**HONORS SCIENCE PROJECT EXPERIMENTAL DESIGN RUBRIC**

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| 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 | • Hypothesis is testable and clearly stated in acceptable format  • Predicts relationship between independent and dependent variables  • Scientific reasoning is used to clearly justify the hypothesis | • Hypothesis is testable and clearly stated in acceptable format  • Predicts relationship between independent and dependent variables  • Scientific reasoning is used to justify the hypothesis | • Hypothesis is clearly  stated  • It predicts the influence of one variable on another | Hypothesis is poorly stated and doesn’t directly mention the variables |
| Variables/ Controls | • Correctly identifies specific, measurable independent and dependent variables  • All necessary conditions held constant are accurately identified  • All appropriate units of measurement given | • Correctly identifies specific, measurable independent and dependent variables  • All necessary conditions held constant are accurately identified | • Identifies variable being tested and variable being measured  • Some conditions held constant are accurately identified | Variables and constants significantly incomplete and/or inaccurate |
| Materials | • Materials with sizes and quantities are completely presented in vertical list format  • Includes all appropriate safety concerns | • Materials with sizes and quantities are presented  • Includes all appropriate safety concerns | • Most materials are  listed and appropriate  • Includes critical safety  concerns | • Materials quite incomplete or inappropriate for experiment  • Safety concerns trivial or inadequately addressed |
| Experimental Procedure | • 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 | • 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 | • 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 | • 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 | • 5+ credible sources  • Full scope of topic covered by research  • All correct APA format | One not evidenced:  • 5+ credible sources  • Full scope of topic covered by research  • All correct APA format | Two not evidenced:  • 5+ credible sources  • Full scope of topic covered by research  • All correct APA format | All not evidenced:  • 5+ credible sources  • Full scope of topic covered by research  • All correct APA format |