

Science Project Proposal Form

Student Name:

| The question I plan to investigate in my experiment (please phrase as a question): | | | | | |
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| Sc | ience Project Question Checklist | |
|----|--|----------------------|
| 1. | Your teacher may put some restrictions on projects. Have you met your teacher's requirements? | Yes / No |
| 2. | Is the topic interesting enough to read about, then work on for the next couple months? | Yes / No |
| 3. | Can you find at least 3 sources of written information on the subject? | Yes / No |
| 4. | 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.? Or, just as good, are you measuring a factor (variable) that is simply present or not present? For example, Lights ON in one trial, then lights OFF in another trial USE fertilizer in one trial, then DON'T USE fertilizer in another trial | |
| 5. | 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 |
| 6. | Is your experiment safe to perform? | Yes / No |
| 7. | Do you have all the materials and equipment you need for your project, or will you be able to obtain them quickly and at a very low cost? | Yes / No |
| 8. | Do you have enough time to do your experiment more than once before the due date? | Yes / No |
| 9. | If you are planning to enter a science fair outside of your school: Does your project meet all the rules and requirements for the science fair? Have you checked to see if your science fair project will require approval from the fair before you begin experimentation? | Yes / No Yes / No |

I have discussed the project idea and the checklist with my parent(s) and I am willing to commit to following through on this project.

| Student Signature | D-4- |
|-------------------|------|
| Diddent Dignature | Date |

I have discussed the project idea and the checklist with my student and I believe he or she can follow through with this project. I agree to supervise the safety of the project steps that my student performs at home.

Parent Signature Date

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Grading Rubric: Science Project Question

| Name: Date: | ······································ | | |
|---|--|----|--|
| 0 = No Evidence 1 = Some Evidence 2 = Clearly Evident | | | 140 - 141 - 141 - 141 - 141 - 141 |
| Is the topic original, or does the project present an original variation to a commonly done project? | 0 | 1. | 2 |
| Are there at least 3 sources of offline information that can easily be found on the subject? | 0 | 1 | 2 |
| Are the changes to the independent/dependent variables measurable using a number that represents a quantity such as a count, length, width, weight, voltage, time, etc.? Or, just as good, is the variable one that is simply present or not present? For example, • Lights ON in one trial, then lights OFF in another trial, • USE fertilizer in one trial, then DON'T USE fertilizer in another trial. | | | 2 |
| Is it possible to control other factors that might influence the data that is collected during the experiment, so that they do not interfere with the results? | 0 | 1 | 2 |
| Is the experiment safe to perform? | 0 | 1 | 2 |
| Does the student have all the materials and equipment needed for the project, or are they able to obtain them quickly and at a reasonable cost? For human behavior or sociology projects, does the student have access to a large enough sample of people to properly administer the survey? | | | 2 |
| Does the student have enough time to do the experiment more than once before the science fair? | 0 | 1 | 2 |
| Does the project meet all the rules and requirements for the science fair? | 0 | 1 | 2 |
| Has the student checked to see if the project will require SRC (Scientific Review Committee) approval? | 0 | 1 | 2 |
| Has the student avoided the bad topic areas listed in the table below? | 0 | 1 | 2 |
| Total Score (To convert to 100 points scale: Total Score x 5) | | | / 20 |
| Comments: | | | |

| Topic to Avoid | Why |
|--|---|
| Any topic that boils down to a simple preference or taste comparison. For example, "Which tastes better: Coke or Pepsi?" | Such experiments don't involve the kinds of numerical measurements we want in a science fair project. They are more of a survey than an experiment. |
| Most consumer product testing of the "Which is best?" type. This includes comparisons of popcorn, bubblegum, make-up, detergents, cleaning products, and paper towels. | These projects only have scientific validity if the Investigator fully understands the science behind why the product works and applies that understanding to the experiment. While many consumer products are easy to use, the science behind them is often at the level of a graduate student in college. |
| Any topic that requires people to recall things they did in the past. | The data tends to be unreliable. |
| Effect of colored light on plants | Several people do this project at almost every science fair. You can be more creative! |
| Effect of music or talking on plants | Difficult to measure. |
| Effect of running, music, video games, or almost anything on blood pressure | The result is either obvious (the heart beats faster when you run) or difficult to measure with proper controls (the effect of music). |
| Effect of color on memory, emotion, mood, taste, strength, etc. | Highly subjective and difficult to measure. |
| Any topic that requires measurements that will be extremely difficult to make or repeat, given your equipment. | Without measurement, you can't do science. |
| Any topic that requires dangerous, hard to find, expensive, or illegal materials. | We care about your safety and your parents' pocketbook. |
| Graphology or handwriting analysis | Questionable scientific validity. |
| Astrology or ESP | No scientific validity. |
| Any project in violation of state law, federal law, state science fair rules, or International Science & Engineering Fair rules. | In brief, you may not do a project that involves: Unacceptable risk (physical or psychological) to a human subject Collection of tissue samples from living humans or vertebrate animals Drugging, pain, or injury to a live vertebrate animal Use of illegal or prohibited materials |

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