

Honors Science Project Experimental Design Rubric

STUDENT NAME _____

Category	Exceeding Expectations	Meeting Expectations	Approaching Expectations	Not Yet Meeting Expectations
Problem Statement	Problem is narrowly focused and suggests how the answer will be investigated	Problem is answerable and narrowly focused	Problem is answerable, but not narrowly focused	Question is too broad and not practically investigated
Hypothesis	<ul style="list-style-type: none"> Hypothesis is testable and clearly stated in acceptable format Predicts relationship between independent and dependent variables 	<ul style="list-style-type: none"> Hypothesis is testable and clearly stated in acceptable format It predicts the influence of one variable on another 	Hypothesis is clearly stated	Hypothesis is poorly stated
Variables/ Controls	<ul style="list-style-type: none"> Correctly identifies specific, measurable independent and dependent variables All necessary conditions held constant are accurately identified All appropriate units of measurement given 	<ul style="list-style-type: none"> Correctly identifies specific, measurable independent and dependent variables All necessary conditions held constant are accurately identified 	<ul style="list-style-type: none"> Identifies variable being tested and variable being measured Some conditions held constant are accurately identified 	Variables and constants significantly incomplete and/or inaccurate
Materials	<ul style="list-style-type: none"> Materials with sizes and quantities are completely presented in vertical list format Includes all appropriate safety concerns 	<ul style="list-style-type: none"> Materials with sizes and quantities are presented Includes all appropriate safety concerns 	<ul style="list-style-type: none"> Most materials are listed and appropriate Includes critical safety concerns 	<ul style="list-style-type: none"> Materials quite incomplete or inappropriate for experiment Safety concerns trivial or inadequately addressed
Experimental Procedure	<ul style="list-style-type: none"> Accurately tests the hypothesis Conducts or analyzes at least 5 trials Procedure is in vertical list format, accurate, complete, easy-to-follow, and reproducible by another person; includes diagrams to clarify procedures if necessary Independent variables are incrementally changed most appropriately Indicates what data will be collected Includes all appropriate safety concerns 	<ul style="list-style-type: none"> Accurately tests the hypothesis Conducts or analyzes at least 5 trials Procedure is in vertical list format, accurate, complete, easy-to-follow, and reproducible by another person; includes diagrams to clarify procedures if necessary Indicates what data will be collected Includes all appropriate safety concerns 	<ul style="list-style-type: none"> Attempts to test hypothesis Multiple trials attempted or need is recognized Step-by-step procedure, generally complete; minor errors/omissions make it difficult to follow or not always repeatable Includes critical safety concerns 	<ul style="list-style-type: none"> Does not address hypothesis Single trial, poor understanding of use of multiple trials Procedure difficult to follow; major omissions or errors Safety concerns trivial or inadequately addressed
Bibliography	<ul style="list-style-type: none"> 5+ credible sources Full scope of topic covered by research Correct APA format used throughout 	<p>ONE NOT EVIDENCED</p> <ul style="list-style-type: none"> 5+ credible sources Full scope of topic covered by research Correct APA format used throughout 	<p>TWO NOT EVIDENCED</p> <ul style="list-style-type: none"> 5+ credible sources Full scope of topic covered by research Correct APA format used throughout 	<p>ALL NOT EVIDENCED</p> <ul style="list-style-type: none"> 5+ credible sources Full scope of topic covered by research Correct APA format used throughout