

Science Fair Project Ideas

The following is a list of experimental problems that can be used for science fair projects. They have been categorized for your convenience. Students can choose a project from this list or can choose an experiment concerning topics in today's changing world such as green energy, global energy, recycling, new ways to grow bigger and better plants etc. with approval from their teacher.

All experiments, surveys or tests should be experimental in nature that is by using the scientific method or the engineering design process. **Remember the scientific method requires that you do repeated trials and/or use a large number of test subjects.**

Projects Using Plants

1. Do oil spills affect the growth of aquatic plants?
2. Does water temperature affect the growth of plants?
3. What is better for plant growth, artificial light or natural light??
4. Does expansive potting soil really help plants grow?
5. Are organic fertilizers more effective than inorganic fertilizers?
6. Do radish plants grow quicker hydroponically than in soil?
7. Does the color of light affect plant growth?
8. How do increased CO₂ levels affect plant growth?
9. Does the presence of detergent in water affect plant growth?
10. What effect does microwaved soil have on seed germination?

“Going Green”

1. Can shutting down and unplugging electronics **really** save energy?
2. Will washing clothes in cold water **really** save energy?
3. Do energy saving light bulbs really work?
4. Can you purify water using solar energy?
5. Are 'green' detergents less toxic than conventional detergents? (measuring toxicity)

6. Would plants grow better with soil found at the surface or from soil found deeper in the ground?
7. What materials can be used to prevent soil erosion?
8. Does an increase in CO₂ levels in the air create warmer air temperatures?
9. What is the best way to clean oil in water?
10. Are there dangerous levels of lead in local soil?
11. How acidic is our rainwater?
12. Can we preserve and protect food without a refrigerator?

Energy

1. Can we convert wind energy into electrical energy easily?
2. What materials, wood, plastic or metal make a more efficient wind turbine?
3. Does a homemade anemometer measure wind speed accurately?
4. What materials work best for a mag-lev track? (Magnetic levitation)
5. What color absorbs the sun's heat the best? (Ice cube melt time.)
6. What material (sand, salt, water or dirt) stores solar energy the best?
7. Do batteries last longer when it is used on/off or with continuous use?
8. Will a sailboat go twice as fast if the sail is twice as large?
9. What material conserves heat the best?
10. Weathering the windchill: How does wind speed affect how quickly an object cools?

Manufacturing/ Technology

1. What material is better for supporting bridges? Wooden, steel, cast iron, or cables?
2. What effect does triangle size have on the strength of a truss bridge?
3. Which materials will sound waves travel through the best?
4. What affects the frequency of a pendulum: bob weight or the length of the strings?

5. Will wrapping more coils around a nail make a stronger electro magnet?
6. What material insulates the best in a house or a refrigerator?
7. Does triple pane glass really insulate better than a double pane glass?
8. Is a structure built without the use of screws and nails as strong as one built with them?
9. Do sound barriers reduce noise? If so, which material reduces the most noise?
10. Which blade design works most efficiently on windmills?
11. Does coating metals prevent their corrosion?

Optics

1. Does the cost of sunglasses coincide with how much sunlight it blocks?
2. Does the age of a person affect what they see in optical illusions?
3. Does the gender of a person affect what they see in optical illusions?
4. Which color light shines the brightest through fog?
5. Are males or females more prone to color blindness?

Sports

1. Does temperature affect the rebound rating of a dropped ball?
2. How does heart rate change with exercise?
3. Batted ball debate: What's better wood or aluminum. (Works with hockey too.)
4. Does the price of a ball (golf, tennis) really affect performance?
5. Does the type of turf affect how far a golf ball will travel?
6. Does the size of a basketball affect the accuracy of the throw?

Miscellaneous:

1. Which type of smoke detector is more effective?
2. Does the color of text affect memory?
3. What objects (that we come in contact with daily) contain the most bacteria?
4. Which substance will melt driveway and walkway ice the best?
5. Can people really taste the difference between regular and low-fat foods? (testing three or more foods for accuracy)
6. Does anti-bacterial soap kill more bacteria than regular soap?
7. When does your mouth have the most bacteria, in the morning before brushing or at the end of the day- before brushing?
8. Distracted driver: Do distractions affect driving video game scores?
9. Does the surface of a ramp affect how fast a marble travels?
10. Does soda lose its carbonation faster at cold or hot temperatures?
11. How does the shape of an ice cube affect its melting?
12. Which sense elicits the fastest response time?
13. Do more suds in water help get things cleaner?
14. Which cleaning solution works best when cleaning tarnished pennies?
15. Are artificial sweeteners just as sweet as real sugar?
16. What kind of clothes will keep you warmest this winter?
17. Does expensive bottled water really taste better than less expensive or tap water?
18. Are childproof containers really childproof?
19. Which whitening toothpaste makes your teeth the whitest?
20. Do plants grow faster in dry or moist conditions.