

Scientific Inquiry Scoring Guide

	Forming a Question & Hypothesis	Designing an Investigation (Experiment)	Collecting & Presenting Data (Results)	Analyze & Interpret Data (Conclusion + Repeat / Revise)
5-6 Exceeds the standard!! 😊😊😊 😊😊 Excellent!! 😊😊	<p>A) You have a scientifically interesting question and hypothesis; well explained; -can be answered or tested.</p> <p>B) You show good knowledge of important scientific concepts, and you explain how they relate to your investigation.</p> <p>C) You describe in detail the observations that led you to your question.</p>	<p>A) Your design shows you're using scientific knowledge</p> <p>B) Your results (data) will let you answer your question and might even lead you to new and more complex questions.</p> <p>C) Your plan and procedures are described in enough detail that someone could replicate (copy) your experiment for themselves.</p>	<p>A) -same as A below, plus: Your data comes from complex procedures carried out correctly.</p> <p>B) Your graphic displays (graphs etc.) highlight the patterns and relationships you want to explain</p> <p>C) Your graphic displays are logical, precise and thorough (complete)</p>	<p>A) You form a conclusion that is supported by your results, and clearly explain how your results support this conclusion.</p> <p>B) You use scientific knowledge to report and discuss your findings (relationships you see).</p> <p>C) You identify limitations or sources of error, and suggest improvements.</p>
4 Meets the standard! 😊 -Way to go!! 😊	<p>A) You clearly explain your question and hypothesis, and you have a hypothesis that can be tested.</p> <p>B) You show some background scientific knowledge and explain how it leads you to your hypothesis or relates to your investigation.</p> <p>C) You describe your observations that led to your question.</p>	<p>A) Your design is logical (makes sense), safe, and ethical (no-one is harmed).</p> <p>B) Your results (data) will help you answer your question (they will show if your hypothesis is right or wrong).</p> <p>C) You describe your plan well and include details on the procedures.</p> <p>Hint: well-labeled diagrams can help a lot!</p>	<p>A) Your measurements and observations are recorded carefully and correctly (charts, tables).</p> <p>B) Your graphic displays are useful to interpret (they show your results in a way that is easy to understand what happened)</p> <p>C) Your graphic displays (graphs, charts, tables) are complete (titles, keys, units)</p>	<p>A) You use your results to make a conclusion that answers your question or hypothesis. If you find that your question cannot be answered, you explain why</p> <p>B) You use scientific knowledge to propose explanations.</p> <p>C) You review the design and procedures and suggest improvements.</p>
1-3 Not there yet. 😞 -Keep trying!! 😊	<p>A) Your question and/or hypothesis could probably be explained more clearly. Your hypothesis might be kind of hard to test.</p> <p>B) Your background knowledge may be incomplete or incorrect or only partly relate to your investigation. Do research.</p> <p>C) You could try to describe your observations better.</p>	<p>A) Your plan might have some scientific errors in it.</p> <p>B) Your results (data) might not really be able to answer your question very well. (Your results might not be able to really tell you if your hypothesis was right or wrong.)</p> <p>C) Try to include a few more details in your description of your experiment or plan.</p>	<p>A) There are some errors: ex. equipment is used incorrectly or carelessly, or important variables (factors) are not controlled</p> <p>B) Your graphic displays may not be the most useful for showing what happened.</p> <p>C) Your graphic displays might be a little disorganized or inaccurate, or incomplete (units, etc)</p>	<p>A) Your conclusion isn't well enough supported by your results, or it doesn't answer your question or tell you if your hypothesis was right or wrong.</p> <p>B) The explanation of your results needs some improvement, or it may have some scientific errors.</p> <p>C) Limitations of design or errors should be discussed.</p>