

DECIDE ON A PROJECT

Science fair projects can be separated into two main groups:

investigation and **invention**.

In an **investigation** project, the student researches a topic or question they are interested in and learns about how and why something happens. They may have a “what if” question, and will test/experiment to learn what that result may be, or test/experiment to better understand a cause/effect relationship, etc. Investigation projects are great for students who like to find things out for themselves and who will become interested in learning about something specific. A good investigation will analyze these questions: “What happened?” “What changed?” and, “What stayed the same?” An example experiment for an investigation would be “What laundry detergent removes stains the best?” **Any question that can be tested and solved fits for an investigation project.**

Inventions are designed to solve a specific problem, preferably in that student's life. These projects are great for students who are good at thinking “out of the box” and are good at problem solving. This type of project should cover these questions: “What is the problem?” “Why is this a problem?” and, “How can I fix it?” After these questions are answered, the student should build an invention to solve the problem (while documenting and photographing all the steps) and later collect data to see how helpful their invention is.

<https://www.opencolleges.edu.au/informed/teacher-resources/science-fair-projects/>

... and Category:

What category would you like to enter? Animal Science; Behavioral and Social Sciences; Biochemistry; Biomedical and Health; Cellular and Molecular Biology; Chemistry; Computer Science (embedded systems, robotics & intellectual machines, or systems software); Earth & Environmental Science (earth & environmental sciences or environmental engineering); Energy (chemical or physical); Engineering Mechanics; Mathematical Sciences (mathematical sciences or computational biology & bioinformatics); Microbiology; Physics & Astronomy (physics & astronomy or materials science); Plant Sciences.

Independent or Group?

You may choose to do a project by yourself, or as a member of a group. If you opt to work with a group, it is important to be sure that each member of the group will work responsibly and share an equal load of tasks. All members of a group will be questioned independently to demonstrate deep knowledge and understanding of the project to receive their individual grade.

Science Fair Project Proposal Form:

Student Name: _____ **Grade:** _____

Science Teacher: _____

Check one:

- Independent project** **Group project (2 – 4 total members)**

If group project, list other group members:

_____ Teacher: _____

_____ Teacher: _____

_____ Teacher: _____

Your Testable Question (Problem):

Your Hypothesis (If.....Then Statement)

Independent Variable (What you are purposely changing?)

Dependent Variable (The change that you measure: impacted by the independent variable)

Controlled Variable(s) (What stays the same during the experiment?)

How are you going to obtain quantitative data? (What tools/instruments will you use to make measurements?)

Materials List (what do you need to do your experiment?)

How many trials (minimum 3-5) will you need to perform your experiment? _____

Will any live subjects be used in this experiment? If yes, how? (plants, people, animals, insects, etc.)

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Parent/Guardian: *I am happy to support my child in this endeavor. If a group is involved, I will follow up with other parents/guardians and work together with their schedules to help this be a success for our young discoverers. I understand the timeframes outlined, and will monitor and guide my child to meet all requirements of this project that will follow in the student guide.*

Signature

Date

Student: *I am proud and excited to take on this investigation. I will use all of my Learner Profile traits throughout this process, and show appreciation to the adults who are able to help me in various ways.*

Signature

Date

Teacher: _____

Approved

Let's look at your other choices

Comment: _____