabulary homework and have students complete the vocabulary review sheet (examples and non-examples) using the procedure laid out in the vocab. protocol.

2) Review "Classical Conditioning" and metacognition

- Tell students to share their annotations in pairs or small groups. Have them discuss the reading based on their questions, examples, paraphrases, etc.

- Metacognition - Tell students to write about a clarification strategies that worked for them. Specifically, which strategies did they or their partners use and when? What did they notice? Have a few students share out with the big group.

3) Read "Classical Conditioning in Real Life"

- Transition: tell students that some of their confusions will be answered when they read the next section, but it will still be important to use clarification strategies.

- Distribute "Classical Conditioning in Real Life" (p. 235-239). Have students skim, write the topic and a big question to answer when they re-read.

- Tell students to <u>read and annotate</u>, making sure to answer their questions, and use clarification strategies.

4) Review Classical Conditioning with the Diagrams from the Textbook

Materials:

- Diagrams A, B, C and D
- A way to project the diagrams (or just draw them yourself on the board)

A)Actively Using diagrams: model and guided practice

-Remind students that in unit 1, they used diagrams to learn about experiments. Ask if anyone used the diagrams in the section about Classical Conditioning. You will probably get a mix of responses. Say that they are going to practice with the diagrams together. Tell students who already practiced with the diagrams that they may wind up moving through the activities a bit faster, but then they will get the chance to use their own examples and learn about classical conditioning more fully.

Ask students if they remember the first thing the class did with the diagrams before. (talk through the diagram). Tell them that as they talk through the diagram, they will talk about both what happened and why. Distribute diagram A, and project it onto the board.

Model and Guided Practice of "Talking Through" the Diagram

-Tell the students that these diagrams are pretty complicated, so they should re-read the section before attempting to talk through the diagram. Give students time to re-read the section silently.

- After students have re-read the section, tell them to close the texts. This will help them to test their memories.

- Point to the first step of the diagram. Tell students that when the dog sees its food, it drools. - That just happens <u>naturally</u> – they don't have to learn it.

- Model how to take notes next to the picture by writing "Dog sees food and drools" to the <u>left</u> of the picture.

- Point to the second step of the diagram. Tell the students, here, the dog sees the food TOGETHER with a bowl. At this point, the dog doesn't drool because of the bowl – it drools because of the food. Ask the students how you should annotate the picture, and write their annotation on the board.

- Call on a student (or a few students) to explain the third step and annotate it. Write their annotation on the board.

After students have seen and practiced talking through the diagram, tell them that they will now <u>label</u> the diagram. Use the steps below to model and lead students in practicing labeling the diagram.

Model and Guided Practice Labeling the Diagram
- Write the words and phrases on the board:
     - unconditioned/conditioned/neutral stimulus
     - unconditioned/conditioned response
- Tell students that conditioning is like teaching. We call the food the unconditioned stimulus because you <u>don't have to teach the dog to react to it</u>. It's just naturally something that gets a reaction from the dog. Refer back to their free writes: like the other day, when you wrote about a smell that makes you want to throw up. For the most part, you didn't learn to feel that way about that smell. It just happens. Same thing for the dog and its food – it's just a natural response.

- Point to the <u>blank line</u> to the right of the picture of the food in the first step and ask students what to write on it. (unconditioned stimulus)

- Point to the line to the right of the drooling dog in the first step and ask what to label it and why. (unconditioned response)

- Have students continue to label on their own. When most students have labeled the diagram, ask students to re-open the text to check their answers, marking any mistakes that they got wrong.

- Ask students to report back on mistakes they made. Students may have made mistakes in the second and third steps because they may find it confusing that the bowl can be both a neutral and a conditioned response, and the drooling dog can be both an unconditioned and a conditioned response. Explain why the bowl has a different label, depending on the step. (The bowl is a neutral stimulus BEFORE the dog has learned to react to it. Once the dog learns to react to it, it's called the conditioned stimulus because the dog has LEARNED to respond). Once you've explained the different labels for the bowl, try to get students to explain the different labels for the drooling dog.

-Have students correct any incorrect labels on their diagrams.

- Point to the title of the diagram, and explain how to fill it in:
A _(dog) ___ is conditioned to __(drool when it sees its bowl)_____

Tell students that they will follow a similar process with a Diagram B, and put the instructions on the board and read through them with the students.

1) <u>Individually</u>, think through the steps of the diagram and annotate the pictures.
2) Individually, label the pictures. (Don't look at the text!)
3) Talk through the story of the diagrams and the labels <u>with your partner</u>.
4) Check back with the text to make sure that your labels are correct.

Distribute the handout with Diagram B and C.

If any pairs finish quickly, they should try working on diagram C and D. Diagram C and D are a bit more challenging, so they can work on them individually or together.

D) Metacognitive conversation

Have students write a brief reflection about how they used the diagrams. What steps did they take, and how was it helpful in learning/remembering what they read? If they used the diagram when they read, did they do anything differently today in class? If so, what was different?

Homework: Finish writing notes for, and labeling Diagrams C and D.

Vocabulary Review

For each of the following vocabulary words, circle the example.

1. Altered

He went to Tibet and became a Buddhist   She wore a new dress to the party

2. Association

The smell of bleach makes me think of hospitals   I like chicken soup because it tastes good

3. Reflexive

Breathing   I was feeling jealous and angry, so I had an affair

4. Inborn

John was always a social person; even   Lisa has worked really hard, and
as a little baby he would smile with strangers   been able to improve her spelling a lot

5. Inherently risky

Sky-diving   I was slicing up an avocado, and cut my finger

6. Speculation

Everyone said she was going to quit her job   She walked into the office and quit her job

7. Has implications

Eating a banana   Robbing a bank

8. A deterrent to shopping

A budget   An advertisement

9. Consistent

Likes school a lot   Always on time to school

10. Intermittent

A flashing light   sunlight during the day

11. Eats Sparingly

An actress/model   An Olympic athlete

<u>**Psychology Unit 2, Lesson 3**</u>

1) <u>**Review Classical Conditioning**</u>

Note: *If you have time to do both the annotating an experiment activity and ReQuest, do both. If you only have time to do one, then make sure to look through their annotations before this lesson. If students are having trouble clearly and efficiently annotating the experiments (especially on p.237), do the activity below to guide students through annotating an experiment. If they are doing pretty well with annotating experiments, then play ReQuest.*

Option A: Annotating an Experiment

Materials:
- Projection of the section on Little Albert (p.237)
- 3 versions of annotations for Little Albert (Version A = tons of underlining only; version B = a brief summary with a personal example; version C = tons of personal associations)

- Project the section on Little Albert, and read through it. Tell students that there is a lot of text there, but they can explain it much more clearly with their presentations. Have one pair of students present the diagram (from yesterday) on Little Albert.
- Explain that a lot of descriptions of experiments are complicated and long, so it's important to be able to annotate them efficiently to remember what the point was.
- Distribute the <u>three sets of annotation</u>s for Little Albert. Tell students to read the annotations and write down notes on which annotations are best and why. In other words, which annotations will help them understand and remember what they read the best? Give students time to read and take notes on the annotations.
- Call on several students to share their ideas with the big group. Make a list on the board of what does and does not make a good annotation for a section about the experiment.
- Project the section about Peter and his fear of rabbits (p.237-238). Read it aloud and call on another group to present their diagram from yesterday about it.
- In groups, direct students to share their annotations of this section with each other. If they did not annotate this section, they should do it now.   If they did annotate, they should share their annotations with eachother and use the list on the board to talk about what is good or could be improved in their annotations.

Option B: ReQuest

Materials: Question Stems

-Ask students: who has noticed that teachers ask a lot of questions. Tell students that teachers ask a lot of questions because asking and answering questions is one of the best ways to remember what you read.

-Tell students that today, they will practice being their own teachers by asking and answering each other's questions.

-Distribute the question stems handout. Read through the question stems aloud with the students. Tell students to look back in "Classical Conditioning" to fill in 1-2 questions. Take a few examples from students of questions and write them on the board. Make sure you have at least one useful question on the board. If some students have questions that are not really helpful, ask students to compare two questions on the board and talk about why some questions are more helpful than others.

-Give students time to write 6 questions about "Classical Conditioning" and "Classical Conditioning in Real Life." Emphasize that they should ask a range of questions to help their classmates really understand the texts. Circulate as students are writing questions to look at students' questions. Some of the problems that arise might include:

- Some students may not be using the question stems, and just writing questions, in which case, find out why they aren't using the questions. If they insist that they can write better, "more creative" questions, tell them that these questions are the kinds of questions that people who study and teach psychology ask so it's helpful to learn them. Ask them to write 6 questions from the question stems, and if they still want to do their own creative questions, they can do those as extra. Usually students who resist using the stems do so because they are not sure how to use them. Ask them to pick out a question stem for you, and show them how you could fill it in. Then pick out a question stem for them, and ask them to fill it in. Once they see how to use the question stems, they are more likely to use them.
- Some questions may not make any sense. In that case, ask the student to try answering their question. When they have trouble answering the question, suggest a question stem for that could work, and have them try to plug in the information.

- In groups, have students quiz each other on "Classical Conditioning" and "Classical Conditioning in Real Life," taking turns asking and answering questions.

2. Making our Own Examples (through a diagram)

Materials:
- Free writes from the day before
- "Conditioning a Kid to" handout

- Tell students that in addition to paraphrasing and clarification, coming up with their own example can really help them understand a text. Ask students if anyone came up with any examples from their lives of classical conditioning, and have them share their examples.

- Tell students that if they couldn't come up with an example, it's still a good idea to think about how it works to *imagine* what an example would be like. Tell the students that this is called a <u>hypothetical</u> example. Tell the students that they will do this now – to practice imagining an example to really picture what the author is talking about.

- Tell students to take out their free writes from yesterday about taste or smell. Using student responses, make lists on the board of 1) tastes/smells that make their mouths water and 2) tastes/smells that make them feel sick

- Ask students whether these are conditioned or unconditioned or neutral stimuli and responses. (note: for the most part they will be unconditioned stimuli and responses, since they won't know why they feel this way about them. In some cases, they might be a conditioned response, like if someone got sick from eating a spoiled version of something . . .)

Tell the students that they will use one of these unconditioned stimuli and responses – whether it's something that makes them drool or feel sick -- to imagine a way to condition a kid with the same tastes as them to either LOVE homework or HATE video games.

Distribute the "Conditioning a Kid Like Me To" handout, and go over the different parts. Give students time to work on it individually.

- Ask a few students to share their diagrams with the class. The class should listen carefully to correct any mistakes.

3. Teaching Annotation

Materials: "Analyze the Model Annotations" handout

-    Model annotations (PDF)

Praise students for imagining their own hypothetical examples of what the text was talking about. Tell them that for the next chapter, they are going to use all three of the major strategies they've been working on – paraphrasing and summarizing clearly, asking questions and clarifying, and coming up with their own examples. Explain that to review these strategies before they go onto the next chapter, they will read and analyze some of their annotations from this chapter, so that they know exactly what they're looking for.

-Distribute the "Analyze the model annotations" directions sheet (below) and the sample annotations (PDF)

- Tell students to read through the annotations aloud with a partner. Tell them that they should read the annotations as complete sentences. For example: an annotation might be: Didn't hate waiter b/c waiter not food. Ask students if they should read that as "Didn't hate waiter b/c waiter not food?" (No. I should read it out as a sentence: He didn't hate the waiter because the waiter is a person, not food.") Tell them that if their pair comes to an annotation that they are not sure how to read or what it means, they should ask the teacher for help.

- Tell students that after they finish reading through all of the annotations with a partner, they should individually complete the annotations analysis sheet.

- Read through the directions/questions on the analysis sheet with students. Some students may get stuck on the question that asks them to compare their own annotations to the model annotations. Some categories to suggest might include: think about number of annotations - do they have more or fewer?; length of annotations/use of abbreviations – are they writing a lot more or less?, and category of annotations – are they paraphrasing, clarifying and giving examples?

After students finish working on the analysis sheet, have them share out their ideas in small groups.

Tell students that they are going to make an annotation resolution. Thinking about the differences between their annotations and the sample annotations, what do they want to focus on, or do more of in the next chapter? For example, if they are doing a lot of paraphrasing, maybe they want to focus on a different strategy? If they are writing a LOT, maybe they want to work on using abbreviations. If they're not writing much, maybe they want to annotate more. Give students time to write their annotation resolution.

After they have written, call on several students to share their resolution with the class.

Question Stems for Nonfiction Readings

1) What is . . . ? Explain it, explain an example from the text and a real or imagined example of your own.

2) Why does the author say " . . . ?" Explain what it means in your own words.

3) Why does . . . say " . . . ?" Explain what it means in your own words.

4) Explain the experiment about . . .   What were the researchers trying to learn? What did they do? What did it show?

5) What does the example about . . . show ?

6) What examples/details/evidence does . . . provide to show that . . . ?

7) In your own words, explain how . . .

8) What are some of the problems/benefits of . . . ?

9) What happened when . . . ?

10) What causes/caused . . . ?

11) How does/did . . . affect . . . ? Why?

12) How is . . . similar to . . . ?

13) How is . . . different from . . . ?

14) Why is it important to know about . . . ?

15) What do you think the author's opinion about . . . is?

Conditioning a Child to _____

Imagine that you wanted to condition a child to _____ . You

can assume that the child shares your same tastes.

Make a 3 part diagram in the space below to show how you could condition the child to ___

_____ . Label the diagram and take notes. Make sure to include
the words and phrases: unconditioned/neutral/conditioned stimulus and conditioned
stimulus/response in your labels.

1.

2.

3.

Psychology – Unit 2, Lesson 4 – Operant Conditioning (6 Day Lesson)

Materials:

- Vocabulary log
- "Operant Conditioning" (p.240-263)
- Butcher paper, markers, tape, and a small ball (the ball is optional)
- Operant Conditioning Comprehension Self-Assessment handout
- Operant Conditioning Discussion Journal
- Operant conditioning writing assignment slips
- "Planning Your Operant Conditioning" essay handout
- Operant Conditioning in Parenting model analysis paper

Day 1

1) **Vocabulary Log (15-20 minutes)**

Students may add on to their previous vocabulary log if there is space, and/or you can give them a new log to add on. Students do NOT need to log every word, especially if it takes them a long time.

Keep in mind that they will only have encountered the words from the "Classical Conditioning" section of the chapter, so they will probably only be able to log about half of the words at this point. If students finish quickly, though, it's fine for them to go ahead and begin logging words from "Operant Conditioning." They should finish vocab. logging sometime during the discussion journal writing.

2) **Frontload Operant Conditioning (15 minutes)**

- Sometimes people learn to be afraid, or drool, or feel sick because they've been conditioned to feel that way just because something happened.

But we can also teach people (or animals) to behave in certain ways. Ask students to brainstorm two lists:

- **Positive behaviors** (Ways we want people (or children or pets or students) to act/things we want them to do)
- **Negative behaviors** (Ways we DON'T want people (or students or children or pets) to act/ things we want them to do less of)

Give students 2 minutes of think/write time to create their own lists. Have students share out their ideas to create two class lists <u>on the board</u>.

Lead students in talking through an example with one of the behaviors on the board – what are some ways you could get a child to do their homework?   a pet to stop barking at people? (for example)

<u>**Make sure to save the brainstormed lists to use for the writing assignment in lesson 5**</u>.

3) Read "Operant Conditioning"

Materials:

- "Operant Conditioning" p. 240-263
- butcher paper and markers
- Operant Conditioning Comprehension Self-Assessment handout

Pre-read

- Tell students that they will read a 23 page section of the textbook for homework. Ask students why it's important to skim (or pre-read) when they are reading a long section of a textbook.
- After taking several students' responses, tell students that they have 12 minutes to pre-read from p. 240-263. At the end of the 12 minutes, they will have to turn the paper over and share with the group some big ideas <u>from memory</u>.
- After 12 minutes, divide students into groups (if they are not already in groups). Ask students to turn their papers over. With their groups, on big paper, make lists of big ideas that they think will come up in the chapter, as well as at least 3 questions that they want to answer when they read more carefully. Groups should post their butcher paper.

Metacognitive Conversation

Materials: small ball (or a small orange, or anything that's soft and easy to throw – it can be crumpled up paper).

- After posting their topic/questions lists, students should return to their groups, and <u>open the text back up</u>.
    - Show your group: which parts of the text did you pay attention to when you pre-read? Which parts did you skip over? Why?
    - What kinds of things did you <u>think</u> about as you were pre-reading the different sections?
    - What strategies were more or less helpful?
- Lead a short full-class debrief focusing on what students noticed about differences in their groups, and what seemed to be more helpful.

    Notes: Some useful differences might emerge, including: some people will THINK about what they're reading as they skim, and some people will just mouth the words. Help students to notice that thinking about what you read is helpful, even in a skim.

Some students will try to read every word and run out of time. Some students will try to read the little cartoons and picture captions. Some will read the questions in the text. Some students will just read the headings, and maybe the conclusions or intros. Help students think about what is the "right amount" to read when they have to read a lot.

Gallery walk – have students walk around to read the posted topic/question charts from the skim. They should put a star (*) next to any topics or questions that they think will be important, and (?) next to anything that was confusing.

If energy permits, lead a short standing up conversation. For the standing up conversation, have students stand up. Tell them that when they have the ball, they should say something about what the students think the article will be about, and/or a question. Then throw the ball to someone else who will share his or her idea, etc.

Read and annotate

Have students take out and re-read their annotation resolutions from the lesson before. Call on several students to read theirs to the class, trying to get a range of different types of resolutions. Remind students that they should be paraphrasing, clarifying, and coming up with examples as they read and annotate.

Students should read and annotate p. 240-264. If possible, try to give them an hour to read and annotate in class. As they read, circulate to work individually with students on their annotation. Some common annotation problems might include:

a) Students not writing in their own words; point this out to them. Ask them why they're not using their own words and/or how it affects their understanding.
b) Students not really summarizing (just paraphrasing unimportant things at random). Talk to them about their understanding of the big ideas of the article. Read a paragraph, and talk to them about what seems important in the paragraph and why.
c) Students only using one strategy. Say: I notice you are doing a lot of _____. Do you have any other ideas for different kinds of annotations? If yes, ask why they're not trying one. Usually it's either because they feel that they don't "need" that one (in which case, explain why it's helpful to you) or they don't know how to do it, in which case model it in a think aloud.
d) Students not giving examples. Ask them why they're not giving examples. Usually it's because they can't thinking of them. Have them find and paraphrase examples that are already in the text. Starting from there, they may be able to better visualize the article and thereby come up with more examples. If not, remind them that it is OK to <u>imagine</u> an example, like they did with conditioning. Model thinking through a hypothetical example, showing them the difference between faking an example ("my cousin multitasked, and she died!") vs. imagining an example (let's say I was trying to text and do my homework at the same time. I probably wouldn't be

very focused, and the homework would take me a long time. Or I would be distracted and not do a very good job).

4) Comprehension Self-Assessment
- If students finish reading the whole section before the end of class, have them close their texts and fill out the "Operant Conditioning" comprehension self-assessment and turn it in. They should ONLY fill out the front side.
- Collect the self-assessments and tell students they will have a chance to come back to their self-assessments to see if they understand and can do more with the text later.

Operant Conditioning Comprehension Pre-Assessment

1. What is operant conditioning, and how is it different than classical conditioning?

_____

_____

_____

_____

_____

_____

2. Rate Your Comprehension

Read the following exam question:

Create a hypothetical situation of a friend/relative/pet's behavior that you would like to change. Write an essay describing the behavior change you would like to see, and explain how you could use operant conditioning to change the behavior. As you describe your behavior change strategy, make sure to include information on **positive and negative reinforcers and punishments**. In addition, make sure to differentiate between **effective and ineffective ways of applying punishment** and **intrinsic vs. extrinsic rewards**.

On a scale of 1 (not comfortable at all) to 10 (completely comfortable), how comfortable do you feel that you understand and remember the information from the chapter needed to write the exam question essay above? Circle the appropriate number below.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Turn in your Comprehension Pre-Assessment (do not complete the other side yet)

Final Comprehension Self-Assessment

1) Rate Your Final Comprehension

Re-read your Operant Conditioning essay.

How comfortable do you feel that you understood the section on Operant Conditioning, including information about positive/negative reinforcers and punishers, effective and ineffective ways of applying punishment, and intrinsic vs. extrinsic rewards?

Circle the appropriate number below to rate your comprehension on a scale of 1-10.

1   2   3   4   5   6   7   8   9   10

2) Reflect. What steps did you (and your classmates) take that deepened your understanding and ability to remember the information in the textbook? What was most effective for you?

_____

_____

_____

_____

_____

_____

_____

Day 2-4

1) Comprehension Self-Assessment (pre-test)

Materials: Operant Conditioning Comprehension Self-Assessment handout

-Tell students that they are getting a short pop quiz on the reading, and that they should close the reading.   Tell them not to worry – it's a very short pop quiz, and it's really for THEM to see how much they understood from reading the text once.

- Distribute the "Operant Conditioning" Comprehension self-assessment handout, and have students fill out the front page, then hand it in. Tell students they will have a chance to come back to their self-assessments to see if they understand and can do more with the text later.

