

## Hypothesis Paper Example: Essay Rubric

	Define/Describe key ideas or terms	Specific Statement of how it works or what it would look like	Total Points
A)	<p>Hypothesis: [1.5 point] A testable prediction derived from a theory; testing the hypothesis helps scientists to test the theory; theory: An apple a day keeps the doctor away!</p>	<p>[3 points] Convert to sample hypothesis: Daily exercise for one month will improve memory.</p>	
B)	<p>Independent variable [1.5 point] The experimental factor being manipulated and tested by the investigator [experimental condition/factor] p. 27</p>	<p>[3 points]</p> <ul style="list-style-type: none"> <li>• Exercise is the independent variable</li> <li>• Memory is the dependent variable</li> <li>• Exercise could be manipulated by having people in an <u>experimental group</u> jog for 30 minutes each day.</li> <li>• Memory could be measured by comparing the number of words the subjects recall from a test list studied before the experiment begins and again afterward.</li> </ul>	
	<p>Dependent variable [1.5 point] The factor being measured by the investigator; the experimenters examine the effect on independent variables on some measurable behavior. The behavior measured. p.27</p>		
	<p>The Experiment [1.5 point] To manage or control; manipulate just one factor [variable], to determine if the hypothesis may be correct [or not]. p. 25 &amp; 27</p>		
C)	<p>Control Group: [1.5 point] We experiment to evaluate two possibilities. For comparison, we create a control condition or control group identical to the experimental condition, except the condition contrasts with the experimental treatment. p. 26</p>	<p>[3 points]</p> <ul style="list-style-type: none"> <li>• Yes, a control group is needed to be able to compare the results of the experimental group.</li> <li>• The control group will not exercise.</li> <li>• In this way, any improvement in the experimental groups memory can be attributed to exercise, and not some other factor, such as the passage of time or familiarity with the test.</li> </ul> <p>The control group should engage in some non-exercise activity for the same amount of time each day that the experimental group exercises.</p>	
	<p>Why is it needed and what will it do: [1.5 point] This provides a baseline to measure the effects, if any, of the experiment. p.26</p>		
D)	<p>Random Selection or random sample [1.5 point] A sample that is representative because every member of the population has an equal chance of being included. p. 19</p>	<p>[3 points] The subjects should be randomly selected from the population at large and then randomly assigned to the experimental and control groups..</p>	
	<p>Random Assignment [1.5 point] Assigning subjects to conditions by chance, thus minimizing preexisting differences between those in the different conditions. p. 27 When done, it will roughly equalize the characteristics of each group that could possibly affect the experiment. P.26</p>		