

Project Ideas and Drawings of What an Exhibit Should Look Like

EXPERIMENTS

The type of project most often presented at science fairs is the experiment. These presentations allow students to pose a problem, design an experiment to investigate that problem, record and report their results, and make conclusions based upon those results. The final project is a display of the steps the student took, any successes or failures, and the implications of the data.

DEMONSTRATIONS

In this type of project students demonstrate a particular science principle or fact. The demonstration should be self-contained; that is, observers can operate or manipulate any controls, switches, or devices needed for the demonstration. Students may wish to demonstrate how something works, a science phenomenon, or how something is created naturally or in the lab.

RESEARCH

In a research project, the student investigates a chosen area of science by consulting primary sources. That is, students will need to consult reading materials from libraries, museums, government agencies, and the like. In addition, they should interview experts, scientists, health care workers, county agents, shop forepersons, and so on. Encourage on-site investigations at labs, factories, a printing plant, a farm, or fish hatchery. The intent is for the student to explore a scientific area in depth and detail and to report the findings in a vivid, interesting way through the project.

COLLECTIONS

Collections are an assembly of items such as seashells, bird nests, or telephone parts that show variety and diversity within a chosen area of science. Usually, collection projects will result from a hobby or other free-time activity. Collections need to include as many samples as possible to represent the magnitude of the topic.

APPARATUS

In this type of project students display some kind of scientific apparatus or instruments and describe their use or function in detail. The project should enumerate the importance of the apparatus for both scientists and the general public. Descriptions of how each apparatus is used within or outside the scientific community would also be appropriate.

Great Science Fair Project Suggestions

EXPERIMENTS

- Test any responses to real and artificial sweeteners.
- How do temperature changes affect a fish?
- Do preservatives stop bread mold from growing?
- How leaves lose water.
- The effect of sunlight on plants.
- The effect of crowding on plants.
- How changing the fulcrum affects a level.
- What fabrics make good insulators?
- How do charged objects act toward each other?
- Materials that are the best conductors of electricity.
- The effect of the height of a swinging mass on its energy.
- How are crystals formed?
- Removing salt from water.
- Which foods contain starch?
- Which sense organ can detect the greatest variety of sensory information?



DEMONSTRATIONS

- Construct a clay model with cutaway sections showing the three layers of the earth.
- Create your own fossils, using plaster casts.
- Make a model of the ocean's floor, labeling each part.
- Construct a model of the eye showing its different parts.
- Where different flavors are tested on the tongue?
- Using modeling clay, make a cross section of the skin.
- What does a magnetic field look like?
- Using a graduate, measure the volume of several objects.
- Set up a box with two holes in it (for hands to reach in) containing unknown objects. Participants reach inside and try to guess what the objects are by feeling them and describing their characteristics.
- Testing minerals for their various properties.



RESEARCH

- Show how living things depend on one another through food chains.
- Use food webs to show how members in a community get their energy.
- Illustrate how animals live underground.
- What are the types of jobs bees have in a honeybee colony?
- How are bees helpful to humans?
- Ants and their jobs.

- Show examples of parasite and host relationships.
- Diagram the parts of trees or flowers.
- The life cycle of non-seed plants.
- Prepare a nature guide to plants and trees on the school grounds or in your neighborhood.
- How plants make food.
- How animals and plants adapt in order to survive.
- Types of bird beaks and their function.
- Why animals hibernate.
- Pick a career in science and tell about it.
- Examples of potential and kinetic energy.
- Learn about insulators and conductors.
- How rocks are formed.
- Uses of rocks and minerals in everyday life.
- The formation of coal.
- Chart the Gulf Stream or any other major warm or cold water current.
- Using resources from the sea: advantages and disadvantages.
- All about the wind chill factor.
- How air temperature changes.
- The Beaufort wind scale.
- Chart similarities and difference between the planets (temp, distance from sun, moons, length of day, so on).
- Everything you wanted to know about (choose a planet).
- Record local temperatures throughout the day for several weeks.
- Compare predicted weather with actual weather.
- The digestive system and how it works.
- From cells to systems.
- The human ear and how it works.
- What is color blindness?
- The history of measurement.



COLLECTIONS

- Clay models of animals that live in groups.
- Start your own ant colony.
- Collections of any of the following: leaves, pine cones, needles, weed seeds, plants that reproduce without seeds.
- Make casts of animal tracks.
- Bird nests; collect the materials used in building nests.
- Monocot and dicot seeds and/or flowers.
- Simple machines used in everyday life.
- Collect some common minerals.
- Use pictures to show examples of animal populations: herds, colonies, schools, and so on.

- Display pictures of herbivores, carnivores, and omnivores. Label them and list the foods they eat.
- Collect items that show different forms of energy (chemical, light, sound, heat, electrical, mechanical).
- Demonstrate different types of animal teeth.

APPARATUS

- Construct a homemade thermometer.
- Series and parallel circuits.
- How to make electromagnets.