-As students are writing and turning them in, try to get a sense of whether students think they understand the text. If students were not very confident that they could write the exam essay, praise them for admitting to having more to learn, and emphasize that they will get to come back to this, and see how much more they understand and remember after they work more with the text. If they are confident that they understand everything, emphasize that as they re-read, they may discover new things.

Note that the purpose of this self-assessment is to motivate students by helping them see the growth in their comprehension and retention as they engage in strategic re-reading. If you feel that they will better see the growth if they self-assess immediately after the initial skim, you can do that. They will return to the self-assessment in day 6 (after they have written and revised the Operant Conditioning essay.

2) Discussion Journal for "Operant Conditioning"

Assign students 2-3 questions per day. Before students begin working, go over the questions so the instructions are somewhat clear, and emphasize that students must work silently and individually. If they have questions, they should ask a teacher. Emphasize that it's also OK to make mistakes, but they should not work together, because this way, they will have lots of different ideas to bring to the discussion.

Students should get about 1 hour to work in class each day, finishing that day's questions for homework.

Day 5
   1)   **Discuss "Operant Conditioning" (1 hour, 10 min)**

Have students discuss "Operant Conditioning" using the procedure from the Discussion Journal protocol.

2) Plan and Write "Operant Conditioning" Essay

Materials:
- Writing prompt slips
- list of positive and negative behaviors from Unit 2, Lesson 4 (the day you introduced operant conditioning)
- "Planning Your Operant Conditioning Essay" handout

- Tell students that they have been reading about and discussing a theory of learning (Operant Conditioning), which is something that they would be expected to do in a college course. In college, they will also have to write research papers, in which they analyze a theory like operant conditioning. They will get to practice this now, by writing a paper about operant conditioning. Distribute the writing prompt slips and have students read through the prompt.

- Post the list of Positive and Negative behaviors, and read through the behaviors with the students. Tell the students that they should choose one of these behaviors that they either currently use operant conditioning with, or that they COULD use operant conditioning with.

-**Free-write**: write as much as you can about how you could (or do) use operant conditioning to improve **ONE** of the behaviors on the list. Also, what are ways NOT to use operant conditioning? (Note: texts and discussion journals should be closed for the free-write).

- Tell students that their free-write helped them to get started with ideas, but they will be writing more, and in a more organized way, for their essay. Distribute the "Planning Your Operant Conditioning Essay" handout and read through it with the students.

-Tell students that now that they have free-written about the topic, it is time to look for quotations to support their ideas. Tell students to try to choose quotations that are as different as possible, but still relate to the behavior they are trying to change. For example, it is probably a good idea to choose 1-2 quotes about what they WILL use operant conditioning for, and 1-2 quotes about how NOT to use operant conditioning. As they pick quotes, try to think about how this applies to their behavior that they want to see more or less of.

- Give students time (20 minutes) to choose quotations, and circulate to help students choose.

- Coaching: Some students may be reluctant to choose. Encourage them to start anywhere. Read any line of text, and talk about how it relates to their target behavior. Other students may be choosing quotes that all relate to the same point. Encourage them to use the section headings in the textbook, and choose a quote from a different section.

-After students have chosen their quotations, ask them: will you ONLY have a quote in the body paragraphs, or will you put other things in your paragraph? Have students list what else will go in their body paragraphs, and write the list on the board:

- Topic sentence (connecting 1 way you will use operant conditioning to get the behavior you want)
- Quote
- Paraphrase
- Explain <u>in detail</u> how you will use operant conditioning to get the behavior you want

- Remind students to start with the essay with an introduction that explains the behavior they want (or don't want), summarizes the big ideas of "Operant Conditioning" and explains briefly how they want to use operant conditioning to change the behavior.

-Reassure students that this paper does not have to be perfect!! It is their first psychology paper, so the most important thing is that they complete a draft, and they will be able to revise and get better at it.

Homework: finish the rough draft of the operant conditioning paper

Psychology, Unit 2, Lesson 4, Day 6

Note: to give more time for teachers to respond to "Operant Conditioning" essays, this lesson can be done after the timed CATW in lesson 5.

1) **Analyze the "Operant Conditioning in Parenting" analysis paper (45 min)**

   Congratulate students on having finished their operant conditioning papers. Tell them that later in the class, they will get a chance to revise their papers. To help with that, they are going to analyze a similar paper written by a successful college student. That is not to say that they have to have written it exactly like the paper that they are analyzing, but the paper may give them some ideas for when they revise.

   - Distribute "Operant Conditioning in Parenting." Tell students they should read it through once before answering the questions on the bottom.

   - After students read and analyze the paper, have them share their answers in pairs or small groups.

2) **Revise Operant Conditioning papers** (45 minutes)

3) **Revisit the Operant Conditioning Self-Assessment**

   Materials: the students' filled in Comprehension self-assessment sheets.

-Remind students that a week ago they filled in comprehension self-assessments for this reading. Since then, they completed the discussion journal, discussed it, and wrote and revised an essay. Re-read the "exam question" on the self-assessment, and ask students to think about whether they could do this exam more easily now than they could when they first read the text. What changed? How? Tell students to re-fill in the self-assessment (on the back).

Discussion Journal – Operant Conditioning

1) Make a list of all of the headings and sub-headings in the text. Think about how they all connect to each other. Then, without looking at the text, write 2-4 sentences explaining what you think this text is about.

2) What is operant conditioning? Support your answer with at least one piece of evidence, and explain at least two different situations in which you or someone you know could use operant conditioning.

3) What is a <u>reinforcer</u>? To explain your answer, make sure to give evidence from the text, and an example of a kind of behavior you would want to reinforce, along with several ways you could reinforce that behavior.

   What is a <u>punisher</u>? To explain your answer, make sure to give evidence from the text, and an example of a kind of behavior you would want to reduce, along with several ways you could reduce that behavior.

   Re-read the section on positive and negative reinforcers and punishers. Put plus signs (+) next to any positive reinforcers or punishments, and minus signs (-) next to any negative reinforcers or punishers.

4) What are some of the problems with the way people use punishment? Give at least 3 reasons or examples, with a piece of evidence for each.

5) Explain the experiment with felt-tipped pens. Make sure to explain what the researchers were trying to find out, what they did, and the *findings* (what they found out), and use at least one piece of evidence to explain your answer.

6) 6. What is the difference between an intrinsic and an extrinsic reward? Is one more effective than the other, and why? Use at least two pieces of evidence to support your answer.

Writing Assignment: Choose one problem and explain how you could use operant conditioning to improve the problem. Write in as much detail as you possibly can.

Writing Assignment: Choose one problem and explain how you could use operant conditioning to improve the problem. Write in as much detail as you possibly can.

Writing Assignment: Choose one problem and explain how you could use operant conditioning to improve the problem. Write in as much detail as you possibly can.

Writing Assignment: Choose one problem and explain how you could use operant conditioning to improve the problem. Write in as much detail as you possibly can.

Writing Assignment: Choose one problem and explain how you could use operant conditioning to improve the problem. Write in as much detail as you possibly can.

Writing Assignment: Choose one problem and explain how you could use operant conditioning to improve the problem. Write in as much detail as you possibly can.

Planning Your Operant Conditioning Essay

1. **Introduction**

> -Summarize Operant Conditioning
> - Explain the problem that you have and/or the behavior that you want
> - Thesis: How can you (or do you) use operant conditioning to get the behavior you want or improve this problem?

2. **Body paragraph 1**

Quote #1: _____

_____ (p. __)

3. **Body paragraph 2**

Quote #2: _____

_____ (p. __)

4. **Body paragraph 3**

Quote #3: _____

_____ (p. __)

5. Conclusion

35

Instructions: Read and annotate the following Response Paper.

<u>Operant Conditioning in Parenting</u>
Adapted from a college student paper on the Penn State Cognitive Psychology Blog
http://sites.psu.edu/psych256fa13/2013/09/13/106/

As adults we already know that every decision we make has a consequence. Some consequences will vary in intensity, and some will be positive while others are negative. What is most interesting, however, is the way that we train our minds at such a young age to understand consequences to our actions. Operant conditioning is the idea that the consequences of our decision will either encourage us to continue to action or deter us from that behavior in the future. In looking at my daughter, and the way that I interact with her as her mother, I find that I use operant conditioning constantly. Three different types of operant conditioning that I find most useful in training her to behave appropriately are positive reinforcement, punishment and extinction.

My daughter responds best to positive reinforcement. Positive reinforcement can be seen as "responses from the environment that increases the probability of a behavior being repeated," (McLeod, 2007), or win-win situations because when the person behaves in a desirable way, they get something they want (or in the case of negative reinforcement, they no longer get something they don't want).   For instance, when my daughter acts in a way that pleases me, I give her a positive reward which makes her feel good, and want to continue her good behavior. An example of this is her putting on her seat belt. My daughter does not like to be tied down in the car, however, not only is this behavior illegal, it is also extremely unsafe. So, understandably, as her mother I am concerned for her safety. My daughter knows that if she gets in the car and puts on her seatbelt, I will put on her favorite song when we begin to drive. Since she is getting to listen to her own music she wants to wear her seatbelt every time we get into the car.

Another method of operant conditioning is punishment. According to Saul McLeod of SimplyPsychology, "punishment is defined as the opposite of reinforcement, since it is designed to weaken or eliminate a response rather than increase it." In other words, a punishment is designed to get a person (or animal) to stop doing an undesirable behavior. This is not as enjoyable as positive reinforcement, but it is just as effective. Punishment is a when my daughter will behave in a way that is unacceptable so she faces a negative consequence. Because of this negative consequence she feels bad, and she does not want to continue her bad behavior any longer (Changing Minds, 2013). An example of this is with throwing toys. This is a bad behavior, because it can damage her toys and people can get hurt. When my daughter throws a toy, I will take that toy away. My daughter will then get more upset that her toy is taken away and she realizes then that if she wants to keep her toys she needs to not throw them.

A more complicated form of operant condition is extinction. As the website Changing Minds explains, "if the condition has been created with regular and predictable reward or punishment, then the absence of the reward or punishment will quickly lead to extinction." In other words, instead of rewarding or punishing the behavior, we can ignore the behavior to make it stop. I use extinction when I do not give my daughter the consequence she wants in hopes that a certain behavior will stop. An example of this is trying to teach her to sleep in her own bed instead of

mine. My daughter will wake up in the middle of the night and come to my room hoping to sleep in my bed- which will make her feel good. However, I wake up and bring her back to her room, instead of giving her what she wants. Hopefully, she will learn that she is not allowed to sleep in my room.

Positive reinforcement, punishment and extinction are just a few types of operant conditioning that are used in everyday life. As humans we are constantly evaluating our decisions and actions to ensure that we are going to receive the desired result. The consideration of our consequences is because of operant conditioning.

Bibliography

Changing Minds. (2013). *Types of Operant Conditioning.* Retrieved from
http://changingminds.org/explanations/behaviors/conditioning/types_conditioning.htm

McLeod, S. A. (2007). *Skinner - Operant Conditioning*. Retrieved from
http://www.simplypsychology.org/operant-conditioning.html

Response Paper Analysis

After you have read this essay, please:

1. Label the introduction (Intro), body paragraphs (BP 1, 2, and 3), and conclusion (concl.).

2. In the introduction:

- Label the **hook**
- Label the part of the introduction that **summarizes** operant conditioning (Summary)
- Underline and label the **thesis**

3. In each of the body paragraphs, underline the topic sentences and put a check mark next to each quotation.

BP 1 focuses on: _____

The example in BP 1 talks about: _____

_____

BP 2 focuses on: _____

The example in BP 2 talks about: _____

_____

BP 3 focuses on: _____

The example in BP 3 talks about: _____

_____

4. What do you like the most about this essay?

5. What, if anything, do you think the writer could improve about this essay?

Psychology Unit 2, Lesson 5

Materials:

- Vocab. set #4 (definitions and questions)
- CATW: "Hey Kids! Go to School! Win Cars, TVs, and Trips!"

1) Introduce vocabulary set #4
2) Timed CATW

Psychology Vocabulary Set #4

Definitions

1) **previous** – earlier

2) **Eradicate** (p. 32) – get rid of completely

3) **trigger** (p.33) – the immediate cause of something; (it's related to the trigger on a gun – when you pull the trigger the gun goes off)

4) **cue** (p.35) – something that prompts or reminds someone to say or do or think something

5) **Enticing** (p.35) – very appealing

6) **Hew to** (p.36) – to stick to, or to follow something or someone

7) **Desensitized** (p.43) – when you've experienced something so much, you don't really notice it

8) **Proclivity** (p.43) – a natural tendency to behave or feel a certain way

9) **Crave** (p.47-50) – to want something so badly you feel like you need it

10) **Neurological** (p.50) – anything having to do with the brain (neurochemicals are chemicals in your _____).

11) **ritual** (p. 54) – something you do over and over again in the same way (people often talk about religious rituals, like Catholics take communion)

12) **Breakthrough** – a moment of discovery

Answer the following questions in complete sentences. For each answer, make sure to use the vocabulary word and show that you know its meaning.

1) Do you think people should be close to their **previous** boyfriends or girlfriends? Why or why not?

2) Do you have any test-taking **rituals**? If so, describe your test-taking ritual. If not, what do you think a good test-taking ritual could be?

3) What is a **cue** that you might have for leaving the class?

4) Describe a breakup that you or someone you know has had. What **triggered** the breakup?

5) Do you **crave** sleep? Why or why not?

6) Do you find cigarettes **enticing**? Why or why not?

7) Should teachers **hew to** prevailing ideas? What about scientists? Explain your answer.

8) If you could **eradicate** anything in the world, what would you eradicate, and why?

9. Describe a **breakthrough** you have had in your life.

10. Are you **desensitized** to violence on TV? Why or why not?

11. Do you have a **proclivity** for learning? Why or why not?

Timed CATW

Hey, Kids! Go To School! Win Cars, TVs, Trips!

September 11, 2001|By RACHEL GOTTLIEB; Courant Staff Writer

Expense-paid trips to Cancun for two, large-screen televisions, cars, gift certificates, cash awards and more!

Sound like a list of prizes for ``The Price is Right?'' Wrong. These are just some of the incentives offered around the country to improve attendance at schools bedeviled by chronic truancy -- especially in the opening weeks of school.

For some, the gifts, which are usually donated by local businesses, are welcome. Whatever gets the youngsters to walk through the door, hand in their homework and sit through their classes can't be bad, they say.

Not so, argue critics who say ``rewards'' send the message that going to school is so distasteful, it needs bribery. Straightforward though the concept may be, the mention of it sends people on both sides groping for words strong enough to express their feelings.

``Instruction is the name of the game and in order for that to be done effectively we need our students in school,'' said St. Louis schools spokesman Chester Edmonds. The schools need to do ``whatever it takes to get them to come to school the first week and then keep them there.''

Author Alfie Kohn disagrees. ``If you have to bribe me, it must be something I don't want to do.''

Parents use sanctions and incentives all the time, he said, and so do businesses.

``In a behaviorist world, people use incentives and rewards, punishments and sanctions all the time,'' he said. ``Liberal people get all queasy about behaviorism because it smacks of small animals running through mazes to get cheese.''

Kohn, author of ``Punished by Rewards: The Trouble with Gold Stars, Incentive Plans, A's, Praise, and Other Bribes,'' is one of those ``liberals'' in the anti-incentives camp. As well-intentioned as an award like a car for attendance may be, said Kohn, research shows that rewards for otherwise expected behavior sends the message that the task is so distasteful it needs to be sweetened.

If a parent tells a child she will get a treat if she does all her math homework plus the extra credit questions, Kohn said, ``what have you taught the kid?''

Hyacinth Yennie, an outspoken Hartford parent whose son is a freshman at Trinity College, agrees with Kohn. ``Parents, you must take responsibility to get your kids to school. We shouldn't have to bait them to go to school,'' she shouted. ``And make sure the school is exciting so children want to come to school.''

Psychology Unit 2, Lesson 6

Lesson Set for "The Craving Brain" from <u>The Power of Habit</u>

This lesson set will take at least 6 classes to complete:

- 2 days to skim, read, annotate
- 2-3 days to complete the discussion journal
- 1 day to discuss the reading
- 1 day to revise the discussion (30 minutes)

Materials:

- Vocab. review for vocab. set #4 (examples & non-examples)
- Copies of the title page, inside cover and table of contents of <u>The Power of Habit</u>
- PDF of section 1 of "The Craving Brain" (p.30-33) and a computer attached to a projector
- Vocabulary log
- The "Power of Habit" discussion journal

Day 1

1) review vocab. for lesson set 4

Materials: Review handout for vocab set 4 (examples and non-examples)

Use the same protocol that has been used in previous lessons. As you circulate to read vocabulary sentences, try to emphasize the nuance of the words, providing information (as appropriate for the individual student) about when and why specific words are used.

2) Free write: habits (10 min)

Ask students to free-write for 10 minutes about habits. Some questions that they can talk about could include: what makes something a habit? What are some of your habits (good or bad)? How do habits start? [Write these questions on the board].

After the free-write, have students share the free writes. You can either have them share in pairs, or have a few students share with the whole class. Tell students that some of the ideas they wrote about may come up in the next reading. As they read, they should remember to <u>check to see if the author is saying the same thing, or something different about what a habit is and how habits start.</u>

3) Skimming a long chapter

Materials:
- copies of the title page, inside cover and table of contents for The Power of Habit
- Copies of "The Craving Brain"
- A projector (if possible) to project the first section of "The Craving Brain"

Tell students that they will read chapter a chapter from a book called The Power of Habit, and that the chapter is 30 pages long – similar to the amount they will be expected to read in a college class. Since it's so long (30 pages), it's important to really skim. In books, there aren't always headings to help. But they can use what they know about the book to help them before they dive in.

- Distribute copies of the title page, inside cover and table of contents. Give students 5 minutes to skim to the title page, inside cover and table of contents, and write down any key topics they predict will come up in the chapter, and questions they want to answer when they read.

- Tell them that they will now look at the chapter from the book that they will read, called "The Craving Brain." Project the first section of "The Craving Brain" (p.30-33). Model a read-aloud/think aloud from p.31-33, showing where and how you might read to skim the first few pages.

- start with the title – "The Craving Brain: How to Create New Habits;" think aloud about what it might mean, and have students predict what the chapter will be about
- Then, skim aloud the first section (p.30-33), moving quickly, and not stopping until you find something that might relate to **habits**.
- One sentence that might be important is on p.32 "Claude Hopkins was best known for a series of rules he coined explaining how to create new habits among consumers"
- Note that this toothpaste seems to come up a lot.
- Model how you tentatively annotate this section as: **ex: toothpaste?**, and model writing some questions in the section (you can have students join you in asking questions). Some questions might include:

> What do toothpaste and advertising have to do with **habits**? Was brushing teeth not a **habit** for people before? Did this guy Claude Hopkins convince people that brushing their teeth should be a **habit**?

- Ask students to quickly make a list of the different things you did to skim that section. Give them 2 minutes to write, and then report back.

Tell students to continue skimming silently, and annotating sections with what they think might be the important topic in that section. They should also write at least 1 question in each section. Challenge students to find at least 7 more example sections. Tell students that examples can be big (like the one about toothpaste), or they can be smaller.

Give students at least 25 minutes to work, so that you can check in with students who may not have understood the model.

Homework: finish skimming, labeling sections, and writing questions. Some examples that students may come up with include:

-        Toothpaste (Pepsodent)

   -   Febreeze
   -   Julio (the monkey)/blackberry juice/craving
   -   Mini-examples: eating donuts, smoking, cellphone, Cinnabon
   -    Exercise
   -   eating his kids chicken nuggets
   -   shampoo
   - sunscreen – not a habit b/c there's not a reward

Day 2:

1) Have students begin logging vocab. from "The Craving Brain" (25 minutes)

> **Materials:** vocabulary log

2) Re-reading a long text

Ask students to share out the different sections that they found in their skim. As they share, note that they have actually found a bunch of examples from the text, so we are going to take notes on the board in a way that combines sections into **examples** from the text:

Toothpaste   Febreeze   Julio   smoking   Cinnabon   etc.

As students name examples, they may have the same examples but by different names.   Ask students which word goes with which category (for example: does Julio go with toothpaste, or with monkeys?") to get them to group examples, and add the new words to your chart, so it looks like this

Toothpaste   Febreeze   Julio   smoking   Cinnabon

Pepsodent   skunk lady   blackberry juice

                         No-smell chemical   monkey

Students may also come up with general concepts that cut across the chapter, like habit, craving, cue, trigger, reward. Start a category for those, and explain that those are talked about in a LOT of sections, so you will create a list for those important words that come up a lot, but not just in one part.

*Note that you should NOT have students select which parts are important. The purpose of this share-out is to get them to notice all the different sections of the text, so they can feel oriented and also notice MORE of the text. If students suggest ideas that other students disagree with, put them on the board with a question mark – they can check as they re-read.

Have students come to the board to write a question for one of the example categories. Each student should write 1 question.

As they read, they should read a whole section, and then go back and annotate. To annotate, students should answer 1-2 questions in the margin, and also write down any new questions that come up, or responses they have. Note that the questions should help them to also skip over information that isn't really important. For example, there's a lot of information about Claude Hopkins's life, but it's more important to understand the big ideas and examples of the chapter.

Give students 1 hour in-class to read.

Coaching Note: as your circulate, it may be helpful to get students to explain the diagrams in the text.

