

*Experimental design*

<i>Trait</i>	<i>Excellent</i>	<i>Satisfactory</i>	<i>Unsatisfactory</i>	<i>No Credit</i>
<b>I.</b>	All the materials needed to complete the investigation are listed.  (5 pts)	All the materials needed to complete the investigation are listed but specific sizes <b>and/or</b> amounts of materials are missing. (3 –4 pts)	The materials list for the investigation is non-specific <b>or</b> grossly incomplete.  (1 – 2 pts)	No materials are listed.  (0 pts)
<b>II.</b>	<u>All appropriate</u> safety guidelines are clearly stated.  (5 pts)	<u>Some</u> safety guidelines are clearly stated.  (3 –4 pts)	Safety guidelines are inappropriate for the investigation <b>and/or</b> unclear. (1 - 2 pts)	No safety guidelines are presented.  (0 pts)
<b>III.</b>	Step by step procedures necessary for carrying out the investigation are detailed, clear and complete.  (8 - 10 pts)	Step by step procedures are complete but lack details and clarity which make the sequence of events difficult to follow. (6 – 7 pts)	Sequence of procedural steps is unclear <b>and/or</b> lacks enough detail to properly carry out the investigation.  (2 - 5 pts)	No procedures are listed <b>or</b> some steps are listed but are not complete enough to finish the investigation.  (0 - 1 point)
<b>IV.</b>	The design of the experiment clearly explains <u>what</u> variables are being measured and <u>how</u> data is being collected. The independent variable(s) and dependent variable(s) are the same as listed in the problem statement & hypothesis.  (12 – 15 pts)	The design of the experiment lacks some details concerning what dependent variable(s) are being measured and how data will be collected <b>or</b> the variables are different from the problem statement & hypothesis.  (9 – 11 pts)	The design of the experiment is vague concerning what dependent variable(s) are being measured and how data will be collected <b>and</b> the variables differ from the ones listed in the problem statement & hypothesis. (5 – 8 pts)	The design of the experiment gives no indication what variable(s) are being measured <b>or</b> how data will be collected.
<b>V.</b>				<b>Section not graded</b>
<b>VI.</b>	A detailed and labeled diagram of the experimental setup is present <b>and</b> enhances the understanding of the written procedures. (4 - 5 pts)	A diagram is present but either lacks detail <b>or</b> does not augment the written procedure. (2 – 3 pts)	A diagram of the experimental setup is present but lacks detail <b>and</b> does not reinforce the written procedure.  (1 pt)	No diagram of the experimental setup is present.  (0 pts)
	Experimental conditions being held constant are identified <u>and</u> a reasonable control is stated. If no control is present, its absence is justified. (5 pts)	<u>Most</u> experimental conditions being held constant are identified <b>or</b> the control is either unreasonable or its absence is not justified.  (3 - 4 pts)	<u>Few</u> experimental conditions being held constant are identified <b>and</b> there is no mention of a control or justification for its absence. (1 – 2 pts)	No attempt is made to hold experimental conditions constant <b>and/or</b> there is no mention of a control.  (0 pts)
<b>VII.</b>		Proper grammar, spelling, capitalization and punctuation are evident throughout. Errors are minimal.  (3 - 5 pts)	Proper grammar, spelling, capitalization and punctuation are evident <u>but</u> errors are a distraction to the reader.  (0 - 2 pts)	Errors in grammar, spelling, capitalization and punctuation make the experimental design difficult to read and interpret. <b>Section not graded.</b> <b>Rewrite may be required.</b>

Comments:

Score \_\_\_\_\_ / 50 points