

STEM Project Criteria for Success (Grades 3-5)

Project Title: _____

Name: _____

Category: _____

Scientific Investigation Criteria	Engineering Design Criteria
<p>Ask a Question</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Ask a clear measurable/testable question to investigate. <input checked="" type="checkbox"/> Make a logical claim focused on one variable change. 	<p>Define a Problem</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Clearly describe a problem to be solved. <input checked="" type="checkbox"/> Make a logical claim, focused on the best solution.
<p>Obtain and Evaluate Information (Research)</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Gather and read information from reliable sources to support the claim. 	<p>Obtain and Evaluate Information (Research)</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Gather and read information from reliable sources to support the claim.
<p>Plan/Design Investigation</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Plan a logically organized procedure. <input checked="" type="checkbox"/> Identify the independent variable (variable changed). 	<p>Plan Best Solution Design</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Create a logical plan for building a prototype. <input checked="" type="checkbox"/> Identify the limitations of the prototype.
<p>Carry Out Investigation Design Plan</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Conduct multiple trials. <input checked="" type="checkbox"/> Collect measurable data from trials. 	<p>Carry Out Solution Design Plan</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Create prototype for best possible solution. <input checked="" type="checkbox"/> Conduct multiple trials to test prototype for intended purpose. <input checked="" type="checkbox"/> Collect measurable data from trials. <input checked="" type="checkbox"/> Redesign solution (as needed).
<p>Use Mathematics and Computational Thinking to Analyze and Interpret Data</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Organize data into tables/graphs. <input checked="" type="checkbox"/> Explain patterns in data. 	<p>Use Mathematics and Computational Thinking to Analyze and Interpret Data</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Organize data into tables/graphs. <input checked="" type="checkbox"/> Explain and use patterns in data to redesign the prototype.
<p>Construct Evidence-Based Written Explanation (Conclusion)</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Write a conclusion linking the data and research to claim. 	<p>Construct Evidence-Based Explanation (Conclusion)</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Write a conclusion linking the data and research to claim.
<p>Construct Evidence-Based Oral Explanation (Presentation)</p> <p>Explain the:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Relevance of the question. <input checked="" type="checkbox"/> Challenges with investigation. <input checked="" type="checkbox"/> Solutions to the challenges. <input checked="" type="checkbox"/> Quality ideas for further investigation. 	<p>Construct Evidence-Based Explanation (Presentation)</p> <p>Explain the:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Relevance of the problem. <input checked="" type="checkbox"/> Solution idea. <input checked="" type="checkbox"/> Challenges with the prototype (limitations) <input checked="" type="checkbox"/> Solutions to improve the prototype.