Homework: finish reading and annotating "The Craving Brain"

Day 3-5 (or 3-4)

Assign students 2-3 questions per day. Before students begin working, go over the questions so the instructions are somewhat clear, and emphasize that students must work silently and individually. Emphasize that if they have questions, they should ask a teacher. Emphasize that it's also OK to make mistakes, but hey should not work together, because this way, they will have lots of different ideas to bring to the discussion.

Students should get about 1 hour to work in class each day, finishing that day's 2-3 questions for homework.

Day 5: Discuss the discussion journal

In groups, students should be assigned 2 questions to discuss. Students should discuss their questions for approximately 40 minutes. The teacher can then either assign one of the groups to present their ideas, or the teacher can lead the students in a discussion of the ideas.

At the end of the discussion, students should turn their papers over, and close the chapter, and write an answer to: What did you learn from this chapter?

For each of the vocabulary words below, circle the example.

1. Previous President

Barack Obama   George W. Bush

2. Ritual

I make my bed every morning   I read a really good book last summer

3. Cue

The smell of pizza   The first page of a book

4. Trigger for a coming back to school

I got fired from my job   I've always wanted to finish my education

5. A **craving**

If I don't go for a run, I feel bad, so   I had a delicious piece of cheesecake
I try to go every morning   last weekend

6. Enticing

"I got a really good grade"   "Ooh, I want to know more!"

7. Hew to the party line

A Republican breaks
ranks to vote with the Democrats

Republicans vote together against
the healthcare bill

8. Eradicate

People in the United States don't get
Polio anymore because of the Polio vaccine

If you get a flu vaccine, you're
much less likely to get the flu

9. Breakthrough

The detective finally realized
which suspect committed the murder

The coffeepot finally beeped to say
that the coffee was ready

10. Desensitized

The more dishes I wash, the more
my hands get dry and cracked

Living in NYC, we see so many
homeless people and walk right by

11. Neurological

A CT Scan of your brain

an EKG for your heart

Discussion Journal for "The Craving Brain"

1. Copy the chart below, leaving space to explain each answer. For the examples from the text, choose ONE example from the text, and explain the habit/cue/routine/reward for that example.

	Habit	Cue	Routine	Reward
Quotation				
Explanation				
Example from the text				
Explain the example				
Your own example				

2. Re-read the section about p. 44 to 51. How is craving different than just wanting something? Use at least three different pieces of evidence to explain your answer.

3) According to the text, putting on sunscreen "significantly lowers the odds of skin cancer. Yet, while everyone brushes their teeth, fewer than 10 percent of Americans apply sunscreen each day." Choose quotations from two different sections of the chapter to explain why teeth brushing is a habit, but sunscreen is not.

4) Re-read the section on Febreeze. What was wrong with the way that the marketers were originally marketing Febreeze? How and why did their marketing strategy change? Support your answer with at least one piece of evidence, and make sure to explain how the change related to habit formation.

5) Why is it important to know about habit-formation? How can we use knowledge? Use at least one piece of evidence to support your answer.

6) How do habits form? Choose one quotation to explain your answer. Then choose one good habit that you would like to develop for yourself or your children. Explain the habit that you want, and how you could go about developing that habit.

Vocabulary Quiz for vocab. sets #3 and 4

For each of the following (except multiple choice), answer in a complete sentence using the vocabulary word, and show that you know the word's meaning.

1) What is one thing that has altered you in your life?

1) What is an **association**? Give an example of an association you have, and explain how associations can contribute to learning.

2) Is it good to **speculate** on a test? Explain why or why not.

3) Should teachers praise their students **consistently** or **intermittently**? Why?

4) Someone who uses electricity **sparingly** probably:

a) runs the air conditioner when it's hot outside so that they don't have to feel hot and sweaty
b) opens a window or uses a fan instead of air conditioner

6) What are the **implications** of cutting school?

7) How could you use either classical or operant conditioning to **deter** a child from eating sweets?

8) What situation would you want to act **reflexively** in? When should you not act reflexively?

9) Describe a **trigger** that you have for a **craving**.

10)What is something you would **eradicate** in society if you could?

11) Which of the following is an example of a **neurological** problem?

a) bad study habits   b) forgetting who you are   c) high cholesterol

A _____ is conditioned to _____

1.

_____

_____

_____ _____

2.

_____

3.

_____

_____

Diagram B

A _____ is conditioned to _____

1.   _____

                                      _____

                    _____   _____

2. [CLINIC] + [syringe]

                                  _____

3. [CLINIC]   _____

                                  _____

Diagram C

Conditioning _____ to _____

1.

_____

_____

_____   _____

2.

_____

3.

_____

_____

Diagram D
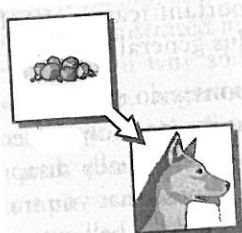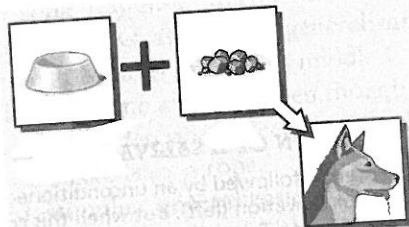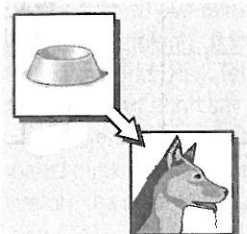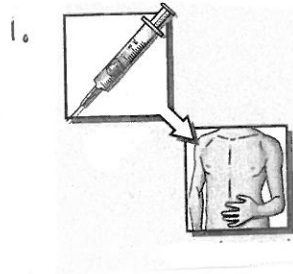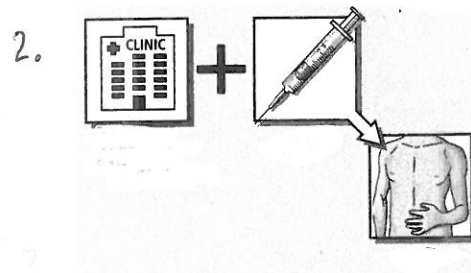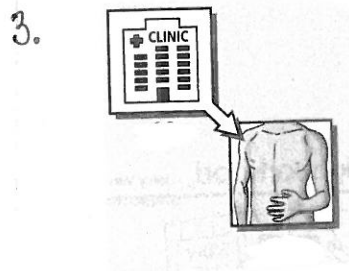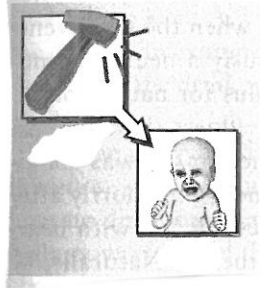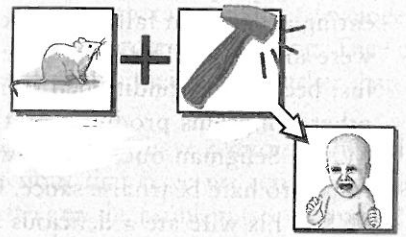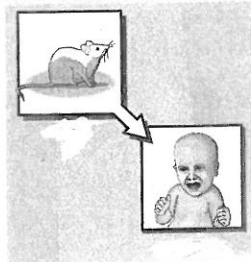
Conditioning _____ to _____

1.   _____

                                    _____
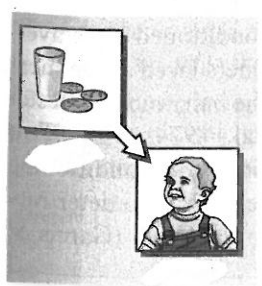
2.   _____

                               _____
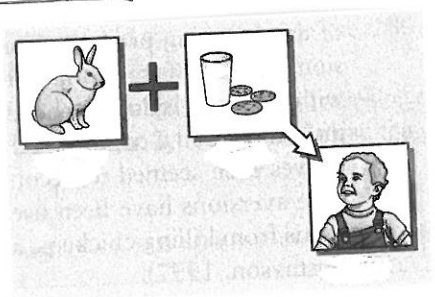
        _____   _____
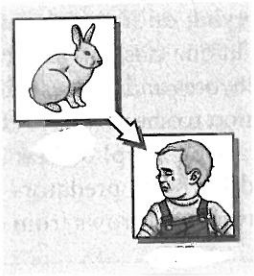
3.

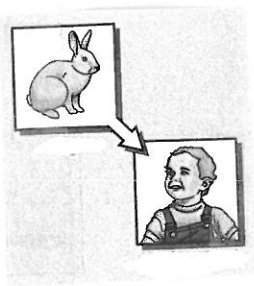   _____

4.   _____

                               _____

Analyze the model annotations.

1) For each of the annotations, label the kind of annotation. Label:
   - (P) for paraphrase
   - (Q/C) for question or clarification
   - (Ex.) for personal example

2) Circle any abbreviations or shortcuts, and list them below:

3) Make observations below. What do you notice about the sample annotations?

4) Are your annotations similar to or different from the sample annotations? Explain.

Peter was even able to sit with the rabbit in his lap, playing with it with one hand while he ate with the other. A variation of this procedure, called *systematic desensitization*, was later devised for treating phobias in adults (see Chapter 17).

Accounting for Taste

Classical conditioning can also explain how we learn to like and dislike many foods and odors. In the laboratory, researchers have taught animals to dislike foods or odors by pairing them with drugs that cause nausea or other unpleasant symptoms. One researcher trained slugs to associate the smell of carrots, which slugs normally like, with a bitter-tasting chemical that they detest. Soon the slugs were avoiding the smell of carrots. The researcher then demonstrated higher-order conditioning by pairing the smell of carrots with the smell of potato. Sure enough, the slugs began to avoid the smell of potato as well (Sahley, Rudy, & Gelperin, 1981).

[handwritten margin note:] We like or hate foods when we associate them with something else.
ex. slugs learn to hate carrots

Many people have learned to dislike a food after eating it and then falling ill, even when the two events were unrelated. The food, previously a neutral stimulus, becomes a conditioned stimulus for nausea or for other symptoms produced by the illness. Psychologist Martin Seligman once told how he himself was conditioned to hate béarnaise sauce. One night, shortly after he and his wife ate a delicious filet mignon with béarnaise sauce, he came down with the flu. Naturally, he felt wretched. His misery had nothing to do with the béarnaise sauce, of course, yet the next time he tried it, he found he disliked the taste (Seligman & Hager, 1972).

[handwritten margin note:] Doesn't have to cause the illness. You learn to associate it.

[handwritten note:] My ex. Saltines reminds me of stomach flu → I hate them

Notice that unlike conditioning in the laboratory, Seligman's aversion to the sauce occurred after only one pairing of the sauce with illness and with a considerable delay between the conditioned and unconditioned stimuli. Moreover, Seligman's wife did *not* become a conditioned stimulus for nausea, and neither did his dinner plate or the waiter, even though they, too, had been paired with illness. Why? In groundbreaking work, John Garcia and Robert Koelling (1966) provided the answer, which became known as the "Garcia effect." Working with rats, they showed that the animals were biologically primed to associate sickness with taste more readily than with sights or sounds. Later work established the same principle for many species, including human beings. Like the tendency to acquire certain fears, this biological tendency evolved through natural selection because it enhances a species' survival: Eating bad food is more likely to be followed by illness and death than are particular sights or sounds.

Whether we say "yuck" or "yum" to a food may depend on a past experience involving classical conditioning.

[handwritten note:] What? Did his wife + the waiter get flu too? No - Seligman hated the sauce, he ∅ hate waiter or wife b/c we learn to be afraid of food easily.

[handwritten note:] So, could I train myself to hate donuts??

Psychologists have taken advantage of this phenomenon to develop humane ways of discouraging predators from preying on livestock, using conditioned taste aversions instead of traps and poisons. In one classic study, researchers laced sheep meat with a nausea-inducing chemical; coyotes and wolves fell for the bait, and as a result they developed a conditioned aversion to sheep (Gustavson et al., 1974, 1976). Two wolves even seemed to become afraid of sheep! Similar techniques for conditioning taste aversions have been used to deter other predators—for example, to deter raccoons from killing chickens, and ravens and crows from eating crane eggs (Garcia & Gustavson, 1997).

[handwritten note:] Exper: teach wolves to fear sheep?
wolf eats poison in sheep meat → sick wolf
↳ wolf is afraid of sheep!

Charles Duhigg

THE POWER OF HABIT

WHY WE DO WHAT WE DO IN LIFE AND BUSINESS
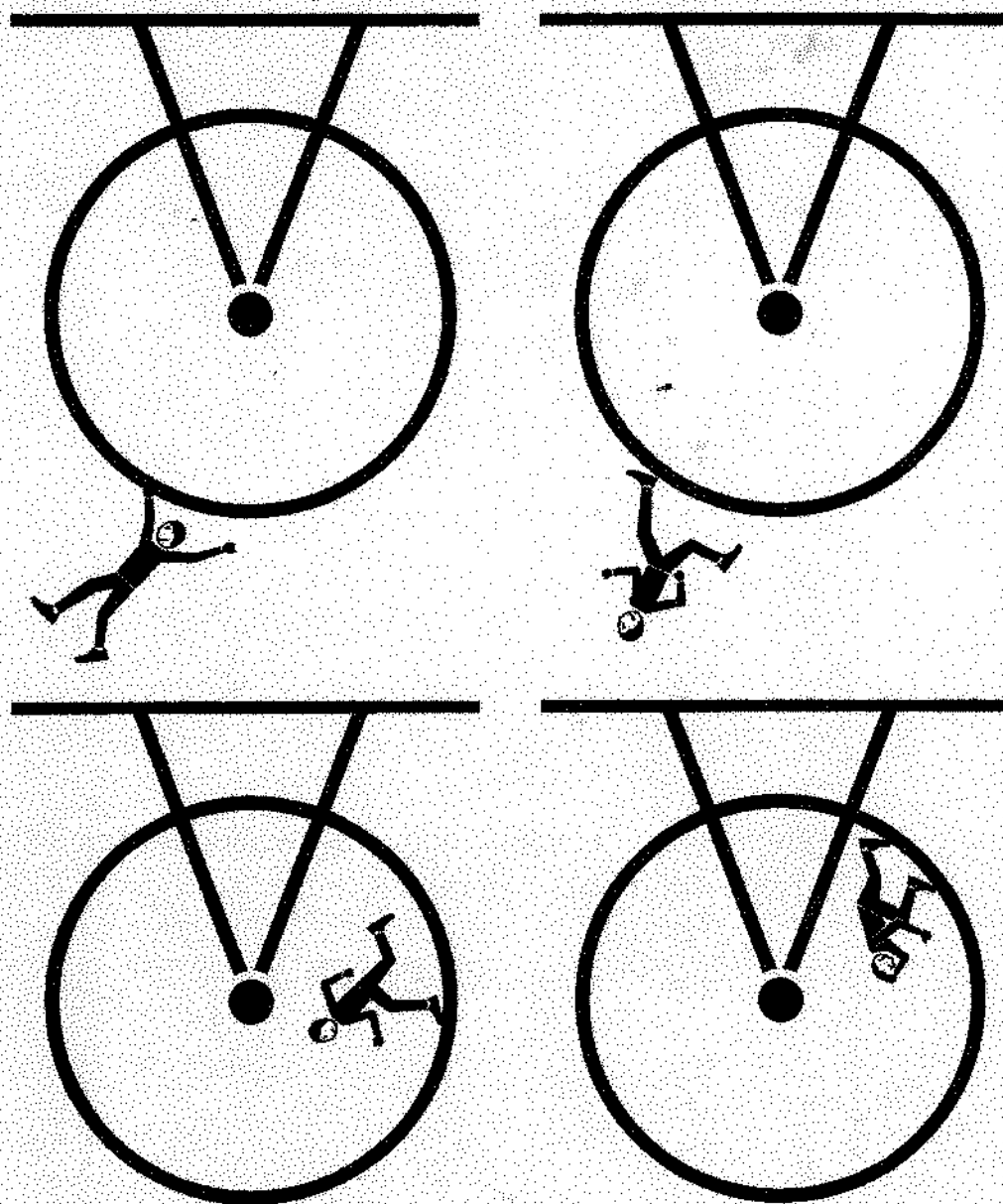
A young woman walks into a laboratory. Over the past two years, she has transformed almost every aspect of her life. She has quit smoking, run a marathon, and been promoted at work. The patterns inside her brain, neurologists discover, have fundamentally changed.

Marketers at Procter & Gamble study videos of people making their beds. They are desperately trying to figure out how to sell a new product called Febreze, which is on track to be one of the biggest flops in company history. Suddenly, one of them detects a nearly imperceptible pattern—and with a slight shift in advertising, Febreze goes on to earn a billion dollars a year.

An untested CEO takes over one of the largest companies in America. His first order of business is attacking a single pattern among his employees—how they approach worker safety—and soon the firm, Alcoa, becomes the top performer in the Dow Jones.

What do all these people have in common? They achieved success by focusing on the patterns that shape every aspect of our lives.

They succeeded by transforming habits.

In *The Power of Habit*, award-winning *New York Times* business reporter Charles Duhigg takes us to the thrilling edge of scientific discoveries that explain why habits exist and how they can be changed. With penetrating intelligence and an ability to distill vast amounts of information into engrossing narratives, Duhigg brings to life a whole new understanding of human nature and its potential for transformation.

Along the way we learn why some people and companies struggle to change, despite years of trying, while others seem to remake themselves overnight. We visit laboratories where neuroscientists explore how habits work and where, exactly, they reside in our brains. We discover how the right habits were crucial to the success of Olympic swimmer Michael Phelps, Starbucks CEO Howard Schultz, and civil-rights hero Martin Luther King, Jr. We go inside Procter & Gamble, Target superstores, Rick Warren's Saddleback Church, NFL locker rooms, and the nation's largest hospitals to see how implementing so-called keystone habits can earn billions and mean the difference between failure and success, life and death.

CONTENTS

● ● ●

PART THREE
The Habits of Societies

● ● ●

a mural.
inside he
tally cha
Marl
ple mak
figure ou
is on trac
tory. Sud
pattern—
goes on.
An t
compan
attacking
they app
becomes
Wh:
achieved
every as|
The!
In T
Times bi
thrilling
habits ex
ing intel
informa
to life a
its poter
Alor
panies s
others s
laborat
work an
discover
of Olyn
Howare
King, Jr
stores, I
rooms,
implem
and me:
and dea

Psychology Unit 3 – Cognitive Psychology Lessons Overview

1) Lesson 1
- vocab. for "Learning to be Helpless"
- experimenting on animals (with anticipation guide)
- transition from behaviorism to cognitive psych

2) Lesson 2
- review vocab.
- "Learning to be Helpless"
     - free write for "helplessness"
     - skim, predict and question for "learned Optimism" and "Learning to be Helpless;" read and annotate

3) Lesson 3: Learning to be Helpless
  - annotation peer review
  - visualizing/diagramming experiments (use the video as a teacher's model)
  - Use question stems to write discussion journal questions

4) Lesson 4
     - review past discussion journal questions
     - share and choose discussion journal questions in groups

teacher follow-up – choose questions for the class discussion journal and make question sort

5) Lesson 5
     - discussion journal question sort
     - answer discussion journal questions

6) Lesson 6
     - introduce vocab. set #6 ("The Effort Effect")
     - discuss "Learning to Be Helpless"

7) Lesson 7: The Effort Effect
     - Review vocab. for "The Effort Effect"
     - Metacognitive Conversation about reading strategies with presentation and gallery walk;
     - read and annotate "The Effort Effect"

8) Lesson 8: Review The Effort Effect
     - vocab. log "The Effort Effect"
     - Write questions for "The Effort Effect"
          - use question stems to write questions
          - in groups, sort the questions and choose 6 questions

- answer questions individually

9) Lesson 9: discuss "The Effort Effect"

10) Lesson 10
- CATW: Teaching Creativity

Additional Materials:
- Vocabulary Quiz on vocab. sets #5 and 6
- Diagram for "The Effort Effect" (PDF)

Psychology Unit 3, Lesson 1: Clinical Psych & the Transition from Behaviorism to Cognitive Psych

Materials:
- Vocab. set #5 Definitions & Questions
- Anticipation Guide for "Animal Testing"
- Animal Testing Reading
- "History of Psychology"

A) Do now
- What is the difference between psychology and pseudo-psychology? Review your annotations and notes from unit 1, and write your answer
- Introduce vocab. for "Learned Helplessness" (definitions and questions)

B) Experimenting on Animals
- **Frontload:** In small groups share your notes about the difference between psychology and pseudo-psychology
- **Transition:** Tell the class that, as many people talked about, one major difference between psychology and pseudo psychology is that psychology is based on <u>science</u> – that is, experimenters have to be open to proving their own ideas wrong. To do that, they do experiments, and sometimes those experiments are on animals in labs. Today, we are going to start by talking about testing on animals.
- **Pre-write**: distribute the Animal Testing Anticipation Guide, and have students fill in the left-hand column, indicating whether they think it's OK or not OK to experiment on animals, and explain why or why not. If people say they think it's sometimes OK to experiment on animals, that is fine – they should just circle "OK," and explain <u>when</u> it's OK and when it's not OK.
- **Walk to Show Your Opinion**: Write "Animal Testing is OK" on one side of the board and "Animal Testing is not OK" on the other side of the board. Have students walk to the part of the room that demonstrates their opinion, and have a range of students with different ideas share their opinions. The goal is to have the class hear from a range of opinions and validate that students hold different opinions. Students do not need to convince each other or reach consensus.
- **Read**: Distribute "Animal Testing" and tell students to read it. After reading, take notes in their own words on the right-hand side of the chart. They should take notes on at least 4 different ideas from the article.
- **Analyze:** After students have written down several ideas from the article, they should answer the question at the bottom. Have students share out a few ideas with the whole class (starting with any students who changed their minds after reading the article).

