

# About.com Chemistry

## Middle School Science Fair Projects

### Get Science Fair Project Ideas

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It can be a challenge to come up with a science fair project idea. There is fierce competition to come up with the coolest idea, plus you need a topic that is considered appropriate for your educational level. I've arranged science fair project ideas by [topic](#)<sup>1</sup>, but you might like to take a look at ideas according to education level.

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It can be challenging to think of a good project idea.

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This is your chance to shine! Middle school students may do alright with projects that describe or model phenomena, but if you can answer a question or solve a problem, you will excel. Try to propose a hypothesis and test it. Aim for a typed presentation with visual aids, such as pictures or physical examples. Choose a project you can do fairly quickly, to give you time to work on the report (no longer than a month). Schools may prohibit projects using hazardous chemicals or animals, so play it safe and avoid anything that might raise red flags with your teacher.

- What household waste materials might be used to filter water? Examples of materials you might try would include [banana peels](#)<sup>6</sup> and coffee grounds.
- What materials [glow under black light](#)<sup>7</sup>? Can you use the UV light to find invisible, possibly smelly, stains in your carpet or elsewhere in your house?
- Will chilling an onion before cutting it [keep you from crying](#)<sup>8</sup>?
- Does catnip repel cockroaches [better than DEET](#)<sup>9</sup>?
- What ratio of vinegar to baking soda produces the best [chemical volcano](#)<sup>10</sup> eruption?
- What type of plastic wrap prevents evaporation the best?
- What plastic wrap prevents oxidation the best?
- What percentage of an orange is water?
- Are night insects attracted to lamps because of heat or light?

- Can you make Jello using fresh pineapples instead of canned pineapples?
- Do white candles burn at a different rate than colored candles?
- Does the presence of detergent in water affect plant growth?
- Can a saturated solution of sodium chloride still dissolve Epsom salts?
- Does magnetism affect the growth of plants?
- How does the shape of an ice cube affect how quickly it melts?
- Do different brands of popcorn leave different amounts of unpopped kernels?
- How accurately do egg producers measure eggs?
- How do differences in surfaces affect the adhesion of tape?
- If you shake up different kinds or brands of soft drinks (e.g., carbonated), will they all spew the same amount?
- Are all potato chips equally greasy?
- Do the same types of mold grow on all types of bread?
- Does light effect the [rate at which foods spoil](#)<sup>11</sup>?
- Can you use a household water filter to remove flavor or color from other liquids?
- Does the power of a microwave affect how well it makes popcorn?
- Do all brands of diapers absorb the same amount of liquid? Does it matter what the liquid is (water as opposed to juice or... um.. urine)?
- Do all dishwashing detergents produce the same amount of bubbles? Clean the same number of dishes?
- Is the nutritional content of different brands of a vegetable (e.g., canned peas) the same?
- How permanent are permanent markers? What solvents (e.g., water, alcohol, vinegar, detergent solution) will remove the ink? Do different brands/types of markers produce the same results?
- Is laundry detergent as effective if you use less than the recommended amount? More?
- Do all hairsprays hold equally well? Equally long? Does type of hair affect the results?
- What effect do additives have on the crystals? You could add food coloring, flavorings, or other 'impurities'.

- What steps can you take to maximize crystal size? You can affect vibration, humidity, temperature, rate of evaporation, purity of your growth medium, and time allowed for crystal growth.
- 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.
- 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 variables, 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 of 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](#)<sup>12</sup>, 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?

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