

Critical Work Function: Provide routine facility support	
Key Activity	Prepare materials / supplies / equipment for use
	Use equipment correctly according to manufacturer's guidelines
Title: Set-up and proper use of a pH meter	
<p>Assessment:</p> <p>Bioscience technicians are often asked to prepare equipment and supplies for use. Students should have a sense of what is necessary to run an experiment or prepare a piece of equipment, but should be free to reference SOPs or user's manuals.</p> <p>Students can be asked to prepare a pH meter for use through calibration. Ideally, all components and supplies are stored within rooms to which the student has access. The following items should be collected by the student:</p> <ul style="list-style-type: none"> • pH meter • pH electrode • ATC probe • pH standards (commonly 4, 7, and 10) • pH electrode storage solution • squirt bottle containing water for rinsing the electrode between readings • kimwipes for blotting electrode after rinsing • electrode refilling solution, if necessary <p>Setting up the pH meter includes:</p> <ul style="list-style-type: none"> • checking the glass bulb to ensure it is intact • adding filling solution to the electrode, if necessary • plugging the electrode and ATC probe into the meter • conducting a two- or three-point calibration (depending on the meter's capability) that uses the pH 7 standard • verifying that the pH meter is performing correctly by testing the pH of an additional standard (e.g. pH 6) <p>Proper use of the pH meter and electrode includes:</p> <ul style="list-style-type: none"> • opening the electrode's filling hole while in use • rinsing the electrode with water between standard and/or sample readings 	
<p>Resources for teaching:</p> <ul style="list-style-type: none"> • Seidman, L.A., and C.J. Moore. 2009. <u>Basic Laboratory Methods for Biotechnology</u> Pearson Education, Inc., San Francisco, CA. • Seidman, L.A., M.E. Kraus, D.L. Brandner, J. Mowery. 2011. <u>Laboratory Manual for Biotechnology and Laboratory Science</u> Pearson Education, Inc., San Francisco, CA. 	

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