C) Behaviorism to Cognitive Psychology

   Transition: note that however we feel about experiments on animals today, experiments on animals in the past helped researchers begin to understand psychology in a different way. Up until now, we have been studying one kind of psychology, called <u>behaviorism</u>. But psychology has changed a lot over time, and we're going to read a little bit about that change as we enter into our 3rd unit, which is <u>Cognitive Psychology</u>.

   Read: Distribute "History of Psychology" and give students time to read and annotate. Remind students that they should be questioning/clarifying, paraphrasing and coming up with their own examples as they annotate.

Homework:
- Finish vocab. set #5 (if needed)
- Finish reading and annotating "History of Psychology"

Vocabulary Set #5 – Vocab. for "Learned Helplessness"

1. **Extrapolate** (p.1) – use information from one situation and apply it to another situation

2. **whimper** (p.1) – make soft, wordless noises because of pain or sadness (kind of like quiet crying)

3. **Proceed** (p.1) – to take the next step or move forward

4. **Regardless** (p.2) – anyway, despite the consequences

5. **Futile** (p.2) – with no effect or useful result, pointless

6. **Hypothesize** (p.4) – make a guess based on observations (a hypothesis)

7. **Identical** (p.5) – exactly the same

8. **Passive** (p. 6) – not active; tending not to act or participate; letting others make decisions, not resisting or arguing

9. **Helpless** (p.2) – can't do anything on your own

10. **Escapable** (p.3) – when it's possible to get out of something (a place or a situation)

For each of the questions below, answer the question in a <u>complete sentence</u>. Make sure to <u>use the vocabulary word</u> in your sentence, and <u>show the word's meaning</u>.

1. Do you think you should **extrapolate** about a person when you have met them one time? Explain why or why not, and give an example.

2. Give an example of a situation that might make a small child **whimper**.

3. What would stop you from **proceeding** when you are walking down the street?

4.Do you always act the same, **regardless** of the people you're with? Explain why or why not.

5a. I think dieting is usually _____because people lose weight and then gain
futile/futility
it all back later. In fact, many health experts have written about the _____
of dieting.   **futile/futility**

5b. Give another example of something you think would be **futile**. Explain why it's futile.

6. If you came to school and no-one was in the classroom, what would you **hypothesize** had happened?

7. How would you feel if you came to school wearing clothes that were **identical** to your classmate's? Explain why.

8. Is it good to be **passive** in school? Explain why or why not, making sure to give an example in your explanation.

9. Give an example of someone you know who acts **helpless**. Make sure to explain some of their behaviors that you consider to be **helpless**.

10. Which of the following vocabulary words is most similar in meaning to the word **helpless?**
   a) whimper
   b) passive
   c) regardless

11. Do you think taxes should be **escapable**? Why or why not?

11b. The opposite of escapable is <u>in</u>escapable. Inescapable means:

_____ . Inescapable is most similar in meaning to:
   Write a definition in your own words

   a) Inevitable
   b) Inimitable
   c) Inadvisable

Anticipation Guide: Animal Testing

Before Reading: My opinion about Animal Testing	After Reading: Ideas from the Article (in your own words)
I think it's <u>OK/not OK</u> to experiment on animals because . . .	

What did you learn in the article that you didn't know before? Did it influence your opinion? Explain.

A History of How Scientists Used Animal Testing to Make Medical Advances

written by: Emma Lloyd

The medical science field relies on animal research for the development of new treatments and medical technologies. Learn about the history of animal testing and how it has helped scientists make advances in the medical field.

The use of animals in scientific research has a surprisingly long history, dating back to the fourth century BCE – Aristotle is one of the first known to have performed experiments on living animals. In the second century a Roman physician named Galen dissected goats and pigs, a practice which later earned him the title "the father of vivisection."

- ### Early Animal Research

The first observations of significance to modern science were made in the 1600s, when William Harvey used animals to observe and describe the blood circulatory system. In the following century, Stephen Hales used a horse to demonstrate the measurement of blood pressure, and Antoine Lavoisier used a calorimeter and a guinea pig to demonstrate that respiration was a type of combustion.

In the early nineteenth century, Louis Pasteur infected sheep with anthrax, thus proving the germ theory of medicine – an important advancement which proved once and for all that infections did not arise spontaneously.

A classic animal experiment, conducted by Ivan Pavlov, was carried out in the 1890s. Pavlov trained dogs to salivate at the sound of a bell, by teaching them to associate the sound with food.

- ### Advances Made through Animal Experimentation

Many advances in medical research could not have been made without the use of animals in some way, and many have been of enormous benefit to humanity.

- o In the late nineteenth century Emil von Behring isolated diphtheria toxin and used a mixture of toxin and anti-toxin to protect guinea pigs from developing the disease. Around fifteen years later he had developed a vaccine which could be used in humans.
- o In the 1920s, experiments in dogs allowed Frederick Banting to determine the functions of the pancreas in producing insulin. Prior to this discovery, a diagnosis of diabetes was more or less a death sentence.

- o   In the 1940s and 1950s, a group of researchers used streptomycin to cure tuberculosis in guinea pigs. These experiments were followed by human trials which demonstrated that antibiotics could halt and even reverse the spread of the disease.
- o   Jonas Salk used Rhesus monkeys to isolate the polio virus and use the isolates to create the Salk vaccine, which markedly reduced the incidence of polio in the U.S. Later, Albert Sabin made a live vaccine by infecting animal hosts to "grow" the virus. By 1965, polio had been virtually eradicated in the U.S.
- o   The first non-volatile anesthetics were developed in the 1950s using a range of mammals as test subjects.
- o   Heart valve replacement surgery was pioneered by Albert Starr in 1960.
- o   Antibiotic treatments for leprosy were developed in armadillos.
- o   Primates have been used extensively for AIDS research, with anti-viral and prophylactic treatments evaluated in several types of monkeys.

Ethical Issues

In terms of ethics, the main issue in animal testing is simply that many experimental animals suffer in ways which are unnatural to them. Through the use of genetic manipulation, obese mice, diabetic mice, and mice with Huntington's disease can be created. Surgical experiments can be performed on larger animals – such as pigs, sheep, and dogs, as "practice" for human surgery.

Normally, such things would not happen to these animals. Any suffering they might experience during such experiments is entirely the making of the researcher – and often these animals are purpose-bred and would not even exist if it were not for the research. These animals have been bred by us, for our use, and suffer on our behalf.

As humans—the dominant species on the planet—we can treat animals in any way we choose, and do with them what we please. The question is, is it moral, or ethical, to treat them in ways which cause suffering – even if it is to our benefit? To some opponents of animal experimentation there are no benefits which justify the use of animals; others believe that animal experimentation is acceptable providing that suffering to the animals is minimized.

Still others oppose animal testing selectively on the basis of the purpose of the tests, believing that animal experimentation for the advancement of medical science is acceptable, but cosmetic testing is not, for example.

Animal Experimentation: Alternatives to the Use of Animals in Research

The fifth in a series on animal research, this article examines some of the alternatives to the use of animals in science.

11

The majority of researchers, governments, and scientific regulatory bodies agree that when animals are used in research, their suffering should be minimized whenever possible. In addition, most also agree that the development of alternatives to animal testing is an important priority.

- ### The Three Rs

In 1959 two scientists, zoologist William Russell and microbiologist Rex Burch, described three guiding principles which, for many researchers, still serve as a basis for the design of any experiments which involve the use of animals.

  - o **Reduce**, whenever possible, the number of animals used in a given experiment.
  - o **Refine** scientific and experimental methods to minimize pain, suffering, and distress, and to enhance the welfare of any experimental animals.
  - o **Replace** experiments using animals with other types of experiments which do not use animals, whenever it is possible to achieve the same aims by doing so.
- ### Alternatives to Animals

Currently there are two main alternatives which may be used in place of animals: *in vitro* and *in silico* experiments. *In vitro* experiments typically involve the use of cell cultures, while the term *in silico* refers to the use of computer models which simulate chemical, molecular, and cellular interactions. However both of these methods, while applicable in some situations, do have their limitations.

The most pressing argument against the use of *in vitro* and *in silico* techniques is that they simply cannot accurately reproduce the conditions found in a living animal, due to the enormous complexity of even the simplest forms of life. The problem is compounded when environmental factors are included – *in vitro* experiments cannot account for them, and *in silico* experiments cannot always accurately predict them.

In short, alternatives do exist, and they do work for certain applications – but these alternatives are not always appropriate.

Despite the problems with these alternatives, there have been some successes. Monoclonal antibodies, for example, could once be produced only in life animals, and the process often caused pain and distress. New techniques were developed which allow for the production of monoclonal antibodies in tissue culture, reducing the need for animal "antibody farms."

Some types of animal testing are particularly difficult to replace. One of these is toxicological testing, due to the need to be able to explore all the possible effects of a drug on a living organism.

Recently, however, a practice called micro-dosing has been explored, with the hope that the practice might reduce the need for experimental animals in toxicology tests for human pharmaceuticals.

Micro-dosing involves the use of human volunteers, who receive a tiny dose of a given drug. The dose is far below that which would be expected to produce toxic effects, but is high enough that the drug will have an effect at the cellular level. There is virtually no risk to the drug recipient, and fewer animals are used because non-viable drugs are ruled out before any animal testing begins (whereas without micro-dosing, animal trials might go through several phases before a potential drug is found to be ineffective).

The History of Psychology: Evolving Points of View

At the dawn of psychology, psychologists did not use experiments. Instead, they collected information through analysis sessions with their patients. Then along came clinical psychologists like John Watson, Ivan Pavlov and BF Skinner, who insisted that psychology should be based on experiments that could prove why humans behaved the way they did. These new psychologists were called behaviorists because they were concerned only with behavior that could be observed. They said that the mind was invisible. People could not see or measure or define consciousness. People can see and measure behavior only, therefore psychologists should focus their research on behavior. These behaviorists came up with theories about how learning (called conditioning) happened, through processes of automatic association or rewards and punishment. Behaviorism reigned as the way to understand human behavior for most of the first half of the twentieth century.

But by the 1960s, however, some psychologists were beginning to question behaviorism. Behaviorism deals almost exclusively with the actions that we can see. Behaviorists were not concerned with feelings such as pride or motivation, or beliefs such as religion or patriotism. At some point, however, people began to ask, "what about what's going on <u>inside</u> the mind?" Cognitive psychologists were concerned less with visible behavior and more with the thought processes that influenced the behavior. Cognitive psychologists assume that humans have the capacity to process and organize information in their mind, and they try to understand concepts such as memory, decision making, optimism vs. pessimism and memory. This train of thought led to the demise of strict behaviorism.

Today, psychologists continue to do research, which has led to new psychological points of view. As scientists have learned more about the neurochemical processes in the brain, a biological point of view has emerged in which psychiatrists can diagnose and treat some chemical imbalances in the brain. Advances in other disciplines, such as anthropology, have also led to new perspectives such as sociocultural psychology, which examines the ways that culture and society influence people's thought and behavior.

Psychology Unit 3, Lesson 2

1) vocab. review (following the previously established routine)
Materials: vocab. review handout (examples and non-examples)

2) Free-write: briefly write as much as you can about helplessness
   - who do you know that acts helpless or doesn't?
   - why?

3) Reading "Learning to be Helpless"
 - Materials: cover page and table of contents for "Learned Optimism"
 - "Learning to be Helpless"

Tell students that we are going to read a chapter from a book called <u>Learned Optimism</u>. Explain that by skimming the front cover and table of contents, they can make some predictions of what the book will be about. Distribute the cover and table of contents, and tell students to read and write down their predictions and how they feel about reading this book.

-Give students a few minutes to skim and write. Then ask a few students to share their predictions and feelings about the book.

- Distribute "Learning to be Helpless." Skim and question. Tell students that they will now read the chapter called "Learned Helplessness." Tell them to skim the chapter, write down the topic and a question. Have students share their questions in small groups.

- Give students time to silently read and annotate "Learning to Be Helpless." Tell students that tomorrow they will be sharing their annotations with each other, so they should make sure to gist/paraphrase, clarify, and come up with examples.

Coaching
you may want to clarify what "shock" and "tone" mean for the students. These are not particularly high-utility words (the way they are being used), but they are important for understanding the chapter.

If students seem to be understanding only abstractly, you may want to encourage students to come up with examples of what it would like to be passive/helpless in different settings, such as school/work or looking for work/in a relationship/financially/in a household (chores).

Homework: finish reading and annotating "Learning to Be Helpless"

Vocabulary Review for "Learned Helplessness"

For each of the following vocabulary word, circle the example that matches the word.

1. Extrapolation

My grandmother hated "The Exorcist," so we probably shouldn't take her to see another horror movie

I don't like snow because it's such a pain to get around in the snow and ice.

2. Whimper

The baby was cold

My wife was cold

3. Proceed

She got a bad grade on the quiz because she didn't study enough the week before.

She got a bad grade on the quiz so she went over her answers to see what she got right and wrong

4. Regardless

My boyfriend doesn't want me to go back to school, but I'm doing it anyway

My parents are so proud of me for going back to school.

5. Futile

Trying to convince my brother to quit smoking when he doesn't want to

Chewing nicotine gum to help make it easier for me to finally quit smoking

6. Hypothesize

I guessed the winning lottery ticket numbers because those numbers are my children's birthdays.

I assumed that he was married because he was wearing a ring on his left ring finger.

7. Identical

A brother and sister   Twins

8.Passive

My roommate never notices when   My roommate is a bad communicator who
Things need to be done. She just lets   is always getting angry and yelling over
the mail pile up and food go bad   little things
in the fridge

9. Helpless

The nurse who helps my grandmother   My grandfather, who is senile and
manage her pain medication   can't remember where he is or even
                                         his children's names

10. Inescapable

The smell of garbage in New York City   My apartment smells strongly
during the summer   like garlic when I cook

"Learning to Be Helpless"

Adapted from <u>Learned Optimism</u> by Martin Seligman

I went to graduate school to study experimental psychology. In the fall of 1964, an eager twenty-one-year-old with a brand-new bachelor's degree under my arm, I arrived in the laboratory of Ricard L. Solomon at the University of Pennsylvania. I had desperately wanted to study under Solomon. Not only was he one of the world's great learning theorists, he was also engaged in the very kind of work I wanted to do: he was trying to understand the fundamentals of mental illness by extrapolating from well-controlled experiments on animals.

Solomon's lab was in the Hare building, the oldest and grimiest building on the campus, and when I opened the door, I half expected it to fall off its hinges. I could see Solomon across the room, tall and thin, and immersed in his own private aura of intellectual intensity. But if Solomon was absorbed, everyone else in the lab was frantically distracted.

His most senior graduate student, a friendly Midwesterner named Bruce Overmier, immediately gave me an explanation. "It's the dogs," said Bruce. "The dogs won't do anything. Something's wrong with them. So nobody can do any experiments." He went on to say that over the past several weeks the laboratory dogs had had Pavlovian conditioning. Day after day, they had been exposed to two kinds of stimulation – high pitched tones and brief shocks. The tones and the shocks had been given to the dogs in pairs – first a tone and then a shock. The shocks weren't too painful, the sort of minor jolt you feel when you touch a doorknob on a dry winter day. The idea was to get the dogs to associate the neutral tone and the noxious shock – to "pair" them so that later, when they heard the tone, they would react to it as if it were a shock – with fear. That was all.

After that, the main part of the experiment had begun. The dogs had been taken to a "two compartment shuttlebox," which is a large box with two parts in it, separated by a low wall. The investigators wanted to see if the dogs would react to the tones the same way they had learned to react to shock – by jumping across the wall to get away. If they had, this would have shown that emotional learning could transfer across widely different situations.

The dogs first had to learn to jump over the barrier to escape the shock; once they'd learned that, they could then be tested to see if tones alone caused the same reaction. It should have been easy for them. To escape the shock, all they'd have to do was jump over the low wall that divided the shuttlebox. Dogs usually learn this easily.

But these dogs, said Overmeier, had just lain down whimpering. They hadn't even tried to get away from the shocks. And that, of course, meant that nobody could proceed with the experiment they really wanted to do – test the dogs with the tones.

As I listened to Overmier and then looked at the whimpering dogs, I realized that something much more significant had already occurred than any result the experiment might produce: Accidentally, during the early part of the experiment, the dogs must have learned to be helpless. That's why they had given up. The tones had nothing to do with it. During Pavlovian conditioning, they felt the shocks go on and off regardless of whether they struggled or jumped or barked or did nothing at all. They had concluded or "learned" that nothing they did mattered. So why try?

I was stunned by the implications. If dogs could learn something as complex as the futility of their actions, here was an analogy to human helplessness, one that could be studied in the laboratory. Helplessness was all around us – in individuals and groups as varied as the urban poor to the newborn child to the deeply depressed patient with his face to the wall. My father had his life destroyed by it. But no scientific study of helplessness existed. My mind raced on: Was it possible to create a laboratory model of human helplessness, one that could be used to understand what causes it, how to cure it, how to prevent it, what drugs worked on it, and who was particularly vulnerable to it?

Although it was the first time I had seen learned helplessness in the laboratory, I knew what it was. Others had seen it before, but thought of it as an annoyance, not as a phenomenon worthy of study in its own right. Somehow my life and experience – perhaps the impact my father's paralysis had on me – prepared me to see what it was. It would take the next ten years of my life to prove to the scientific community that what afflicted those dogs was helplessness, and that helplessness could be learned, and therefore unlearned.

Before the Experiments

As excited as I was by the possibility of this discovery, I was upset about something else. The graduate students here gave shocks that were in some degree painful to perfectly innocent dogs. "Could I work in this laboratory? I asked myself. I had always been an animal lover, particularly a dog lover, so the prospect of causing pain – if only minor pain – was very upsetting. I took a weekend off and went to share my doubts with one of my philosophy teachers. Though he was only a few years older than me, I regarded him as wise. He and his wife had always made time for me and helped me sort out the puzzles and contradictions that filled college life in the Sixties.

"I've seen something in the lab that might be the beginning of understanding helplessness," I said to him. "No one has ever investigated helplessness before, yet I'm not sure I can pursue it, because I don't think it's right to hurt dogs. Even if it's not wrong, it's repulsive."

My professor was a student of ethics and the history of science, and his line of questioning was informed by what he worked on. "Marty, do you have any other way of cracking the problem of helplessness? How about case studies of helpless people?"

It was clear to both of us that case histories were a scientific dead end. A case study is an anecdote about the life of only one person. It provides no way of finding out what caused what. Usually there isn't even a way of finding out what really happened. It was equally clear that only well-controlled experiments could isolate cause and discover cure. Further, there was no way I could ethically give trauma to other human beings. This seemed to leave only experiments on animals.

"Is it ever justified," I asked, "to inflict pain on any creature?"

My professor reminded me that most human beings, as well as household pets, are alive today because animal experiments were carried out. Without them, he asserted, polio would still be rampant, and smallpox widespread. "On the other hand," he went on, "you know the history of science is littered with unpaid promissory notes from basic research - assurances for techniques that were supposed to alleviate human misery but somehow never did.

"Let me ask you two things about what you propose to do. First, is there a reasonable chance that you will eliminate much more pain in the long run than the pain you cause in the short run? Second, can scientists ever generalize from animals to people?"

My answer to both these queries was yes. First, I believed I had a model that might unravel the mystery of human helplessness. If that could be done, the potential alleviation of pain would be substantial. And second, I knew that science had already developed a set of clear tests designed to tell when the generalization from animals is likely to work and when it is likely to fail. I resolved to do those tests.

A Model of Helplessness

I returned to the lab with high hopes for creating an animal model of helplessness. Only one other student, Steven Maier, believed that this goal made any sense at all. A shy, studious young man from the heart of the Bronx, Maier quickly became absorbed in the project. He had grown up in poverty, he knew what real-world helplessness was about, and he had a taste for struggle. We thought of an experiment to show that animals could learn helplessness. We called it the "triadic" experiment, because it involved three groups yoked together.

We would give the first group a shock that they could learn to escape – that is, escapable shock. By pushing a panel with their noses, dogs in that group would be able to turn off the shock. That dog would thus have control, because one of its responses mattered.

The second group of dogs would get inescapable shocks, or shocks that they could not control. The shock-giving device for this group would be yoked to that for the

first dogs. That is, they would get exactly the same shocks as the first group, but no response they made would have any effect. The shock a dog in the second group experienced would only stop when the "yoked" dog in the first group (which this group couldn't see) pushed its panel.

A third group would get no shocks at all.

Once the dogs went through that experience, all three would be taken to the shuttlebox. They could easily learn to jump over the little wall to escape from the shock. We hypothesized, however, that if the dogs in the second group had learned that nothing they did mattered, they would just lie down and do nothing. They would not even try to escape from the shock.

Professor Solomon was openly skeptical. There was no room among psychology's theories at the time for the idea that animals, or even people, could learn to be helpless. "Organisms," he said, "can learn responses only when the responses produce reward or punishment."

