

Names \_\_\_\_\_

date \_\_\_\_\_ period \_\_\_\_\_

**AP Biology Lab Rubric - Inquiry Enzyme Lab**

Staple to front of lab report.

Section	Excellent guidelines	Self score	Final score
<b>Introduction - background</b>	<ul style="list-style-type: none"> <li>• Excellent background information including definitions of key terms</li> <li>• Clear connections to class content, understanding of scientific concepts</li> <li>• Citation for why your problem is significant or relevant</li> <li>•</li> </ul>		3
<b>Introduction – problem/ hypothesis</b>	Clearly states purpose/problem for lab <ul style="list-style-type: none"> <li>• Gives a clearly stated, well-reasoned, testable hypothesis</li> <li>• Specific prediction is stated based on hypothesis</li> </ul>		3
<b>Materials</b>	<ul style="list-style-type: none"> <li>• Lists <u>all</u> materials needed for the lab</li> <li>• includes scientific names for organisms (<i>Genus species</i>)</li> <li>• includes all safety information, if applicable</li> </ul>		3
<b>Procedure</b>	detailed, step by step instructions for entire lab in a numbered list <ul style="list-style-type: none"> <li>• describes how all equipment is used</li> <li>• includes tools &amp; units for all measurements</li> <li>• mentions recording data in data table</li> <li>• procedure is detailed enough so it could be duplicated by someone else</li> <li>• include a diagram of the lab setup</li> <li>• include validity measures – i.e. cleaning equipment between use, using same ruler, etc.</li> </ul> At end of procedure, clearly identify: independent variable, dependent variable, controlled variables (at least 3), control treatment (your basis for comparison)		3
<b>Results – data table</b>	<ul style="list-style-type: none"> <li>• presents data in a organized, clearly labeled data table with a descriptive title</li> <li>• collects all necessary data</li> <li>• includes qualitative data</li> </ul>		3
<b>Results - graph</b>	<ul style="list-style-type: none"> <li>• graph is correctly set-up and labeled on graph paper with a descriptive title</li> <li>• smooth curve or line is drawn to show trend of data</li> <li>• graph accurately reflects data (appropriate scale is used, graph is at least 2/3 of the page)</li> </ul>		3
<b>Conclusion</b>	<ul style="list-style-type: none"> <li>• Clearly summarizes results of lab</li> <li>• Restates hypothesis and indicate whether the data supports or does not support your hypothesis, using correct terminology</li> <li>• Explains the effect of the factor you tested on the rate of your enzymatic reaction – why does the curve in your graph have the shape that it does?</li> <li>• Gives a clear, accurate scientific explanation for the lab results</li> <li>• Discusses validity of experiment, specifies and discusses sources of error, specifies ways to improve</li> <li>• includes a thoughtful personal statement *</li> </ul>		6
<b>Reference</b>	<ul style="list-style-type: none"> <li>• reference(s) for citation(s) listed in introduction</li> </ul>		1
<b>Overall Presentation</b>	<ul style="list-style-type: none"> <li>• very neat, no ripped pages, lines made with a ruler</li> <li>• well organized, with sections labeled and in order</li> <li>• typed</li> <li>• no errors in formatting, spelling, grammar</li> <li>• rubric is attached and self graded</li> <li>• Submitted to Turnitin.com</li> </ul>		3
<b>TOTAL</b>			28

\* Ideas for personal statement: What did you learn from this lab?/ How has your understanding of the concept changed by doing the lab?