

Science Fair Experiment Checklist

Complete	List of Tasks to Complete	Verify this step is complete
	Project Decision	
	Based upon your thoughts and interests, write a testable and measureable question in your journal that could be used for your experiment.	Journal: A dated journal entry containing a testable and measurable question for experiment.
	Do you have the same curiosity as someone else in your class? If so, you can decide to work with them on the project. Complete the Partner Pact.	Journal: A dated journal entry listing the name(s) of your partner(s) or a sentence stating you would like to work alone.
	Rewrite Experiment Question	
	Rewrite your question in the format “When X is changed what will happen to Y?” where X is the “thing” you will change and Y is the “thing” you will measure. What are you going to change (X) and what are you going to measure/test (Y)?	Journal: A dated journal entry containing your project question written in the “When X is changed, what will happen to Y?” format.
	Based upon previous step, determine the independent variable, dependent variable and all control for your experiment. X is the independent variable and Y is the dependent variable. The controls are all conditions that you will ensure stay the same for all parts of the experiment.	Journal: A dated journal entry containing sentences indicating the independent (X), dependent (Y) and control variables.
	Research	
	Research your topic to help you understand the “science” behind your topic. Your textbook is a good place to start. Enter any notes in your journal (be sure to write the date and source).	Journal check: Dated journal entry with at least 3 facts you found about the science related to your project.
	Write an If/Then hypothesis based upon the “When I change X what will happen to Y?” question. If something is done to X then this will happen to Y because ... Where you replace X and Y with the independent and dependent variables and explain why you think this is what will happen. You are trying to cause something to see if it has an effect on something else.	Journal check: Dated journal entry with an If/then hypothesis related to the project question.
	Experiment	
	Create, or copy, a detailed step by step procedure for your experiment.	Journal check: Dated journal entry containing detailed step by step procedure.

Complete	List of Tasks to Complete	Verify this step is complete
	Write the list of materials, including amounts, needed for the experiment.	Journal check: Dated journal entry with complete list of materials.
	Determine what you will need to observe during your experiment. How will you collect and record your data? Write in your journal exactly what you plan to observe or measure. rewrite	Journal check: Dated journal entry indicating your understanding of what you will be observing or measuring during the experiment.
	Prepare Journal for Data Collection	
	The list of materials written in your journal is complete. The procedure for your experiment is written in step by step format and detailed enough that anyone reading your journal could conduct the experiment. Draw any data tables for recording observations/measurements in your journal.	Journal check: Dated journal entry with a detailed step by step procedure and accurate list of materials including any measurement apparatus. Data tables are drawn for collection of data during experiment.
	Conduct Experiment	
	Conduct at least 3 trials of your experiment and record your observations in your journal.	Journal check: Dated journal entries indicating observations from 3 trials of experiment.
	Include pictures/drawings/sketches in journal for proof of your experiment. (Keep copies of pictures to include on your display board.) Try not to have your face in the pictures.	Journal check: Completed data table with data indicating experiment is complete.
	Analyze Your Results	
	Analyze your data and observations in your journal. Look for patterns. Describe your data by explaining any relationships you have discovered between the independent variable and the dependent variable. It is OK if your data indicates a lack of a relationship just be sure to write this in your journal and a reason why you think there is no relationship after you have learned more from this experiment. Write any questions you may have as a result of conducting your experiment or analysis.	Journal check: Dated journal entry/ies indicating the results of each sentence listed to the left.
	Was your initial question answered?	Journal check: Dated journal entry answering question at left.
	Look back in your journal at your hypothesis. Based upon your observations, was your hypothesis supported? How does the data answer this question?	Journal check: Dated journal entry containing the original hypothesis and answers to questions at left.

Complete	Schedule of Weekly Events	What is due
	Complete data graphs	Journal check: Dated journal entry with any applicable graphs as noted in a journal review.
	Conclusion: What conclusion can you draw from the results of your experiment? What did you learn from this experiment? If you had the time to do this experiment again, what would you do differently? Do you have any new/additional questions as a result of conducting this experiment?	Journal check: Dated journal entry indicating a conclusion that answers all questions listed at the left.
	Write Report and Abstract	
	Set up outline for written report using the Step Up To Writing format for outlines.	Journal check: Dated journal entry containing an outline for your report.
	Write a draft of your report using your Step Up To Writing outline and any handouts provided by your teacher.	Journal check: Hand written DRAFT REPORT written in dated journal entry/ies.
	Update research by adding questions AND finding the answers for any questions you came up with while performing your analysis or while writing your report. REMEMBER TO ALWAYS DOCUMENT SOURCES.	Journal check: Answers to questions written in data journal entries along with source citation. Or, dated journal entry indicating you have no further questions regarding this subject.
	Write Abstract Draft according to handout provided by teacher.	Journal check: Hand written draft of abstract written in journal.
	Project Review	
	Locate the judging rubric for an experiment at the county web site and make sure your project addresses all items listed. Update your journal and report as needed.	Dated journal entry indicating you have reviewed your project against the judging rubric for an experiment and made changes as necessary.
	Type Report and Assemble Tri-Board	
	Type Report including any changes indicated in hand written draft. DO NOT PUT NAME OR SCHOOL ON REPORT, ONLY NUMBER AND GRADE.	TYPED REPORT. Print an extra copy of the Abstract so
	Type Abstract. DO NOT PUT NAME OR SCHOOL ON ABSTRACT, ONLY NUMBER AND GRADE.	TYPED SINGLE PAGE ABSTRACT
	Assemble tri-board. DO NOT PUT NAME OR SCHOOL ON FRONT OF TRI-BOARD; ONLY WRITE NUMBER AND GRADE ON BACK.	Tri-Board