Though skeptical, he remained supportive. They also urged us not to leap to any conclusions. It could be that the animals would fail to escape from shock for some other reason, and not because they'd learned that responding is futile. The stress of the shock itself might make those dogs appear to give up.

But Steve and I felt that the triadic experiment would test these possibilities also, since the groups that got escapable and inescapable shock would undergo identical amounts of physical stress. If we were right and helplessness was the crucial ingredient, only the dogs who got inescapable shock would give up.

In early January of 1965, we exposed the first dog to shocks from which it could escape and the second dog to identical shocks from which it could not escape. The third dog was left alone. The next day, we took the dogs to the shuttlebox and gave all three shocks they could easily escape by jumping over the low wall dividing one side of the box from the other.

Within seconds, the dog that had been taught to control shocks discovered that he could jump over the barrier and escape. The dog that earlier had received no shocks discovered the same thing, also in a matter of seconds. But the dog that had earlier found that nothing it did mattered made no effort to escape, even though it could easily see over the low barrier to the shockless part of the shuttlebox. Pathetically, it soon gave up and lay down, even though it was regularly shocked by the box. It never found out that the shock could be escaped simply by jumping to the other side.

We repeated this experiment on eight groups. Six of the eight dogs in the helpless group just sat in the shuttlebox and gave up, whereas none of the eight dogs in the group that had previously learned to control shock gave up.

Steven and I were now convinced that inescapable events produced giving up, because the identical pattern of shock, if it was under the animal's control, did not produce giving up. Clearly, animals can learn their actions are futile, and when they do, they no longer initiate action. They become passive. We had taken the central premise of learning theory – that only rewards and punishments lead to learning – and proved it wrong.

With regard to learned helplessness, Steve and I proved that the dogs were just lying there because they had learned that nothing they did mattered – and they therefore expected that no action of theirs would matter in the future. Once they formed this expectation, they would no longer engage in action.

"Being passive can have two sources," Steve pointed out in his soft Bronx accent to the members of our weekly research seminar. "Like old people in nursing homes, you can learn to become passive if it pays off. The staff is much nicer to you if you appear docile than if you appear demanding. Or, you can become passive if you give up completely, if you believe that nothing at all you do – docile or demanding – matters. The dogs are not passive because they've learned that passivity turns off the shock. Rather, the dogs give up because they expect that nothing they do will matter."

****

Steve Maier and I had now found out how to produce learned helplessness. But, having caused it, could we cure it?

We took a group of dogs that had been taught to be helpless, and we dragged those poor reluctant animals back and forth across the shuttlebox, over the little wall again and again, until they began to move under their own steam, and came to see that their own actions worked. Once they did, the cure was one hundred percent reliable and permanent.

We worked on prevention and discovered a phenomenon we called *immunization*: learning beforehand that responding matters – that doing something has an effect - actually prevents learned helplessness. We even found that dogs taught this mastery as puppies were immunized to learned helplessness all their lives. The implications of that, for human beings, were thrilling.

We had now established the basics of the theory, and as I'd resolved that day at Princeton when my professor and I had discussed the ethics of animal experimentation, Steve Meier and I stopped our dog experiments.

Applying the Model

Our papers on learned helplessness now appeared regularly. The most helpful reactions came from scientists interested in applying learned helplessness to the problems of human suffering. One of the most intriguing came from Donald Hiroto, a thirty-year-old Japanese American graduate student at Oregon State University. Hiroto was looking for a dissertation project and asked for the details of what we had done. "I want to try it with people, rather than dogs or rats," he wrote, "and see if it applies to the human condition. My professors are skeptical."

Hiroto set out to do with people experiments parallel to those we had done with dogs. He first took one group of people to a room, turned on a loud noise, and gave them the task of learning how to turn it off. They tried every combination on the panel of buttons at their fingertips, but the noise was unstoppable. Another group of people could turn off the noise by pushing the right pattern of buttons. Still another group was subjected to no noise at all.

Later Hiroto took the people to a room in which there was a shuttlebox. You put your hand on one side, and there is an annoying whooshing sound; move your hand to the other side, and the noise stops.

One afternoon in 1971, Hiroto called me. "Marty, he said. I think we've got some results that mean something. The people we gave inescapable noise to back at the beginning, when they put their hand in the shuttlebox, would you believe it, most of them just sat there! I could tell Hiroto was excited, though he was trying to maintain professional composure. "It was as if they'd learned they were helpless to turn off the noise, so they didn't even try, even though everything else – the time and place, all that – had changed. They carried that noise-helplessness right through to the new experiment. But get this: All the other people – the ones who first got escapable noise or no noise – they learned to turn the noise off quite easily.

I felt this might well be the culmination of years of inquiry, years of work. If people could be taught to be helpless in the face of a trivial irritation such as noise, then perhaps it was true that people out in the world, experiencing instances when their actions are futile, experiencing serious shocks, were being taught helplessness too. Perhaps human reaction to loss in general – rejection by those we have loved, failure at work, death of a spouse – could be understood as learned helplessness.

Psychology Unit 3, Lesson 3

1) Vocab. Log "Learning to be Helpless"
Materials: vocab. log

2) "Learning to Be Helpless"
Materials:
- a projector so that you can show "Learned Helplessness" experiment video at http://www.youtube.com/watch?v=gFmFOmprTt0
- experiment note-taking templates

a) Annotation Share
Tell students to share their annotations in pairs. They should trade papers, and each partner should take turns reading aloud their partner's annotation for each section of the chapter. As students read aloud the annotations they can discuss each other's and their own annotations.

- At the end, tell students to write on each other's papers: put stars next to your partner's two annotations that are most likely to help your partner clarify, understand, or remember what they read.

- Tell students that they should also make one suggestion if they can think of anything that would help their partner annotate in a way that can help them clarify, understand or remember better. (For example, are there any types of annotation that your partner is not using but could be using?)

b) visualizing
Transition: Have students share out questions and parts of the chapter that were confusing from their annotations. Students will ask a range of questions (including – how could they do this to dogs???).
You can affirm their questions, and/or maybe do a little basic clarification, but the area they are going to focus on is on the experiments. (If students did not identify this as a source of confusion, say that many students find the experiments confusing, and that since many college texts are about experiments, they are going to focus on these).

- Visualizing/Annotating the experiments
 - Ask students what are the key things we normally annotate for when we read about an experiment, ie answers to these questions:

What do they want to know?
What did they do?
What did they find out?

- Point out that psychology experiments often have multiple steps, so it can be helpful to take organized notes about the steps.
- Tell students that they are going to see a video of an experiment that is similar to the one in the chapter. Tell students that they should try to take notes on the experiment, but don't worry if they don't catch everything – just try to see what it's about.
       - Show the video at: http://www.youtube.com/watch?v=gFmFOmprTt0
[Note that the context of the class in the video is a bit different, so you should put the title of the video "Can We Induce Learned Helplessness?" on the board, and then just show from :23 to 4:45.]

Give students a few minutes to jot down their notes, and then share out with the class.

- Distribute the template, and go over the different categories with the students, and have them re-watch the video, thinking about the different categories.
- After they watch the video for the second time, lead a discussion/think aloud to model filling in the note-taking template. Take notes on the board; students should be filling in their templates as well. As much as possible, try to use pictures to help students visualize. (A sample teacher's model is included here).
- Students will be taking notes on the experiments in "Learned Helplessness," so give students time to re-read both experiments (Seligman and Meier's experiment on dogs and Hiroto's experiment on people.
- 2 students from each group should take notes on the blank template on Seligman and Meier's experiment on dogs, and the other half of the group should take notes about Hiroto's experiment on people. Remind students to take notes in their own words, and use little pictures to help themselves visualize it.
- After they have read and taken notes, students should share their notes about the experiments, making sure to go back to the text to sort out any disagreement. After sharing, students should re-annotate the experiments in the chapter.

C) Introduce Student-written Discussion Journal

Materials: Question Stems

Remind students that for the last 4 big readings, they have completed discussion journals. They will be doing a discussion journal for this reading as well, but this time they will be writing many of the questions for the journal using question stems.

Distribute question stems handout. Read through the question stems aloud with the students. Tell students to look back in "Learning to Be Helpless" to create 1-2 questions using question stems. Take a few examples from students of questions and write them on the board. Make sure you have at least one useful question on the board. If some students have questions that are not really helpful, ask students to compare two questions on the board. For instance, if your students have given the following questions:
  - What is a dog? Give an example.
  - What is learned helplessness? Give an example.
  - Explain Seligman's experiment with the dogs.

Ask students which questions will help their classmates understand the article best. Would any of the questions not help students understand the article as much?

Tell students to write 6 questions using question stems. Remind them that the questions should help their classmates fully understand the article.

Circulate as students are writing questions to look at students' questions. Some of the problems that arise might include:

  - Some students may not be using the question stems, and just writing questions, in which case, find out why they aren't using the questions. If they insist that they can write better, "more creative" questions, tell them that using the question stems can give them practice in asking the kinds of questions that people who study and

teach psychology ask, so it's helpful to learn them. Ask them to write 6 questions from the question stems, and if they still want to do their own creative questions, they can do those as extra. Usually students who resist using the stems do so because they are not sure how to use them. Ask them to pick out a question stem for you, and show them how you could fill it in. Then pick out a question stem for them, and ask them to fill it in. Once they see how to use the question stems, they are more likely to use them.

- Some questions may not make any sense. ("What is the difference between a dog and a shock?") In that case, ask the student to try answering their question. When they have trouble answering the question, suggest a question stem for that could work, and have them try to plug in the information.

Homework: finish writing 6 questions using question stems.

Experiment Note-Taking Template (Video)

Hypothesis:

_____

_____

_____

Step 1:	Step 2:
Group A	Group A
Group B	Group B

Conclusion/Findings: _____

_____

_____

Hypothesis: _____

_____

_____

Step 1:	Step 2:
Group A	**Group A**
Group B	**Group B**
Group C	**Group C**

Conclusion/Findings: _____

_____

Question Stems for Nonfiction Readings

1) What is . . . ? Explain it, explain an example from the text and a real or imagined example of your own.

2) Why does the author say " . . . ?" Explain what it means in your own words.

3) Why does . . . say " . . . ?" Explain what it means in your own words.

4) Explain the experiment about . . .   What were the researchers trying to learn? What did they do? What did it show?

5) What does the example about . . . show ?

6) What examples/details/evidence does . . . provide to show that . . . ?

7) In your own words, explain how . . .

8) What are some of the problems/benefits of . . . ?

9) What happened when . . . ?

10) What causes/caused . . . ?

11) How does/did . . . affect . . . ?

12) How is . . . similar to . . . ?

13) How is . . . different from . . . ?

14) Why is it important to know about . . . ?

15) What do you think the author's opinion about . . . is? Why?

Psychology Unit 3, Lesson 4

Sharing and answering discussion journal questions

Have students flip back through their binders to past discussion journals. Tell the students they will read through past discussion journal questions to see what makes a good question when studying a psychology text. Have students read back through their past discussion journals and underline words and phrases that seem to come up a lot from question to question. They should make observations and take notes on the following questions: what kinds of questions do the DJs seem to be asking? What makes a good question?

Have students share out their observations with the full class, and lead a discussion about what makes a good question. (ie, it helps the reader understand key terms from the article. It helps the reader understand the experiments or examples showing the author's points. It helps readers see connections and relationships among different ideas in the article, etc.)

In small groups, have students share their questions. From their whole group, they should choose 6 questions that will make a full discussion journal for their group to answer, and write their 6 questions on butcher paper.

Teacher follow up: choosing questions for the class discussion journal

The teacher should collect the groups' questions. Assuming that there are 5-6 groups per class, you will have a collection of 30 to 36 questions. From these questions, choose 5-6 questions that will serve as the <u>class discussion journal</u>.

For the journal, your process will probably include these steps: mentally categorizing the students' questions, choosing a range of different types of questions to cover different aspects of the article, and choosing questions that are more literal and/or focus on one part of the text, as well as questions that force students to read across the text and make inferences.

Rather than simply throwing out the rest of the questions, however, create a handout that that makes visible your process of selecting the questions.

To help make this process transparent, type up 3-4 questions per category. If you have one categories of sort of miscellaneous detail questions, you can group those together in one category.

1. QUESTION	2. QUESTION
Similar questions	Similar questions

- - -	- - -
3. QUESTION Similar questions - - -	**4. QUESTION** Similar questions - - -
5. **QUESTION** Similar questions - - -	**6. QUESTION** Similar questions - - -

Psych Unit 3, Lesson 5

1) Discussion Journal Question Analysis
Materials: teacher's typed up question categories

- Tell the students that since everyone will be working on the same discussion journal, they need to have one set of questions for the class. So, last night you chose 6 questions, but you didn't choose them randomly. You tried to choose questions that can help everyone to understand and remember the reading.

Distribute the typed up question categories handout. Explain to students that this is a record of how you were thinking when you chose the questions. Point to the first category of questions, and explain why you grouped these together, and why you thought this was an important question to answer.

Ask the students to continue making observations about the next 5 categories in their groups. After the group discussions, have groups share out their observations.

2) Write the discussion journal
Materials: the discussion journal questions

Praise students for their observations, and also for having written helpful questions. Tell them that they are now going to answer the questions, and give them time in class to begin writing their answers. Remind them to use sandwich paragraphs wherever possible, and remind them that they will discuss the article fully in the next class, so they should not share answers yet.

Homework: finish answering the discussion journal questions for "Learning to be Helpless"

Psychology Unit 3, Lesson 6

1) Introduce vocabulary for "The Effort Effect"
2) Discuss "Learning to be Helpless"

Vocabulary Set #6 – Vocab. for "The Effort Effect"

1) **Latter** – the last one (**former** = the earlier one)

2) **Innate** – inborn

3) **Cope** – deal with a problem

4) **Attribute** – to blame or give credit to

5) **Setbacks** – difficulties

6) **Paramount** – of the highest importance

7) **Static** – always stays the same; unchanging

8) **Malleable** – can be stretched or changed

9) **Aversion to** – extremely strong dislike for something

10) **Compatible** – go together well

Answer each of the following questions. Make sure to write each answer in a **complete sentence** that **uses the vocabulary word** and **shows the word's meaning**.

1. Some people like to stay up late. Others like to get up early. Are you the **former**, or the **latter**? Explain your answer.

2. Describe a **setback** that you have faced in your life.

3. What is one thing you do to **cope** with feeling sad or angry?

4. If you did well on a quiz, who or what would you probably **attribute** your success to?

5. What do you think is **paramount** in life, and why?

6. Do you think people's personalities tend to be **static** or **malleable**? Explain your answer.

7. Describe a person, or a kind of person that you tend to be <u>**incompatible**</u> with. Explain why you are **incompatible**.

8. What is something you have an **aversion** to? Explain.

9) Do you think that athletic ability is **innate**? Why or why not?

Psychology Unit 3, Lesson 7: Begin "The Effort Effect"

1) Vocab. review
Material: vocab. review handout for "The Effort Effect"

Have students review vocab. set #6 using previously established routines.

2) Review "Learning to Be Helpless" and Frontload "The Effort Effect"
Ask the class to re-read their notes from "Learning to be Helpless" and share out with the class. Have them talk briefly in their own words about the big ideas of the chapter. This short discussion is meant to serve as a segueway into the writing assignment and next reading.

Remind students that about 1 out of 3 people in Hiroto's studies (and 1 out of 3 dogs in Seligman's studies) did NOT become helpless.

Write the following question on the board, and ask students to free-write their response: Why are some people more likely to become helpless, while other people become helpless easily?

Tell students that later in the class, they will read about one answer to this question. But first, they are going to review all of the things they have been practicing about how to read to learn.

2) Metacognitive Conversation:

Materials: Butcher paper, markers and tape

In pairs, have students make a list of their "reading process" on butcher paper. What do they do when they first get a reading? What next? Tell students that their list should start with what they do when they first get a reading all the way til the end when they really understand it. For each step, they should include why they do that (how it helps them). If they generally have trouble with any of the steps, they should include that in their notes. Tell students that they can go back to their notes if they are stuck or can't remember.

As pairs are making their list, circulate. Encourage students to be more detailed about what to do and why. (For example, students might say "read." Encourage them to break that down. What do they do before reading? During reading? If they say, "annotate" ask them how or what kinds of things they annotate, and why). Some of the things that they might talk about include:
   - Pre-reading (skimming, thinking about the topic and making predictions or thinking about what we already think about the topic, asking questions)
   - Reading and clarifying, gisting/paraphrasing, coming up with our own examples; drawing diagrams and talking them through; annotating
   - Asking questions by using question stems

- Have one pair of students present their list. Tell students to listen carefully to see if the pair missed anything, or if there is anything different in their list.

- After the first pair presents, ask other pairs to add on anything that was different than the presentation.

-Have students hang their lists around the room. Have the students walk around the room, reading other groups' lists

2) Read "The Effort Effect"

Name several of the steps that students mentioned. Remind students to use these steps as they read, and distribute "The Effort Effect."

Coaching: circulate as students read to make sure students are using strategies. Note that the text jumps around a lot, so it may be helpful to chunk or visually connect different parts of the text (such as Dweck's ideas; her studies with kids; the example about the soccer team, etc.)

Homework: finish reading and annotating "The Effort Effect"

Vocabulary Review

For each of the following, circle the example that matches the vocabulary word.

1. **Coping** with a **setback**

When they fail a test, some students deal with it by turning to friends, while others study harder

When they pass a test, some students stop working so hard, while others study even harder

2. **Compatible** foods

Peanut butter & jelly   pickles & chocolate

3. **Static**

My father worked for the same company for 50 years

when I touch the TV on a cold day, and I get a shock

4. **Malleable**

I am trying to teach my son to say please and thank you when he asks for things, and he's learning

I have lived in a lot of different countries where people have different customs and cultures

5. **Aversion**

I am allergic to cats. When I'm around them, my eyes swell up and I sneeze all the time

I hate tunafish. Even the smell of it makes me feel nauseous.

6. **Attribution**

The study said that individuals are more likely to react quickly to help in an emergency than groups

The study said that children who eat dinner with their families do better in school because they talk to their families about problems at school.

7.**Innate**

An interest in fast cars.

The ability to make sounds.

8. paramount concern

Having enough food to eat.   Getting a good night's sleep.

8. Some people like to go to the movies in their free time. Others like to read. Sam is the **latter**. Rebecca is the **former**.

Sam likes to _____

Rebecca likes to _____

Innate is most similar in meaning to:

   a) inmate   b) inherent   c) inside

The Effort Effect

According to a Stanford psychologist, you'll reach new heights if you learn to embrace the occasional tumble.

By Marina Krakovsky

One day last November, psychology professor Carol Dweck welcomed a pair of visitors from the Blackburn Rovers, a soccer team in the United Kingdom's Premier League. The Rovers' training academy is ranked in England's top three, yet performance director Tony Faulkner had long suspected that many promising players weren't reaching their potential. Ignoring the team's century-old motto—*arte et labore*, or "skill and hard work"—the most talented individuals disdained serious training.

On some level, Faulkner knew the source of the trouble: British soccer culture held that star players are born, not made. If you buy into that view, and are told you've got immense talent, what's the point of practice? If anything, training hard would tell you and others that you're merely good, not great. Faulkner had identified the problem; but to fix it, he needed Dweck's help.

A 60-year-old academic psychologist might seem an unlikely sports motivation guru. But Dweck's expertise—and her recent book, *Mindset: The New Psychology of Success*—bear directly on the sort of problem facing the Rovers. Through more than three decades of systematic research, she has been figuring out answers to why some people achieve their potential while equally talented others don't—why some become Muhammad Ali and others Mike Tyson. The key, she found, isn't ability; it's whether you look at ability as something inherent that needs to be demonstrated or as something that can be developed.

What's more, Dweck has shown that people can learn to adopt the latter belief and make dramatic strides in performance. These days, she's sought out wherever motivation and achievement matter, from education and parenting to business management and personal development.

As a graduate student at Yale, Dweck started off studying animal motivation. In the late 1960s, a hot topic in animal research was "learned helplessness": lab animals sometimes didn't do what they were capable of because they'd given up from repeat failures. Dweck wondered how humans coped with that. "I asked, 'What makes a really capable child give up in the face of failure, where other children may be motivated by the failure?'" she recalls.

At the time, the suggested cure for learned helplessness was a long string of successes. Dweck posited that the difference between the helpless response and its opposite—the determination to master new things and surmount challenges—lay in people's beliefs about why they had failed. People who attributed their failures to lack of ability, Dweck thought, would become discouraged even in areas where they were capable. Those who thought they simply hadn't tried hard enough, on the other hand, would be fueled by setbacks. This became the topic of her PhD dissertation.

Dweck and her assistants ran an experiment on elementary school children whom school personnel had identified as helpless. These kids fit the definition perfectly: if they came across a few math problems they couldn't solve, for example, they no longer could do problems they had solved before—and some didn't recover that ability for days.

Through a series of exercises, the experimenters trained half the students to chalk up their errors to insufficient effort, and encouraged them to keep going. Those children learned to persist in the face of failure—and to succeed. The control group showed no improvement at all, continuing to fall apart quickly and to recover slowly. These findings, says Dweck, "really supported the idea that the attributions were a key ingredient driving the helpless and mastery-oriented patterns." Her 1975 article on the topic has become one of the most widely cited in contemporary psychology.

