**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 |