Science Fair Topic Ideas

* Does acid rain affect the growth of aquatic plants?
* Does having worms in soil help plants grow faster?
* Does the type of potting soil used in planting affect how fast the plant grows?
* Does having worms in soil help the plants grow faster?
* How do phosphates affect oxygen levels in water?
* Is the water near animal pens contaminated?
* How much pollution can water take before it becomes unsafe? Does this differ between different water sources?
* Examine how much carbon dioxide is produced by different gas sources. This helps to understand the impact of these gas sources on global warming.
* What is the greenhouse effect and how can we demonstrate it?
* Do detergents affect plant growth?
* What factors affect pollution in cities?
* How can plants be used to measure the levels of air pollution?
* River pollution
* Pollution and the depth of water
* The effect of gasoline fumes on plants.
* How do pollutants affect marine life?
* Are waters in urban areas more polluted than in rural areas?
* How do oil spills affect marine life?
* How do increased CO2 levels affect plant growth?
* What are the different methods of purifying water?
* How does the pH of rainwater vary from place to place?
* Is the burning of trash a viable alternative to landfills?
* Natural insect repellents
* Corrosion of different metals
* Recycled water and plant growth.
* How does location of the water source affect the sulfate ion concentration?
* How does location of the water source affect the nitrate ion concentration?
* How does location of the water source affect the phosphate ion concentration?
* How does phosphate ion concentration affect algae growth?
* How does carbon dioxide concentration affect the temperature of an environment?
* Can a black light detect invisible stains?
* What type of plastic wrap prevents evaporation the best?
* What plastic wrap prevents oxidation the best?
* Are night insects attracted to lamps because of heat or light?
* What type of car antifreeze is safest to the environment?
* Do different brands of orange juice contain different [levels of vitamin C](http://chemistry.about.com/od/demonstrationsexperiments/ss/vitctitration.htm)?
* Does the level of vitamin C in orange juice change over time?
* How effective are natural mosquito repellents?
* Does magnetism affect the growth of plants?
* Do oranges gain or lose vitamin C after being picked?
* How does the sugar concentration vary in different brands of apple juices?
* Does storage temperature affect the pH of juice?
* Do foods containing preservatives stay fresh longer than foods without them?
* How does time or season of harvest affect the chemistry and nutritional content of food?
* How long do home haircoloring products hold their color? Does brand matter? Does type of hair affect colorfastness? How does previous treatment (perming, previous coloring, straightening) affect initial color intensity and colorfastness?
* Do plant-based insect repellents work as well as synthesized chemical repellents?
* How does the pH of juice change with time? How does temperature affect the rate of chemical changes?
* How does the rate of evaporation of the crystal-growing medium affect the final size of the crystals?
* You will usually heat water or another liquid to dissolve a solid to grow your crystals. Does the rate at which this liquid is cooled affect the way the crystals grow?
* What effect do additives have on the crystals?
* Does using colored mulch have an effect on a plant? You can look at its height, fruitfulness, number of flowers, overall plant size, rate of growth, or other factors.
* How do different factors affect seed germination? Factors that you could test include the intensity, duration, or type of light, the temperature, the amount of water, the presence/absence of certain chemicals, or the presence/absence of soil. You can look at the percentage of seeds that germinate or the rate at which seeds germinate.
* How are plants affected by the distance between them? Look into the concept of allelopathy. Sweet potatoes are plants that release chemicals (allelochemicals) that can inhibit the growth of plants near them. How close can another plant grow to a sweet potato? What effects does an allelochemical have on a plant?
* Is a seed affected by its size? Do different size seeds have different germination rates or percentages? Does seed size affect the growth rate or final size of a plant?
* How does cold storage affect the germination of seeds? Factors you can control include the type of seeds, length of storage, temperature of storage, and other [variable](http://chemistry.about.com/od/sciencefairprojects/a/What-Is-A-Variable-In-Science.htm)s, such as light and humidity.
* What conditions affect the ripening of fruit? Look at ethylene and enclosing a fruit in a sealed bag, temperature, light, or nearness to other pieces or fruit.
* How are different soils affected by erosion? You can make your own wind or water and evaluate the effects on soil. If you have access to a very cold freezer, you can look at the effects of freeze and thaw cycles.
* How does the pH of soil relate to the pH of the water around the soil? You can [make your own pH paper](http://chemistry.about.com/library/weekly/aa012803a.htm), test the pH of the soil, add water, then test the pH of the water. Are the two values the same? If not, is there a relationship between them?
* How close does a plant have to be to a pesticide for it to work? What factors influence the effectiveness of a pesticide (rain? light? wind?)? How much can you dilute a pesticide while retaining its effectiveness? How effective are natural pest deterrents?
* What is the effect of a chemical on a plant? Factors that you can measure include rate of plant growth, leaf size, life/death of the plant, color of plant, and ability to flower/bear fruit.