Attribution theory, concerned with people's judgments about the causes of events and behavior, already was an active area of psychological research. But the focus at the time was on how we make attributions, explains Stanford psychology professor Lee Ross, who coined the term "fundamental attribution error" for our tendency to explain other people's actions by their character traits, overlooking the power of circumstances. Dweck, he says, helped "shift the emphasis from attributional errors and biases to the consequences of attributions—why it matters what attributions people make." Dweck had put attribution theory to practical use.

She continued to do so as an assistant professor at the University of Illinois, collaborating with then-graduate student Carol Diener to have children "think out loud" as they faced problem-solving tasks, some too difficult for them. The big surprise: some of the children who put forth lots of effort didn't make attributions at all. These children didn't think

they were failing. Diener puts it this way: "Failure is information—we label it failure, but it's more like, 'This didn't work, I'm a problem solver, and I'll try something else.'" During one unforgettable moment, one boy—something of a poster child for the mastery-oriented type—faced his first stumper by pulling up his chair, rubbing his hands together, smacking his lips and announcing, "I love a challenge."

Such zest for challenge helped explain why other capable students thought they lacked ability just because they'd hit a setback. Common sense suggests that ability inspires self-confidence. And it does for a while—so long as the going is easy. But setbacks change everything. Dweck realized—and, with colleague Elaine Elliott soon demonstrated—that the difference lay in the kids' goals. "The mastery-oriented children are really hell-bent on learning something," Dweck says, and "learning goals" inspire a different chain of thoughts and behaviors than "performance goals."

Students for whom performance is paramount want to look smart even if it means not learning a thing in the process. For them, each task is a challenge to their self-image, and each setback becomes a personal threat. So they pursue only activities at which they're sure to shine—and avoid the sorts of experiences necessary to grow and flourish in any endeavor. Students with learning goals, on the other hand, take necessary risks and don't worry about failure because each mistake becomes a chance to learn. Dweck's insight launched a new field of educational psychology—achievement goal theory.

Dweck's next question: what makes students focus on different goals in the first place? During a sabbatical at Harvard, she was discussing this with doctoral student Mary Bandura (daughter of legendary Stanford psychologist Albert Bandura), and the answer hit them: if some students want to show off their ability, while others want to increase their ability, "ability" means different things to the two groups. "If you want to demonstrate something over and over, it feels like something static that lives inside of you—whereas if you want to increase your ability, it feels dynamic and malleable," Dweck explains. People with performance goals, she reasoned, think intelligence is fixed from birth. People with learning goals have a growth mind-set about intelligence, believing it can be developed. (Among themselves, psychologists call the growth mind-set an "incremental theory," and use the term "entity theory" for the fixed mind-set.) The model was nearly complete.

Growing up in Brooklyn in the '50s, Dweck did well in elementary school, earning a spot in a sixth-grade class of other high achievers. Not just any spot, it turned out. Their teacher, Mrs. Wilson, seated the students in IQ order and even used IQ scores to dole out classroom responsibilities. Whether Mrs. Wilson meant to or not, she was conveying her belief in fixed intelligence. Dweck, who was in row 1, seat 1, believes Mrs. Wilson's intentions were good. The experience didn't scar her—Dweck says she already had some of the growth mind-set—but she has shown that many students pegged as bright, especially girls, don't fare as well.

Tests, Dweck notes, are notoriously poor at measuring potential. Take a group of adults and ask them to draw a self-portrait. Most Americans think of drawing as a gift they

don't have, and their portraits look no better than a child's scribbles. But put them in a well-designed class—as Betty Edwards, the author of *Drawing on the Right Side of the Brain*, has—and the resulting portraits look so skilled it's hard to believe they're the work of the same "talentless" individuals. The belief that you can't improve stunts achievement.

Culture can play a large role in shaping our beliefs, Dweck says. A college physics teacher recently wrote to Dweck that in India, where she was educated, there was no notion that you had to be a genius or even particularly smart to learn physics. "The assumption was that everyone could do it, and, for the most part, they did." But what if you're raised with a fixed mind-set about physics—or foreign languages or music? Not to worry: Dweck has shown that you can change the mind-set itself.

The most dramatic proof comes from a recent study by Dweck and Lisa Sorich Blackwell of low-achieving seventh graders. All students participated in sessions on study skills, the brain and the like; in addition, one group attended a neutral session on memory while the other learned that intelligence, like a muscle, grows stronger through exercise. Training students to adopt a growth mind-set about intelligence had a catalytic effect on motivation and math grades; students in the control group showed no improvement despite all the other interventions.

"Study skills and learning skills are inert until they're powered by an active ingredient," Dweck explains. Students may know how to study, but won't want to if they believe their efforts are futile. "If you target that belief, you can see more benefit than you have any reason to hope for."

The classroom workshop isn't feasible on a large scale; for one thing, it's too costly. So Dweck and Blackwell have designed a computer-based training module to simulate the live intervention. Their hip multimedia software, called Brainology, is still in development, but thanks to early buzz from a Time magazine article and Dweck's recent book, teachers have begun clamoring for it, one even asking to become a distributor.

Unlike much that passes for wisdom about education and performance, Dweck's conclusions are grounded in solid research. She's no rah-rah motivational coach proclaiming the sky's the limit and attitude is everything; that's too facile. But the evidence shows that if we hold a fixed mind-set, we're bound not to reach as high as we might.

Although much of Dweck's research on mind-sets has taken place in school settings, it's applicable to sports, business, interpersonal relationships and so on. "Lots and lots of people are interested in her work; it touches on so many different areas of psychology and areas outside of psychology," says Stanford psychology professor Mark Lepper, '66, who as department chair in 2004 lured Dweck away from Columbia, where she'd been for 15 years. "The social psychologists like to say she's a social psychologist; the personality psychologists say she's a personality psychologist; and the developmental psychologists say she's a developmental psychologist," Lepper adds.

44

By all rights, her appeal should transcend academia, says *New Yorker* writer Malcolm Gladwell, who is well known for making psychological research accessible to the general public. "One of the most popular pieces I ever did relied very heavily on work done by Carol Dweck," he said in a December interview in the *Journal of Management Inquiry*. "Carol Dweck deserves a big audience. It is criminal if she does not get that audience." Perhaps *Mindset* will help; it was written for lay readers.

It certainly cemented Tony Faulkner's belief that Dweck could help the Blackburn Rovers soccer team. Unlike the disadvantaged kids in Dweck's middle-school study, the Rovers didn't think they lacked what it took to succeed. Quite the opposite: they thought their talent should take them all the way. Yet both groups' fixed mind-set about ability explains their aversion to effort.

But aren't there plenty of people who believe in innate ability and in the notion that nothing comes without effort? Logically, the two ideas are compatible. But psychologically, explains Dweck, many people who believe in fixed intelligence also think you shouldn't need hard work to do well. This belief isn't entirely irrational, she says. A student who finishes a problem set in 10 minutes is indeed better at math than someone who takes four hours to solve the problems. And a soccer player who scores effortlessly probably is more talented than someone who's always practicing. "The fallacy comes when people generalize it to the belief that effort on any task, even very hard ones, implies low ability," Dweck says.

Her advice for the Rovers rings true for anyone stuck in a fixed mind-set. "Changing mind-sets is not like surgery," she says. "You can't simply remove the fixed mind-set and replace it with the growth mind-set." The Rovers are starting their workshops with recent recruits—their youngest, most malleable players. (Faulkner realizes that players who've already earned millions from being "naturals" have little incentive to reshape their brains.) The team's talent scouts will be asking about new players' views on talent and training—not to screen out those with a fixed mind-set, but to target them for special training.

In his 2002 essay that relied on Dweck's work, Gladwell cited one of her best-known experiments to argue that Enron may have collapsed precisely because of the company's talent-obsessed culture, not despite it. Dweck's study showed that praising children for intelligence, rather than for effort, sapped their motivation.

What Do We Tell the Kids?

You have a bright child, and you want her to succeed. You should tell her how smart she is, right?

That's what 85 percent of the parents Dweck surveyed said. Her research on fifth graders shows otherwise. Labels, even though positive, can be harmful. They may instill a fixed mind-set and all the baggage that goes with it, from performance anxiety to a tendency to give up quickly. Well-meaning words can sap children's motivation and enjoyment of learning and undermine their performance. While Dweck's study focused on intelligence praise, she says her conclusions hold true for all talents and abilities.

Here are Dweck's tips from *Mindset:*

- Listen to what you say to your kids, with an ear toward the messages you're sending about mind-set.
- Instead of praising children's intelligence or talent, focus on the processes they used.

  Example: "That homework was so long and involved. I really admire the way you concentrated and finished it."

  Example: "That picture has so many beautiful colors. Tell me about them."

  Example: "You put so much thought into that essay. It really makes me think about Shakespeare in a new way."

- When your child messes up, give constructive criticism—feedback that helps the child understand how to fix the problem, rather than labeling or excusing the child.
- Pay attention to the goals you set for your children; having innate talent is not a goal, but expanding skills and knowledge is.

Don't worry about praising your children for their inherent goodness, though. It's important for children to learn they're basically good and that their parents love them unconditionally, Dweck says. "The problem arises when parents praise children in a way that makes them feel that they're good and love-worthy only when they behave in particular ways that please the parents."

But more disturbingly, 40 percent of those whose intelligence was praised overstated their scores to peers. "We took ordinary children and made them into liars," Dweck says. Similarly, Enron executives who'd been celebrated for their innate talent would sooner lie than fess up to problems and work to fix them.

Business School professor Jeffrey Pfeffer says Dweck's research has implications for the more workaday problem of performance management. He faults businesses for spending too much time in rank-and-yank mode, grading and evaluating people instead of developing their skills. "It's like the Santa Claus theory of management: who's naughty and who's nice."

Leaders, too, can benefit from Dweck's work, says Robert Sternberg, PhD '75, Tufts University's dean of the School of Arts and Sciences. Sternberg, a past president of the American Psychological Association, says that excessive concern with looking smart keeps you from making bold, visionary moves. "If you're afraid of making mistakes, you'll never learn on the job, and your whole approach becomes defensive: 'I have to make sure I don't screw up.'"

Social psychologist Peter Salovey, '80, MA '80, dean of Yale College and a pioneer in the field of emotional intelligence, says Dweck's ideas have helped him think through a controversy in his field. Echoing an older debate about the malleability of general intelligence, some scholars say emotional intelligence is largely inborn, while others, like Salovey, see it as a set of skills that can be taught and learned. "People say to me all the time, 'I'm not a people person,' or 'I'm not good at managing my emotions,'" unaware that they're expressing a fixed mind-set, Salovey says.

Stanford psychology professor James Gross has begun extending Dweck's work to emotions. In a recent study, Gross and his colleagues followed a group of Stanford undergrads as they made the transition to college life. Those with a fixed mind-set about emotions were less able to manage theirs, and by the end of freshman year, they'd shown poorer social and emotional adjustment than their growth-minded counterparts.

At the Association for Psychological Science convention in May, Dweck will give the keynote address. The topic: "Can Personality Be Changed?" Her short answer, of course, is yes. Moreover, holding a growth mind-set bodes well for one's relationships. In a recent study, Dweck found that people who believe personality can change were more likely than others to bring up concerns and deal with problems in a constructive way. Dweck thinks a fixed mind-set fosters a categorical, all-or-nothing view of people's qualities; this view tends to make you ignore festering problems or, at the other extreme, give up on a relationship at the first sign of trouble. (The growth mind-set, though, can be taken too far if someone stays in an abusive relationship hoping her partner will change; as always, the person has to *want* to change.)

These days, Dweck is applying her model to kids' moral development. Young children may not always have beliefs about ability, but they do have ideas about goodness. Many kids believe they're invariably good or bad; other kids think they can get better at being good. Dweck has already found that preschoolers with this growth mind-set feel okay about themselves after they've messed up and are less judgmental of others; they're also more likely than kids with a fixed view of goodness to try to set things right and to learn from their mistakes. They understand that spilling juice or throwing toys, for example, doesn't damn a kid as bad, so long as the child cleans up and resolves to do better next

time. Now Dweck and graduate student Allison Master are running experiments at Bing Nursery School to see if teaching kids the growth mind-set improves their coping skills. They've designed a storybook with the message that preschoolers can go from "bad" one year to better the next. Can hearing such stories help a 4-year-old handle a sandbox setback?

Dweck's students from over the years describe her as a generous, nurturing mentor. She'd surely attribute these traits not to an innate gift, but to a highly developed mind-set. "Just being aware of the growth mind-set, and studying it and writing about it, I feel compelled to live it and to benefit from it," says Dweck, who took up piano as an adult and learned to speak Italian in her 50s. "These are things that adults are not supposed to be good at learning."

Psychology Unit 3, Lesson 8

1) Vocabulary log for vocab. set #6

2) Write and Choose questions for "The Effort Effect"
     Materials: index cards, post-it notes or slips of paper – at least 7 per student

- Ask students to take out their question stems handout. Remind students that using question stems can help them ask questions about a text that will help them or someone else to be better able to understand and remember what they read. Tell students that they will be writing questions about the "Effort Effect." Give students a few minutes to write questions, and have a few volunteers share out their questions. Write their questions on the board.
- Distribute the index cards, post-it notes, or slips of paper. Tell students that they should write 6 questions each, and the questions should be written on separate cards/post-its/slips, only 1 question per card.
- After students have written their questions, remind them that when you chose the discussion journal questions, you did it by thinking about which questions were similar and which were different, so you could ask a range of questions. Remind students that the more they ask the questions BEFORE the teacher asks them (whether in class or on a test), the more likely they are to make sure that they know what they need to know to do well.
- Tell students to sort their cards into groups, discussing as they categorize with their group. From their sorted cards, choose only 6 questions that represent a range of questions that will help them and their classmates to really understand and remember the article.
- Once their group chooses 6 questions, they should begin to answer the questions in writing individually. Remind students to use sandwich paragraphs whenever possible.

Psychology Unit 3, Lesson 10

Timed CATW: Teaching Creativity

Learning to Think Outside the Box

By Laura Pappano

IT BOTHERS MATTHEW LAHUE and it surely bothers you: enter a public restroom and the stall lock is broken. Fortunately, Mr. Lahue has a solution. It's called the Bathroom Bodyguard. Standing before his Buffalo State College classmates and professor, Mr. Lahue displayed a device he concocted from a large washer, metal ring, wall hook, rubber bands and Lincoln Log. Slide the ring in the crack and twist. The door stays shut.

The world may be full of problems, but students presenting projects for Introduction to Creative Studies have uncovered a bunch you probably haven't thought of. "I don't expect them to be the next Steve Jobs or invent the flying car," Dr. Burnett says. "But I do want them to be more effective and resourceful problem solvers." Her hope, she says, is that her course has made them more creative.

Once considered the product of genius or divine inspiration, creativity — the ability to spot problems and devise smart solutions — is being recast as a prized and teachable skill. "The reality is that to survive in a fast-changing world you need to be creative," says Gerard J. Puccio, chairman of the International Center for Studies in Creativity at Buffalo State College, which has the nation's oldest creative studies program, having offered courses in it since 1967. "That is why you are seeing more attention to creativity at universities," he says. "The marketplace is demanding it."

On-demand inventiveness is not as outrageous as it sounds. Sure, some people are naturally more imaginative than others. What's igniting campuses, though, is the conviction that everyone is creative, and can learn to be more so.

For example, Jack V. Matson, an environmental engineer and a lead instructor of "Creativity, Innovation and Change," teaches a freshman seminar course at Penn State that he calls "Failure 101." That's because, he says, "the frequency and intensity of failures is an implicit principle of the course. Getting into a creative mind-set involves a lot of trial and error."

It's a lesson that has been basic to the ventures of Brad Keywell, a Groupon founder and a student of Dr. Matson's at the University of Michigan. "I am an absolute evangelist about the value of failure as part of creativity," says Mr. Keywell, noting that Groupon took off after the failure of ThePoint.com, where people were to organize for collective action but instead organized discount group purchases. Dr. Matson taught him not just to be willing to fail but that failure is a critical avenue to a successful end.

Vocabulary Quiz for Unit 3

1) Are you a passive person? Explain why or why not, and make sure to give an example.

2) What do you think makes some people act helpless, and others don't act helpless?

3) Which of the following is most similar to **speculation**?
      A) Hypothesizing
      B) Extrapolation

Explain how speculation and _____ are similar, and how they are
                           hypothesizing/extrapolation
Different_____
_____
_____

4) If someone says that school was **futile**, it means they probably:
      a) Didn't pass the test at the end, but realize that they made a lot of progress.
      b) Was worried about starting a new school because they are shy.
      c) Hated school, and didn't feel like they learned anything.

4a) Do you feel that school is **futile**? Why or why not? _____
_____
_____

5) She studied very hard. **Regardless** of her efforts, she got a _____ grade.
      a) good
      b) bad
Explain how you know: _____
_____

6) When scientists **extrapolate** from a study, they sometimes make mistakes. Explain what it means to extrapolate from a study, and why it would sometimes result in mistakes.

7) Do you think that scientific ability is **innate**? Explain why or why not.

8) When you experience a **setback**, what do you usually **attribute** it to? In your explanation, make sure to give an example of a setback that you have experienced.

9) Do you think that **science** is **compatible** with religion? Explain why or why not.

10) Some people are passive in their work, while others are active. Tom is the **former**.
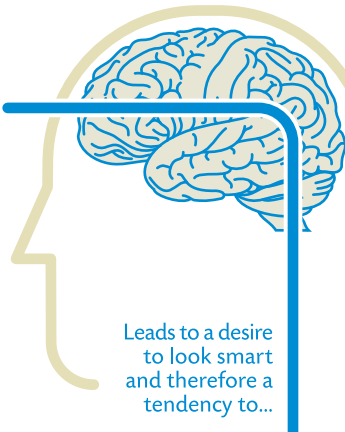   a) active
    b) passive

10a) Are you the **former** or the **latter**? Explain your answer.

11) Do you want to have a career that is **static**, or **malleable**? Explain your answer.

Fixed Mind-set
Intelligence is static

Growth Mind-set
Intelligence can be developed

Leads to a desire to look smart and therefore a tendency to...

Leads to a desire to learn and therefore a tendency to...

CHALLENGES

...avoid challenges

...embrace challenges

OBSTACLES

...give up easily

...persist in the face of setbacks

EFFORT

...see effort as fruitless or worse

...see effort as the path to mastery

CRITICISM

...ignore useful negative feedback

...learn from criticism

SUCCESS OF OTHERS

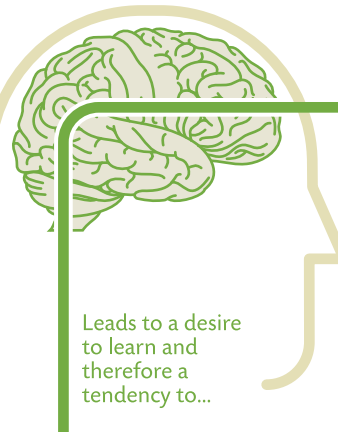...feel threatened by the success of others
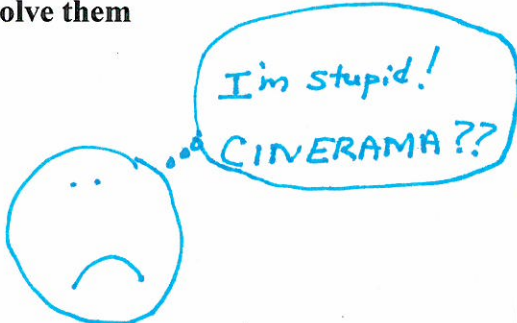
...find lessons and inspiration in the success of others

As a result, they may plateau early and achieve less than their full potential.

All this confirms a **deterministic view of the world.**

As a result, they reach ever-higher levels of achievement.

All this gives them a **greater sense of free will.**

TEACHER'S MODEL - Experiment Note-Taking Template (Video)

Hypothesis: students can be taught to be helpless; if you teach them to be helpless, they will do worse even on easy questions

Step 1: Teaching some s's to be helpless	Step 2: Testing how helplessness affects their performance
Group A Easy problems 	**Group A** Solves harder problem easily
Group B Impossible problems 	**Group B** Can't solve the problems even when Group A can solve them

Conclusion/Findings: Group B couldn't solve the problems at the end because they felt helpless and didn't even try.

