

Science Fair Project Question Checklist

What Makes a Good Science Fair Project Question?	For a Good Science Fair Project Question, You Should Answer "Yes" to Every Question
Is the topic interesting enough to read about, then work on for the next couple months?	Yes / No
Can you find at least 3 sources of written information on the subject?	Yes / No
<p>Can you measure changes to the important factors (variables) using a number that represents a quantity such as a count, percentage, length, width, weight, voltage, velocity, energy, time, etc.?</p> <p>Or, just as good, are you measuring a factor (variable) that is simply present or not present? For example,</p> <ul style="list-style-type: none"> • Lights ON in one trial, then lights OFF in another trial, • USE fertilizer in one trial, then DON'T USE fertilizer in another trial. 	Yes / No
Can you design a "fair test" to answer your question? In other words, can you change only one factor (variable) at a time, and control other factors that might influence your experiment, so that they do not interfere?	Yes / No
Is your experiment safe to perform?	Yes / No
Do you have all the materials and equipment you need for your science fair project, or will you be able to obtain them quickly and at a very low cost?	Yes / No
Do you have enough time to do your experiment more than once before the science fair?	Yes / No
Does your science fair project meet all the rules and requirements for your science fair?	Yes / No
Have you checked to see if your science fair project will require SRC (Scientific Review Committee) approval?	Yes / No
Have you avoided the bad science fair project topic areas listed in the table above?	Yes / No

Background Research Plan Checklist

What Makes a Good Background Research Plan?	For a Good Background Research Plan, You Should Answer "Yes" to Every Question
Have you identified all the keywords in your science fair project question?	Yes / No
Have you used the question word table to generate research questions?	Yes / No
Have you thrown out irrelevant questions?	Yes / No
Will the answers to your research questions give you the information you need to design an experiment and predict the outcome?	Yes / No
Do one or more of your research questions specifically ask about any equipment or techniques you will need to perform an experiment? (if applicable)	Yes / No
If you are doing an engineering or programming project, have you included questions from Engineering & Programming Project Tips?	Yes / No

Hypothesis Checklist

What Makes a Good Hypothesis?	For a Good Hypothesis, You Should Answer "Yes" to Every Question
Is the hypothesis based on information contained in the Research Paper?	Yes / No
Does the hypothesis include the independent and dependent variables?	Yes / No
Have you worded the hypothesis so that it can be tested in the experiment?	Yes / No
If you are doing an engineering or programming project, have you established your design criteria?	Yes / No

Materials List Checklist

What Makes a Good Materials List?	For a Good Materials List, You Should Answer "Yes" to Every Question
Have you listed all necessary materials?	Yes / No
Have you described the materials in sufficient detail?	Yes / No

Experimental Procedure Checklist

What Makes a Good Experimental Procedure?	For a Good Experimental Procedure, You Should Answer "Yes" to Every Question
Have you included a description and size for all experimental and control groups?	Yes / No
Have you included a step-by-step list of all procedures?	Yes / No
Have you described how to change the independent variable and how to measure that change?	Yes / No
Have you explained how to measure the resulting change in the dependent variable or variables?	Yes / No
Have you explained how the controlled variables will be maintained at a constant value?	Yes / No
Have you specified how many times you intend to repeat the experiment (should be at least three times), and is that number of repetitions sufficient to give you reliable data?	Yes / No
The ultimate test: Can another individual duplicate the experiment based on the experimental procedure you have written?	Yes / No
If you are doing an engineering or programming project, have you completed several preliminary designs?	Yes / No

Data Analysis Checklist

What Makes for a Good Data Analysis Chart?	For a Good Chart, You Should Answer "Yes" to Every Question
Is there sufficient data to know whether your hypothesis is correct?	Yes / No
Is your data accurate?	Yes / No
Have you summarized your data with an average, if appropriate?	Yes / No
Does your chart specify units of measurement for all data?	Yes / No
Have you verified that all calculations (if any) are correct?	Yes / No

Graph Checklist

What Makes for a Good Graph?	For a Good Graph, You Should Answer "Yes" to Every Question
Have you selected the appropriate graph type for the data you are displaying?	Yes / No
Does your graph have a title?	Yes / No
Have you placed the independent variable on the x-axis and the dependent variable on the y-axis?	Yes / No
Have you labeled the axes correctly and specified the units of measurement?	Yes / No
Does your graph have the proper scale (the appropriate high and low values on the axes)?	Yes / No
Is your data plotted correctly and clearly?	Yes / No

Conclusions Checklist

What Makes for Good Conclusions?	For Good Conclusions, You Should Answer "Yes" to Every Question
Do you summarize your results and use it to support the findings?	Yes / No
Do your conclusions state that you proved or disproved your hypothesis? (Engineering & programming projects should state whether they met their design criteria.)	Yes / No
If appropriate, do you state the relationship between the independent and dependent variable?	Yes / No
Do you summarize and evaluate your experimental procedure, making comments about its success and effectiveness?	Yes / No
Do you suggest changes in the experimental procedure and/or possibilities for further study?	Yes / No

Science Fair Project Final Report Checklist

What Makes for a Good Science Fair Project Final Report?	For a Good Science Fair Project Final Report, You Should Answer "Yes" to Every Question
<p>Does your final report include:</p> <ul style="list-style-type: none"> • Title page. • Abstract. • Table of contents. • Question, variables, and hypothesis. • Background research. • Materials list. • Experimental procedure. • Data analysis and discussion (including data table and graph(s)). • Conclusions. • Bibliography. 	Yes / No

Science Fair Project Display Board Checklist

What Makes for a Good Science Fair Project Display Board?	For a Good Science Fair Project Display Board, You Should Answer "Yes" to Every Question
<p>Does your display board include:</p> <ul style="list-style-type: none"> • Title • Question • Variables and hypothesis • Background research • Materials list • Experimental procedure • Data analysis and discussion including data chart(s) & graph(s) • Conclusions (including ideas for future research) • Bibliography 	Yes / No
Are the sections on your display board organized like a newspaper so that they are easy to follow?	Yes / No
Is the text font large enough to be read easily (at least 16 points)?	Yes / No
Does the title catch people's attention, and is the title font large enough to be read from across the room?	Yes / No
Did you use pictures and diagrams to effectively convey information about your science fair project?	Yes / No
Have you constructed your display board as neatly as possible?	Yes / No
Did you proofread your display board?	Yes / No
Did you follow all of the rules pertaining to display boards for your particular science fair?	Yes / No