

**STEM Fair Feedback Glow and Grow Form**  
 Our school STEM Fair will be held the week of November 14th.



Student's Name: \_\_\_\_\_ Grade: \_\_\_\_\_ Teacher's Name: \_\_\_\_\_  
 Stem Fair Question: \_\_\_\_\_

Parent Signature: \_\_\_\_\_

Date Assigned- Due Date	Things to Do	Teacher Feedback/ Glow and Grow
August 29- September 9	<b>Decide your topic and which question you will investigate.</b> Remember, your question must be TESTABLE and MEASURABLE. <b>Begin keeping a data log.</b> <i>Write in your data log.</i>	<input type="checkbox"/> Is the question TESTABLE and MEASUREABLE? <input type="checkbox"/> Has the STEM Fair log been started and dated?
September 12 -16	<b>Write the purpose</b> for your investigation. <i>Write in your data log.</i>	<input type="checkbox"/> Is the <b>purpose</b> written in 1 to 3 sentences explaining why you are doing this experiment? Do you have a relevant, real world purpose?
September 19-23	<b>Do any necessary research for your topic.</b> <b>Write in your data log.</b>	<input type="checkbox"/> Has the research been documented in student words in STEM Log? Are there copies of the research or links written in the log book?
September 26- September 30	<b>Write your hypothesis.</b> Remember, this is a statement giving a possible answer to the question that you are testing in your experiment. <i>Write in your data log.</i>	<input type="checkbox"/> Does the <b>hypothesis</b> state what you think is going to happen and why (because)? <input type="checkbox"/> <b>Has the STEM Log been updated including reflections?</b>
October 3-October 7	<b>Create a materials list</b> of what you will need in order to conduct your experiment. Begin to collect your materials. <i>Write in your data log.</i>	<input type="checkbox"/> Are all of the materials that will be used in the experiment listed? <input type="checkbox"/> Is how much and what kind of materials used listed? <input type="checkbox"/> <b>Has the STEM Log been updated including reflections?</b>
October 10-14	<b>Create your VARIABLES list.</b> Tell what the manipulated (independent), responding (dependent), and constant (controlled) variables will be. <i>Write in your data log.</i>	<input type="checkbox"/> <b>Manipulated/Independent Variable</b> – What you change (test) on purpose in an experiment. <input type="checkbox"/> <b>Responding/Dependent Variable</b> – What changes by itself because you changed something in your experiment? It is measured. <input type="checkbox"/> <b>Variables Held Constant</b> – What is done the same in each trial? There should be several! <input type="checkbox"/> <b>Has the STEM Log been updated including reflections?</b>
October 17-21	<b>Write your step-by-step directions</b> for your experiment. Be clear and concise. Include specific details, numbers, etc! <i>Write in your data log.</i>	<input type="checkbox"/> Are the step by step directions written like a recipe with specific details and numbered? <input type="checkbox"/> Has the STEM Log been updated?

October 24-28	<p><b>Create a data chart</b> that you will use to collect your data.  <b>Begin or continue) to collect data for your experiment!</b> <i>Write in your data log.</i></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Are there pictures or drawings to support/show how and what you did in your experiment?</li> <li><input type="checkbox"/> The data collected during the course of your experiment needs to be quantifiable (measurable). We encourage you to measure measurements and tools used in math class.</li> <li><input type="checkbox"/> <b>Has the data been recorded in a data table?</b></li> </ul>
October 31-11/4	<p><b>Graph and interpret your data.</b> Create a graph of the data you collected. Does your data call for a bar graph or a line graph? <i>Write in your data log.</i></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>bar graph</b> – shows unrelated data</li> <li><input type="checkbox"/> <b>line graph</b> – shows data over time (like growing plants) or continuous data (like a relation between increasing power and speed)</li> <li><input type="checkbox"/> <b>Has the STEM Log been updated including reflections?</b></li> <li><input type="checkbox"/> <b>Is there a title?</b> (<i>this should match the title of the data table</i>)</li> <li><input type="checkbox"/> <b>Is the X axis labeled</b> (<i>the bottom of the graph</i>)?</li> <li><input type="checkbox"/> <b>Is the Y axis labeled</b> (<i>the side of the graph</i>)?</li> <li><input type="checkbox"/> <b>Is there a key</b> (<i>tells what the colors/designs represent</i>)?</li> <li><input type="checkbox"/> <b>Is the STEM Log updated including reflections?</b></li> </ul>
November 4-11/11	<p><b>Analyze Data and Conclusion.</b> Tell whether your hypothesis was supported by your data or not. Tell about unusual findings and explain what you LEARNED from the investigation. <i>Write in your data log.</i></p> <p><b>Utilize this week to finalize student STEM Fair notebooks</b>  <b>Be sure to reflect on your project and document.</b>  <b>Turn your completed STEM project and STEM log into your teacher.</b>  <b>Now think:</b>  <b>What questions do you still have?</b>  <b>How could you change your experiment if you were to re-do it?</b>  <b>Is there something else about this topic that you want to investigate? Record lingering questions in your science notebook for future investigations!</b>  <b>Class Teachers: You may keep your grades for each step of the project or provide one grade for the entire project. Pick your two best projects for the school wide competition.</b></p>	<p>The conclusion should include:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 1. A statement of <b>support or non-support</b> of the original hypothesis.</li> <li><input type="checkbox"/> 2. A <b>reflection of the hypothesis</b>. Did the data support the original hypothesis?</li> <li><input type="checkbox"/> 3. A <b>description of any problems or unusual events</b> that occurred during the investigation.</li> <li><input type="checkbox"/> 4. What <b>could be done</b> differently to the experiment next time?</li> <li><input type="checkbox"/> 5. Compare the results with your background information.</li> <li><input type="checkbox"/> 6. Why is the <b>experiment important</b>?</li> <li><input type="checkbox"/> 7. What are the <b>real world connections</b>?</li> </ul>
<p>November 11</p> <p>Week of November 14</p> <p>November 30</p>	<p><b>Class Teachers- Please submit your two grade level winners for school Stem judging.</b>  <b>Primary grades- Please submit your boards for judging.</b></p> <p><b>School-wide judging.</b></p> <p><b>District STEAM competition- February 27<sup>th</sup> setup, February 28<sup>th</sup> judging</b></p> <p><b>School Stem night</b></p>	<p>Is the STEM log complete?</p>