Psychology Final Writing Assignment Overview

1) **Lesson 1: Introduce the Assignment**
   - Distribute assignment and go over it (have students make a list of steps/components of the assignments)
   - Scoring Rubric: Connect the assignment to the CATW
   - In groups, brainstorm the "real life example" (problems and goals for employees/students)
   - If possible, begin reviewing annotations for the texts

   Homework: Review annotations and notes on "The Craving Brain" and "The Effort Effect"

2) **Lesson 2 – Planning part 1**
   - Begin writing paragraph #2 – description of hypothetical situation, problem & goals (25 minutes)
   - Take notes on the readings on "The Craving Brain" 1 hour, 5 min
     o Close text and take notes on as many ideas/examples as you can as a group (first with guided student model, then individually)
     o Share notes with groups; go back to the text to find page numbers, check facts, and see if there are any parts you forgot to take notes on (15 min)
   - Begin to take notes on "The Effort Effect"
   - Analyze model body paragraphs (45 min)

   Homework: finish taking notes on "The Effort Effect;" finish writing paragraph #2 (description of problems and goals) if not finished

3) **Lesson 3 – Planning part 2**
   - Optional activity to connect to model body paragraphs to CATW rubric (45 min)
   - Share notes on "The Effort Effect" (groups), summarize it and connect to example (30 min)
   - Choose sub-idea quotations (45 min-1 hour)
   - Fill in outline template (30 min)

   Homework: Complete the outline include quotes

4) **Lesson 4 – Planning part 3 and begin writing**
   - Share outlines (20 min)
   - Analyze model intro and fill in intro (40 min)
   - Begin writing paper with coaching –(1 hour 20 min)

   Homework: finish the first 3 paragraphs

5) Lesson 5

- Brief activity on the difference between outline and paper (20 min)
- Continue writing, with teachers, circulating to do quick coaching. In general, coaching should focus on:
    i. detailed explanations
    ii. providing context for quotations and textual information
    iii. creating clear transitions and connections to the thesis

If possible (especially for students who are exempt from either of the tests), provide 1-3 additional class periods for students to write and revise from teacher's comments and peer review.

6) Lesson 6 – Self Reflection
- Have students read their first (pre-test) CATW and re-read their final paper; and have students write a reflection on how they have improved their academic writing, especially in regards to critical response, development and structure (organization and coherence)
- Giving advice

Additional materials: sophisticated and basic sample versions of the final paper

Psychology, Final Writing Assignment, Lesson 1

Homework: Review annotations and notes on "The Craving Brain" and "The Effort Effect"

1) Go over the assignment
Materials: Assignment handout

Explain to the students that they will be writing a final paper, similar to the ones that they will have to write for college classes.

Tell students that in college, assignments are very long – usually the professor writes a whole page about the assignment! Ask students – what is the first thing they should do when they get an assignment? (Read carefully and underline the steps or parts of the assignment – what they have to do).

Distribute the "Psychology Final Paper Writing Assignment," and tell students to read carefully, underlining the steps that they will need to take in the paper, then give students time to read and underline.

After students have read, call on students to list the steps (or parts) of the paper, and make a list on the board. Students may read from the background, so you may need to help them differentiate between background in an assignment and what needs to go in an assignment. If students are reading from the assignment, have them explain what to do in their own words (in shorter form). Their list might look something like this:

- imagine you are a manager or a professor; describe your work and what you want your workers/students to do

- describe 2 strategies to get workers/students to work harder

- Use quotations from "Power of Habit" and "The Effort Effect" and details in your paper

Tell students to take notes on the list if they haven't already, and keep the list. They will use it to help make an outline later.

2) Applying the CATW Rubric to the Final Paper

Remind them that this longer paper will help them be successful in college because in college they will have to write longer papers like this. But it will ALSO help them with the CATW, because they are practicing all of the same skills that they will need to use on the CATW. Tell them that this paper will even be evaluated in the same way the CATW is evaluated. Ask them: what are the three areas that count the most in your CATW score? (Critical Response, Development, and structure). Write these categories on the board.

Go through each of the categories, and ask students what will help their scores in each major

area. Take notes of their brainstormed list on the board, making corrections as necessary.

What can help your paper have good critical response? (thinking about the texts in a deep way so that your strategies would really work if you tried to use them in the real world; thinking it through and being realistic and thoughtful)

What can help your paper have good details (using quotations that are connected to your ideas and help the reader understand your ideas, introducing quotations with enough context to understand what the author is talking about; explaining things fully; giving details and examples that can help the reader understand – note that this also helps critical response because if the examples have details that show that this would really work and that you've thought about it, it will also help the CR score).

What can help your paper have good structure? (Coherence – every paragraph is connected to the thesis, so that the whole paper all fits together like one paper instead of 10 little papers; note that transition words and connecting explanations can help with coherence; paragraphs having a clear purpose & topic sentence can also help with this, but this category is really about coherence)

Ask students: what are the other 2 categories? (Language and mechanics). Remind students that these are important, so they should absolutely proofread their papers, but that they should focus on critical response, development and structure when they start.

3) Imagination Brainstorm
Materials: butcher paper & markers

Point students to the first step in the paper – imagine you are a professor or a business manager. Give students 2 minutes to decide whether they want to be a professor or a manager of a business. If they are unsure, encourage them to just make a decision – it doesn't matter either way.

Break students into groups based on their interest (ie, professors together and business managers together). Give each group a sheet of butcher paper and marker to brainstorm their situation. Write the following template on the board, and tell students that they will make a brainstormed list on their butcher paper. They should take NOTES on their brainstorm, not write out a paragraph.

Who You Are	Problems	Goals
(Professor & subject or Manager & type of business)	Behaviors and attitudes	Behaviors & attitudes

Tell students that the more **<u>realistically</u>** and specifically they imagine their situation – the problems with what their workers or students are doing, and what they want their workers or

students to do. Write on the board:

If students start with a **real situation** that has a real problem they have experienced, they are more likely to be able to imagine their example more realistically and specifically.

What is a **<u>real problem</u>** that you have noticed at a particular business?
Or with students from your high school or college?

As you circulate, ask questions to help the students imagine more realistically and specifically.

For example, if they are managing a diner, what do the workers do when it's slow? What do they want them to do? Or how do the workers treat the customers? Etc. For professors, how are the students acting in class? (ex. Are they texting? Not participating?) How do they do the homework? What kind of homework is it, and how do they want them to do it? Etc.

4) Assign Homework

Remind students that part of this assignment, like some college assignments, comes from a <u>hypothetical</u> (imagined) situation. Where will the other information come from? (the texts). Ask students which texts they will be using for this paper? (The Craving Brain and The Effort Effect). For homework, students should take re-read their annotations and notes on those two texts. If possible, try to give students 15 minutes in class to begin doing this.

Psychology Final Paper Writing Assignment

Psychology is often described as a practical, or applied, social science. In other words, one of the goals of psychology is for practitioners to understand how the human mind and behavior work, in order to use that knowledge. In this assignment, you will apply everything that you have learned over the semester to think critically about how to affect human behavior.

For this paper, imagine that you are either:

a) the manager of a big company and you want to get your employees to work harder and more efficiently. For this scenario, make sure to explain what the company does and what kinds of things the employees must do; or

b) a professor at a local college, and you want to get your students to work harder. For this scenario, make sure to explain what you teach, and what kinds of things you want your students to do.

Drawing on both cognitive and behavioral psychology, create a three-part strategy to get your employees/students to work harder and/or better. In your paper, you must explain two strategies using evidence from "The Craving Brain" and "The Effort Effect," and you may also draw on your knowledge from other texts that we have read in class. Additionally, you should explain your strategies using specific details from your imagined work as a business manager or professor.

Your final paper should be 3 to 5 pages long, typed, and double spaced in Times Roman 12 point font.

An outline of your final paper is due on _____

The first 2 pages of your final paper is due on _____

A rough draft of your final paper is due on _____

Psychology Final Writing Assignment, Lesson 2

1) <u>**Writing body paragraph 1 – explaining the hypothetical situation**</u> (25 minutes)

Materials: butcher paper from lesson 1 with the components of the paper AND the students' hypothetical situations/problems and goals brainstorms.

Re-post the students' list of what they need the paper will need to include, and the notes from their brainstorms about their hypothetical situations. Tell students since a big part of the assignment is to imagine this situation as a business manager or professor, that will have to be the first body paragraph. They will write that body paragraph now.

Post or write the directions (below) on the board, and go over them with the students.

Body #1

- Who are you? (What kind of manager/professor?) You can start your paragraph with: I am a _____
- What is the problem?
- What do you want them to do?

(Be realistic about the problem(s) and specific about what you want!)

- Give students time to write their paragraphs. If students finish writing early, have them read each other's paragraphs.

2) Take Notes on "The Craving Brain"

- Post steps for taking notes to prepare for writing a paper:

Steps for taking notes:

1) review annotations and notes for a text

2) Close text to take notes from memory (in your own words)

3) Write each idea or example on your notes page; try to come up with at least 6 cards with different ideas and examples per text

4) After you've made notes from memory, open your text. Find where the text is talking about that idea or example and write the page number where you can find the info on the appropriate card.

---

5) See if you can find any ideas or examples that you forgot about. Add 1-2 notes

- Point back to the original list of components in the paper. Ask students: now that they have written about their hypothetical situation, what else needs to be in the paper? (information from the texts).

Tell students that in order to prepare for the final paper, they will take notes, starting with "The Craving Brain." Tell them that the notes should be in their own words, so they will CLOSE their texts and annotations. Tell them that this will also help them test how well they remember the text. Ask them if they want a few minutes to re-review before they have to close their texts. [Most students will say yes, and it's a good idea to give them some time to do re-review]. Tell them to re-review "The Craving Brain."
- After a few minutes, tell students to close their texts. They should make a list of all the ideas or examples that they can remember from "The Craving Brain." After 2 minutes, and call on a student volunteer to share some ideas. Make sure to get a mix of ideas and examples, and model putting them in note form, like this:

Create habits through cue – routine – reward
  - ex. Pepsodent toothpaste = habit
        - feel film on teach = brush teeth = clean, minty feeling

As you circulate, you may have to help students think of more ideas, or put arrows to connect duplicative ideas.

After most students finish their notes, put them into groups or pairs. Tell students that they closed their texts to check our memories, but now we want to turn back to the text for two reasons: 1) to make sure that their ideas really are in the text, and take notes on where they can find quotations to support their ideas. And 2) to find any ideas or examples that they forgot about.

Students should share their notes, and see which notes they have that are similar, then look for evidence. Model finding a quotation to support the idea or example. Tell students that they do not need to write out the quotation, just the page number where they found the idea.

If they come across any new ideas or examples, make a new note.

Sample Notes for Texts – NOT a Student Handout

Sample Notes for "The Craving Brain"

Create habits through cue – routine – reward

Pepsodent – film – brush – clean/minty feeling

Febreeze – clean – spray Febreeze – feel satisfied that you did a good job

If the cue doesn't happen, people won't do it – ex. People didn't smell their own house as

stinky

Has to be a very specific cue – not general

See sneakers set out – run – feel satisfied/get a smoothie

It changes your brain – Julio the monkey with blackberry juice – when you expect a

reward, you crave it, and then you feel BAD when you don't have it

Ex. You see a donut box and you have to eat one – the donut box is the cue

Ex. The smell of cinnabon is a cue that makes you crave cinnabon

3) Connect Texts and Examples (20 minutes)
Materials: "Connecting the Text to Your Example" handout

- Tell students that one of the challenges of writing about text is to go back and forth between the ideas in the text and the example. They wrote their paragraph about their hypothetical example, and took notes on "The Craving Brain." Now their job is to put the text and the example together, first by explaining the main idea of the text, and then by connecting it to the example (hypothetical situation).

- Tell students that tomorrow they will use ALL of their notes and begin to get into sub-ideas, but for today, they will just think about the big idea of the text.

Distribute the "Connecting the Text to Your Example" handout. Tell students to turn over their notes and fill it out in their own words (without looking at text or notes). What is the big idea of "The Craving Brain" and how can they use that idea with their employees/students?

-Note that students should NOT begin choosing quotes. When students are finished, they can begin taking notes on "The Effort Effect."

4) Note-take for "The Effort Effect"

- Have students take notes on "The Effort Effect" in exactly the same way as they took notes

They do not need to fill in the "Connecting the text to your example" handout for "The Effort Effect" yet.

Sample Notes for "The Effort Effect" – NOT A STUDENT HANDOUT

Ability doesn't matter – it's whether you **think** that talent or hard work creates success

Can be "performance" oriented or "growth" oriented

Some people like a challenge/failure – they see it as interesting/"challenging"

Repeat failures that you can't control == learned helplessness (people or animals get

passive because they think they can't control things)

-people can be trained to see failures as because of lack of effort – and try harder

      - this works for people who think they're too good and don't need to work hard

(star soccer players) and also people who think they're bad and can't improve (kids at

math)

kids who see failure as a reason to work harder don't think of it as failure – they think of

it as an opportunity to learn something/try again

praising people for their effort – the process – gets them to work harder

praising people (especially kids) for the outcome (like "you got a good grade!") makes

them cheat or lie (like kids with math or Enron executives) or give up easily because they

just want a good outcome

now she wants to teach kids to have a growth mindset about being nice

---

3) **Structure of a Body Paragraph in a longer paper (45 min)**

Materials: Analyzing body paragraphs handout

Tell students that they will finish their notes on "The Effort Effect" for homework, but since this paper is a bit different than what they have done before, you will give them some sample body paragraphs, but on a DIFFERENT text (not "The Power of Habit" or "Effort Effect."

Ask students to look back at the assignment. How long is this paper? Tell students that since this is a longer paper than a CATW, and the texts they are writing about are much longer, they will still be using the parts of a CATW paragraph, but they will be stretching each body paragraph out into TWO paragraphs.

Distribute the "Analyzing body paragraph" handout and have students analyze the body paragraphs individually.

Ask students to share out what they notice, and write the structure of body paragraphs for this paper on the board:

Longer Paper Body Paragraphs

#1
Summarize the text that you will be talking about in this section, and introduce your strategy

Quote a **sub-idea** about the strategy and explain it. You can also quote about an example.
Example from the text about the strategy

#2
Transition (Connection) between the strategy and your situation (example)
Explain your situation (example)
Connection: explain how the strategy applies to your situation (example)

There may be some confusion about why they are doing it slightly differently than on the CATW. Ask students to notice what is the same and what is different, and why THEY think that you are asking them to do it differently. With such a long text, you have a lot more to say about the text – it takes up a whole paragraph instead of just a part of a paragraph. Also, for a longer paper, they need to spend more time explaining the example and how it connects to the point, instead of just giving it a few sentences. [Note: if you feel comfortable, you might suggest to some students that they can try writing a CATW this way. They will still need the summary in the intro to their CATW, but body 1 could focus on really explaining a point from the text, with body 2 connecting it to a personal example. If they are going to try the CATW this way, they should make sure to practice it with a timed CATW before the test]

Homework: completed hypothetical situation paragraph and complete notes for "The Effort Effect"

Connecting the text to Your Example (Hypothetical Situation)

I am a _____, and I want my _____ to _____
    business manager/professor   employees/students

_____ .

Text 1: "The Power of Habit"

What is the main idea of "The Craving Brain?" _____

_____

How will you use the ideas from "The Craving Brain" with your employees/students?

_____

_____

_____

_____

_____

_____

Next Steps (to do **in-class** **tomorrow**):
1. Re-skim "The Craving Brain." Look for THREE quotations that might add interesting information (a sub-idea) that will help you explain how to use the strategy in a <u>real</u> way. Underline the quotations, and label them #1, #2 and #3.
2. With your partner, share your quotations. For each quotation:
   a. Read it out loud.
   b. Paraphrase it; what information does it <u>add</u> that you don't know just from knowing the main idea?
   c. Connect it to your hypothetical example. What does it show about how you can use the strategy in your situation in a real way?

What is the main idea of "The Effort Effect?" _____

_____

How will you use the ideas from "The Effort Effect" with your employees/students?

_____

_____

_____

_____

_____

_____

Next Steps:
1. Re-skim "The Craving Brain." Look for THREE quotations that might add interesting information (a sub-idea) that will help you explain how to use the strategy in a <u>real</u> way. Underline the quotations, and label them #1, #2 and #3.
2. With your partner, share your quotations. For each quotation:
    a. Read it out loud.
    b. Paraphrase it; what information does it <u>add</u> that you don't know just from knowing the main idea?
    c. Connect it to your hypothetical example. What does it show about how you can use the strategy in your situation in a real way?

Analyze Sample BODY Paragraphs

Directions: Read the following body paragraphs from a sample paper. Then, analyze the body paragraphs by answering the questions below.

Paragraph 1: Introduction

Paragraph 2: Explain Hypothetical Example (I am a manager at a doctors' office, and want the nurses to deliver better customer service)

Paragraphs 3 and 4:

One strategy for getting workers to work more efficiently comes from the theory of operant conditioning. Operant conditioning is a way of training people to behave in desirable ways by reinforcing behavior that you want to see more of, and punishing behavior that you want to discourage. For example, parents who want their children to do their homework might reinforce their children's homework with by rewarding them with TV or by nagging them until they do their homework. However, the text cautions that operant conditioning can actually backfire if you use only extrinsic rewards because "it can kill the pleasure of doing something for its own sake" (Wade & Tavris, p.255). Wade and Tavris discuss an experiment in which school children who were promised a prize for playing with felt-tipped pens actually played with the pens less than children who were not promised a prize. In other words, the students who had the intrinsic motivation of enjoying the pens played with the pens, but the promise of the reward actually backfired. Taken together, the studies that Wade and Tavris cite show that operant conditioning works, but it's best if the motivation comes from inside a person.

People use operant conditioning with so many different types of behavior, from training pets to toilet training children, to getting drivers to drive more safely, so it's only natural to use

14

operant conditioning in my medical office as well. One way to get the nurses at the office to provide better service would be to reward them when they do positive things like smile at the patients, or let patients know how much longer they have to wait. But if nurses don't really want to do these things, or resent it, they could follow the customer service rules in ways that actually make the patients feel more frustrated and unappreciated. For example, the nurses who only have extrinsic motivation could say nice things sarcastically, or without making eye contact. That's why it's so important to make sure that the nurses feel intrinsically motivated to provide good customer service. In order to get the nurses intrinsically motivated, I will have a meeting with all the nurses, and ask them to reflect on how they think the patients feel when they have to wait. I will ask them what they think they could do to help patients have a better visit, even if they have to wait a long time for the doctor. They can brainstorm a list together. I imagine that they might come up with things like: periodically tell the patients how much longer they might have to wait, smile, or offer the patients water while they wait. I'm sure they will come up with other ideas too. Then I will make a list of their ideas and ask them to keep track of how often they do each idea. At the end of the first month, I will call another meeting and ask them to share with each other how they did, which will provide an opportunity to celebrate those who are doing the most to make the patients happy and comfortable. Through this process of operant conditioning, I can build the nurses' intrinsic motivation, and reward and reinforce their positive behavior towards the patients.

Body Paragraph Analysis

1. Where does the writer summarize the main idea of the text? Label it **SUMMARY**

2. Where does the writer QUOTE and PARAPHRASE the text? Write **Q** next to the quotes, and **P** next to the paraphrases

3. Where does the writer explain **examples from the text**? Label each **EXAMPLE from the TEXT**

4. Where does the writer explain in detail how the strategy from the text connects to her hypothetical situation (example)? Label that paragraph **PERSONAL EXAMPLE** and put check marks (✔) next to each detail.

5. How does the writer transition from idea to idea? Squiggle underline any transition or connecting words, phrases or sentences you see.

6. How many body paragraphs are there for <u>each</u> text? ___

This paper writes about strategies from "Operant Conditioning." For your paper, you will write about strategies from _____ and _____. Since you will write about TWO texts for your paper, how many <u>total</u> body paragraphs will your paper have? ___

Psychology Final Paper, Lesson 3

1) Share Notes on "The Effort Effect" and complete "Connecting the Text" (30 minutes)

Break students into groups. Tell students to take out their notes from "The Effort Effect" that they finished for homework, and share them in groups. Students who did not finish taking notes for HW can use this time to finish taking notes individually.

Have students fill in the back side of "Connecting the Text to Your Example." Tell them to close their notes and texts to briefly summarize the main idea of "The Effort Effect" and explain how they can use it in their business or with their students.

2) Optional Activity: Analyze Sample Body Paragraphs with the CATW rubric (45 min)

Tell students that they have been learning a lot about what makes good writing on the CATW, but that what makes good CATW writing also makes good writing in general. Tell them that they will analyze the model paragraphs from yesterday to see how they would do with the CATW rubric.

Break students into pairs and assign them to either read the model body paragraphs for Critical Response, Development, or Structure. Each pair should prepare a presentation.

The presentations will include:
- A brief explanation of their area (what is critical response/development/structure)
- Read aloud TWO parts of the sample body paragraphs (no more than 2 sentences each), and explain why each one is a good example of good critical response/development/structure

-Tell students that to prepare, they should 1) talk about what their area means; 2) read the sample paragraphs, and mark parts that are good examples of their area; then talk about them and why they're a good example of critical response/development/structure

Note: development is the easiest category to understand, so weaker pairs should be assigned to look for good development.

As you circulate,
- remind Critical Response pairs that good critical response shows that the writer is really thinking deeply about the text and how to use it in a real way
- remind Development pairs that lots of information leads to good development

17

- remind Structure pairs that good structure means that the essay is coherent – it all goes together. So they should look for places that connect different ideas and bring the reader along from idea to idea

Have two sets of partners present on each area. If students who are not presenting found other examples, they should add on.

2) Choosing Quotations for the Paper (45 min-1 hour)

Transition: Ask students if they will be writing about "Operant Conditioning." (No – about <u>The Power of Habit</u> and "The Effort Effect.") Remind them that they analyzed your paragraphs to see how to structure their paragraphs for this paper, but that they will now turn their attention back to the texts <u>they</u> will be writing about. Ask students to take out their "Connecting the Text to Your Example" handouts.

- Have a few students share the main idea of each text, and how they will use that with their employees or students. You do not need to record their ideas on the board. (The goal is just to get students minds back from "operant conditioning" to the texts that they will be writing about)

- Go over the steps for choosing quotations. Give students 10-15 minutes to re-skim "The Craving Brain" and label quotes #1, #2 and #3. Some students may have already chosen their quotes, but encourage them to re-read anyway to see if they find a quote that adds even more information.

- Divide students into partners who have the same type of hypothetical example (business vs. professors). The partners should go back and forth, reading their quotations out loud and answering the following questions:

> a. Paraphrase it; what information does it <u>add</u> that you don't know just from knowing the main idea?
> b. Connect it to your hypothetical example. What does it show about how you can use the strategy in your situation in a real way?

At the end of the sharing time (even if they haven't shared all three quotes, students should choose one quote that they want to use in their paper) and CIRCLE the quotation in their text.

If time, repeat for "The Effort Effect." If not, they can do this for homework:
Then give them 20 minutes to silently read and label 3 quotations from "The Effort Effect," thinking about what each quotation should add. Remind students that as they choose quotes, they should think about the key questions on the paper. (what information does it add? What does it show about how you can use the strategy in your situation in a real way?)

They will be more likely to think about it if they believe they will have to share with their partner at the end; however, at the end of the time, they should individually select one quote and circle it.

3) Fill in Student-Created outline template and add quotations (25 min)

    Materials: Outline templates

Ask students what the purpose of an outline is, and take several student ideas. (A guide, a way of organizing your ideas, a map that tells you what comes first, and next and next in your paper). Tell students that they will now fill in the outline so that as they're writing, they don't lose track of which idea they are writing about.

-Distribute the outline template, and go over what needs to go in each section. Tell students that for today, they will focus on the body paragraphs, so they should NOT fill in the thesis. They will do that tomorrow after they know what they want to say in each body paragraph.

-Before they fill in the body paragraphs, ask students to think briefly about which text they want to write about first. Which do they think should come first? Changing their students'/employees' habits? Or their mindsets? Why? Ask a few students to share their ideas and explain why.

Explain to students that there is not much space for the whole quotation because they are just taking notes – that's why the outline has the **. . .** in the middle of the quote. Tell students that as they look for their quotes, they should choose a quote that they think says something <u>interesting</u> from the text that they think connects to their hypothetical situation (just like you chose the quote about intrinsic vs. extrinsic motivation in your model paragraph).

- Give students time to fill in their outline templates. Circulate to make sure the students are <u>taking notes,</u> not writing whole paragraphs, and that they know what to put in each section.

Homework: Complete the outline template

Psychology Final Paper Outline:
A Map to Guide Your Writing

1. Introduction

Thesis: Although Duhigg and Dweck offer lots of important ideas, as a _____ ,
                                                                                    business owner/professor
I believe the most important things I can do will be to _____ and

_____ because _____ .

2. Body Paragraph

Hypothetical situation, problems and goals (My Example)

3. Body Paragraph

My first strategy is from _____

Summarize the big idea of : _____

Quote: "_____ . . . _____" (_____, p.___)

Example from the text is about: _____

4. BodyParagraph

Notes about Connecting Strategy 1 to My Example (Hypothetical Situation)

5. Body Paragraph

My first strategy is from _____

Summarize the big idea of : _____

Quote: "_____ . . . _____" (_____, p.__)

Example from the text is about: _____

6. BodyParagraph

Notes about Connecting Strategy 2 to My Example (Hypothetical Situation)

8. Conclusion

Psychology Final Paper, Lesson 4

1) Share outlines (25 minutes)

Break students into pairs. Have students read each other's outlines. Students should notice similarities and differences between their outlines, and make sure that their partner has fully filled in the template for the body paragraphs.

As students finish comparing outlines, have them talk about the main strategies from the text that they are going to use. Explain that these 2 strategies will be the focus of their paper, so they should fill these into the thesis. Have students fill in the thesis in the outline's introduction.

Students who did not complete their outline for homework can use this time to work on their outlines.

2) Write Introduction
Materials: Introduction template

Ask students what will be the first paragraph in their paper? (Introduction). Ask them what normally goes into an introduction? (a hook, summary of the text – including the title and author of the text, and a significant idea or thesis). If students have not yet learned the word thesis, tell them that most professors will call the Significant Idea a thesis. That's the big idea that the whole paper will be about.

Ask students if they think this paper will be similar or different to a CATW. Have a few students share their ideas, and then tell them that you will give them a sample introduction, but with some of the pieces missing because they will already recognize many of the pieces.

- Distribute the Introduction template. Have students read the template, then analyze its parts. Students should then share their answers in pairs before beginning to write their own introductions.

- As students begin writing their own introductions, circulate to help them. Some students may have trouble filling in the template in a way that makes sense. Other students may not be sure about what to write for the thesis. For those students, take them back to their outlines, and have them talk about what they are going to be saying in their paper – what strategies are they planning to use with their students/employees?

3) Write the body of the paper
- As students begin finishing their introduction, stop the class to ask them what comes after the introduction. Many students may say "the body," but they may not be sure about what goes in the first body paragraph. Encourage students to look back at their outlines to see that the first body paragraph is the one they have already written about problems/strategies. Tell them that not all college papers – but many – will begin with a paragraph of background like this one. Since they have already written the first body paragraph, they should go on to body #2. Remind students that they already have an idea of what body paragraph #2 will be about (Strategy #1 that

they will use), so they should explain that strategy. Some students will forget that the topic sentence should both focus on the strategy, but also connect to the thesis (which is about using these strategies in your business or class). **To help these students, write the following sentence starters on the board as optional ways of starting BP #2:**

One strategy that I will use with my _____ is to _____ . . .
                                         Employees/students   briefly explain strategy

One strategy that I will use with my _____ comes from _____ . . .
                                         Employees/students   title and author of text

As students write, teachers should circulate and read over students' shoulders to do quick coaching. Now is a good time to remind students that they are writing for an audience that has not read the texts, so everything needs to be explained fully for someone who does not already understand it. Some areas that often need coaching:

    i. Providing attribution for quotations
    ii. context for quotations and textual information; one part of this includes putting things in a logical order (for example, if their quotation is about an example, the idea needs to be explained before the example will make sense)
    iii. creating clear transitions and connections to the thesis
    iv. complete and detailed explanations

Homework: finish the first 3 paragraphs (intro, problems/goals, info about strategy #1)

Introduction Template

Read and analyze the following sample introduction template.

Thousands of _____ worldwide would love to know how to ___
business owners/professors

_____ . As _____, there is lots of bad advice out
business owners/professors

there about ways to_____ . But if you want to succeed in _____, it is important to find strategies that are proven by research. Fortunately, psychology provides a good place to start, and two psychology texts, <u>The Power of Habit</u> by Charles Duhigg and "The Effort Effect," which describes the work of psychologist Carol Dweck, offer clinically-supported advice . According to Duhigg, _____ . On a _____ note, Krakovsky suggests that _____ .
similar/different

Although Duhigg and Krakovsky offer lots of important ideas, as a _____,

business owner/professor

I believe the most important things I can do will be to _____ and

_____ because _____ .

Ananlyze the Introduction Template
- Write "**hook**" next to the hook
- Put a check ( ) next to the part of the introduction that mentions the **titles and authors**
- Write "**summary**" next to the part where you will briefly summarize the writers' ideas. Remember that since you are summarizing more than one text, your summaries will be briefer than if you were only summarizing one text.
- Write "**Thesis**" next to where you will write your thesis

After you label the parts of the introduction, write your introduction. You may use the sentence starters, or feel free to play around with them. After you have finished writing, make sure to read over your introduction to make sure that it makes sense.

Psychology Final Writing Assignment Lesson 5

1) Outlines vs. Papers (20 minutes)

- Ask students to (individually) briefly jot down notes on the difference between an outline and a paper.

After about 3 minutes of brainstorming time, ask students to share out their ideas, and create a chart on the board. Correct any misconceptions as they come up.

Their chart may look something like this:

Outline	Paper
-for us to remember what we're writing	- for the professor, or readers who don't know what we're talking about
- informal; can use abbreviations, notes	- formal; no abbreviations
- short – to help us keep track of our ideas	- write in complete sentences and paragraphs
- don't have to explain anything	- long
	- everything is fully explained for someone who doesn't understand the topic

This activity is particularly helpful to emphasize the idea of audience, and that students have to fully explain for the reader in the paper.

2) Continue Writing Papers (2 hours)

-Tell students that they will have the rest of the period to work on the paper.
Remind them when the rough draft is due.

As students write, continue reading over their shoulders to make quick corrections. The nice thing about writing a longer paper is that the length of the paper provides an opportunity for students to get coaching in the early paragraphs and then practice/self-correct in the later paragraphs.

If possible (especially for students who are exempt from either of the tests), provide 1-3 additional class periods for students to write and revise from teacher's comments.

Psychology Final Writing Assignment, Lesson 6
Note: this lesson is a good "last day of class before the writing test" lesson. It does not need to immediately follow lesson 5.

1) Final Paper Self-Reflection
Materials:
- the assessment CATWs that students wrote at orientation
- the My Final Portfolio handout

- Ask students who they think will be evaluating their final paper. (They will probably want you to evaluate it). Remind them that in order to write a good paper and do well, THEY have to be able to see what makes good writing. So the real final writing assignment is for them to look back at the FIRST paper they wrote, before the class even started, and really see and be able to explain how their writing has grown.

In particular, they are going to think about what we know makes good writing – how has critical response, development, and structure, as well as mechanics, gotten better?

Write the following instructions on the board:
- Choose a mid-semester paper: one that you think shows progress, but where you weren't as good a writer as you are now
- Carefully re-read your FIRST CATW, your mid-semester paper, and your final paper.
- Write a detailed reflection: how has your writing improved? Be as specific as you can about what you do and understand differently.
- Put all three papers together (with the best paper on top), and staple your reflection on top of all three papers and turn in your final portfolio.

- Have students read through the instructions aloud. Distribute the early CATWs, and have students look for a mid-semester paper and begin re-reading.

- As students are reading their papers, distribute the My Final Portfolio handouts. Circulate to make sure that students read all three papers (starting with the oldest) before they write the reflections, and to help them be more detailed in their self-reflection writing.

2) Giving Advice for the CATW
Materials: butcher paper and markers

-Tell students that they have learned so much as writers. The final paper is different than timed CATWs, but they have learned a lot from both. Tell students that now they are going to have a chance to give each other advice before they take their timed CATW.

-Divide students into groups, and give each group markers and butcher paper. They should write a list of everything they have learned and all of their advice for taking the CATW test.

As you circulate, help students think of more areas that they might have forgot about:
To help them broaden their lists, you can say things like:

-       what should you do the night before/morning of?
-       What if you're panicking?
-       How should you use your time?
-       What are the parts of the CATW?

-Gallery Walk: Tell students to take 10 minutes to walk around the class, reading their classmates' lists. Each student should write a star next to the 3 ideas or pieces of advice they think are most important.

- Individual Reflection and Selection: tell students that they will now share the ONE most important thing for them – advice that may make the difference for their classmates. Everyone should take a minute to write down the ONE secret of their CATW success. What is the one thing that they do that REALLY works?

After 2 minutes, have everyone stand in a circle. Go around the circle and have each student give their personal advice - the secret of their CATW success.

My Final Writing Portfolio Self-Assessment

After reading my first, middle and final papers, I learned or improved in . . .

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Thousands of business owners and managers worldwide would love to know how to get their employees how to provide better customer service. As a business professional, there is lots of bad advice out there about ways to motivate employees. But if you want to succeed in business, it is important to find strategies that are proven by research. Fortunately, psychology provides a good place to start, and two psychology texts, The Power of Habit by Charles Duhigg and "The Effort Effect" by Marina Krakovsky, which describes the work of psychologist Carol Dweck, offer clinically supported advice. According to Duhigg, knowing about how cues, routines and rewards create a habit loop can help everyone understand how to create new and better habits. On a different note, Krakovsky suggests that people go farther when they have a growth mindset and embrace challenges. Although Duhigg and Krakovsky provide lots of possible real-world applications, as a business manager of a healthcare office, I believe the most important things I can do will be to first work with the nurses at my office to see that their efforts can make a difference in patient satisfaction, and then work with them to create new and better customer service habits.

Helping nurses improve customer service is a priority at my office because right now, patient satisfaction is quite low. Although our office does provide good patient care once someone is seeing the doctors, they usually have to wait a long time, even when they have an appointment and they feel disrespected as a result. The real problem is that sometimes patients just don't show up, or they cancel at the last minute, so we have to schedule more patients than we can actually see during a normal workday. That creates big waiting times, sometimes up to an hour or two. We can't change the wait times, but I do believe that how the nurses act can

make a difference in customer satisfaction. Right now, nurses usually just tell the patients to wait, and patients have to just sit there, and get frustrated. If nurses did more to acknowledge the wait time – by telling patients how long they might have to wait, explaining the reasons for the delays, or updating the patients, it would really help the patients to feel less frustrated.

The first thing that has to change in order for customer service to improve at the office is attitude. Marina Krakovsky's description of psychologist Carol Dweck's research on mindsets is very helpful here. According to Dweck, some people have a fixed mindset. They see aptitude and achievement as fixed; either you're talented or you're not, so there's no point in trying very hard. Others, however, have a growth mindset. They understand that everyone encounters challenges, and that hard work can help you get better. As a result, the people with a growth mindset like challenges because they enjoy learning and growing. Krakovsky describes a perfect example of a child with a growth mindset from one of Dweck's studies, where students were given problems that were too hard for them to solve. This boy "faced his first stumper by pulling up his chair, rubbing his hands together, smacking his lips and announcing, 'I love a challenge'" (Krakovsky, p. 42). In other words, this student didn't just remain calm. He actually embraced the challenge. What's more, Dweck's research demonstrated that people can learn to have more of a growth mindset. In one experiment that Dweck organized, researchers worked with students that had previously had a fixed mindset. They trained half of the students to talk about their failures as coming from a lack of effort, while they did not do anything to encourage a growth mindset in the other half of the students. Not surprisingly, the students who learned to think of failure as a lack of effort worked much harder after the training.

So how can a growth mindset work in a doctor's office? The problem now is not that the nurses don't care about patients. Many of them say that they went into nursing to help people, so

they do care about the patients. But they think that the waiting time is inevitable so they think

that they can't help the patients have a better experience, which is a fixed mindset. And it is true

that wait time is inevitable, but patients don't have to have such a miserable experience. If the

nurses put effort into helping patients have a better time – by acknowledging the wait times for

example, or apologizing for the delay, or updating them about how much longer they have to

wait, then the patients would be much less frustrated. If the nurses focused more on the way that

effort could transform the patient experience, then they would give better customer service. So, I

plan to call a meeting of the nurses to talk about patient satisfaction. I will ask the nurses to

brainstorm things that they can do to give patients a better experience, especially when there are

long wait times. We will make a big list of all of their ideas, which will help them see just how

much power they have to influence the patients' experience. If they can see how their effort will

make a difference, then just like the newly growth oriented students in Dweck's study, they will

be much more willing to make the effort.

  Although a new attitude will make a big difference in customer service at our office, I

believe that changing habits will help put the new attitude into practice and make better customer

service automatic. In his book <u>The Power of Habit</u>, Charles Duhigg describes how the

combination of a cue, a routine and a reward gradually build a habit loop in our brains. That's

because if the cue, routine, reward loop is repeated enough, we come to expect that the cue will

lead automatically to the reward. Once we experience the cue, we feel like we have to do the

routine because we want the reward so badly. In fact, it becomes an automatic response. Duhigg

gives an example from dieting, saying that "research on dieting says creating new food habits

requires a predetermined cue – such as planning menus in advance – and simple rewards for

dieters when they stick to their intentions" (Duhigg, p.36). In other words, the cue cannot be

vague or general, and that is also true for bad habits. For example, explains that when we see a

donut box, we absolutely expect to eat a donut. If there is a donut box around, people will just

reach in and take a donut out of the box and eat it because that is our habit. If you see a donut

sitting in a glass case at a restaurant, you might want the donut, but you wouldn't buy it

automatically because the cue (the box) isn't there to trigger your automatic response.

So a key to getting better customer service in the office is to set up a specific customer

service habit that can become automatic. The most obvious cue that could trigger a routine

would be when the patient walks in the door. And it would be nice if patients were greeted more

warmly when they walk in the door, but the biggest problem is happening when patients have to

wait and wait, and no-one ever acknowledges them. So the cue should happen after the patient

has been waiting for a while, to get the nurse to find out the doctors' statuses, and update the

patients. I will ask nurses to help brainstorm the cue, but one idea is to get a timer that can go off

every 25 minutes. At each 25 minutes, the nurse will check to see how much longer the patient

might have to wait, and update the patient. I will have the nurses fill in the "waiting" log, and

nurses who get have a fully filled in "waiting" log at the end of a month will get a reward, like a

gift card. In order to help make the routine automatic, I will make posters demonstrating the cue

(25 minute timer), routine (updating the patients) and reward so that nurses begin to learn and

internalize it. After they do it enough times, they will begin to do it without thinking. The

automaticity of the routine will be particularly important for nurses who haven't fully bought

into a new attitude about customer service. And of course, nurses who begin to develop the habit

of updating the patients about how much time they have to wait will be rewarded with happier

and more grateful patients, which will certainly have a good effect on the nurses' beliefs about

the power of their efforts to give patients a positive experience.

As a result, the new habits and new mindset will work together to help nurses be more attuned to customer service and provide a more pleasant and respectful environment for waiting patients. Taken together The Power of Habit and "The Effort Effect" demonstrate that there is not just one type of psychology that is useful to study. Rather, different psychological points of view can work hand in hand to transform and motivate an individual or a workplace.

NOT A STUDENT HANDOUT

Thousands of business owners and managers worldwide would love to know how to get their employees how to provide better customer service. As a business professional, there is lots of bad advice out there about ways to provide better customer service. But if you want to succeed in business, it is important to find strategies that are proven by research. Fortunately, psychology provides a good place to start, and two psychology texts, <u>The Power of Habit</u> by Charles Duhigg and "The Effort Effect" by Marina Krakovsky, which describes the work of psychologist Carol Dweck, offer clinically supported advice. According to Duhigg, habits come from cues, routines and rewards. On a similar note, Krakovsky suggests that some people make more of an effort than other people, and effort helps you succeed. Although Duhigg and Krakovsky provide lots of good ideas, as a business manager of a healthcare office, I believe the most important things I can do will be to get the nurses to have good habits and to be the kind of workers that try hard because I want them to provide better customer service.

I work at a healthcare office, and the nurses don't give good customer service. They are rude to the patients and are always having phone conversations while the patients wait. The patients have to wait and wait, and the nurses and doctors never apologize for the wait. Even if they're doing something important, it looks really rude. I want the nurses (and doctors too) to be nicer to the patients when they come in and are waiting. They should stop having loud personal conversations, and they should be polite.

The first strategy that I am going to use to get the nurses to be nicer to the patients is making new habits. According to Charles Duhigg, "Studies of people who have successfully started new exercise routines, for instance, show they are more likely to stick with a workout

plan if they choose a specific cue . . . and a clear reward" (p.36). For example, Duhigg explains that the way you can make running in the morning a habit is by putting your running shoes next to your bed. When you wake up, you will see your shoes, and that will be your cue for running. Running is the routine that you always do. Then you have to give yourself a reward, like a smoothie after your run. If you do that enough times, then seeing your shoes in the morning and going for a run gets to be a habit.

Just like some people have a habit of going for a run, I want to get the nurses to make a habit of customer service. To make a habit, we need a cue, routine and response. One cue could be when the patient walks in. The routine can be that the nurse looks up and smiles and says hello. There could be different rewards for doing this routine like a contest for who's the friendliest. If they do this enough times, then it will be a habit to look up and smile and say hello when the patient walks in. This will help the nurses become more polite to the patients, just like the people in Duhigg's book who got in the habit of brushing their teeth or going for a run.

In addition to getting nurses in the habit of being nice to patients, I want to help nurses see that their effort is important. According to Marina Krakovsky, "People who attributed their failures to lack of ability, Dweck thought, would become discouraged even in areas where they were capable. Those who thought they simply hadn't tried hard enough, on the other hand, would be fueled by setbacks" (Krakovsky, p. __). That means that some people think that nothing they do matters. When they fail at something, they get really discouraged and give up. Other people see that if they try harder, they can get better. For example, Dweck did an experiment with kids and gave them really hard problems. Some of the kids just gave up and said they were failures. But the other kids really liked the hard problems because they knew that they could learn from them and get better.

35

I want the nurses to have an attitude that's more like the kids who liked hard problems. The problem in my medical office is that some patients have really bad attitudes. They're rude and they expect everything to happen right away, but sometimes the nurses are busy and can't help them right then. We can't change those patients, but we can change how we treat them. Right now, some nurses don't even try with those patients. They're rude right back, and they don't try to calm them down in a nice way. But maybe if they see that their effort makes a difference, they would be nicer. To show them that their effort makes a difference, I could ask them to think about a time when someone was nice to them, and ask them how they felt. Then they would know that being nice makes a difference.

In conclusion, the two strategies that I plan to use with the nurses at my medical office are creating good habits of smiling and saying hello when patients come in and getting nurses to have a new and more caring attitude towards the patients. These suggestions come from the psychology texts The Power of Habit and the article "The Effort Effect." These texts show how important it is to read psychology because they give great suggestions for anyone who wants to run a business better, or improve their life in any way.