



**LASF SCIENCE FAIR**  
**Suggestions for Science Projects**  
Grades 4-5

**Engineering**

1. Do oil additives reduce friction on engine parts?
2. A frictionless magnetic bearing.
3. Paper airplane performance.
4. Robots.
5. Using electromagnets to power a car.
6. Battle of the bridges.
7. Computer projects.
8. Testing a car headlight as a satellite dish antenna.
9. Storing the sun's energy.
10. Power from rising air.
11. Power from the waves.
12. Testing different water turbine blades.

**Earth Science**

1. Charting the apparent motion of Polaris.
2. Composition of Hawaiian sand.
3. Water retention of different soils.
4. Using a computer for mineral identification.
5. How much dust falls on your lawn in a month?
6. How clean is our air?
7. How acidic is our rain?
8. Speed of clouds using photography.
9. Wave barriers.
10. Using feathers to clean up oil spills.
11. Terracing and how it affects erosion.
12. The effects of water on different types of wood.

**Consumer**

1. Which firewood gives the most heat per dollar?
2. Which solar panel is most efficient?
3. Can a roof overhang cut summer cooling costs?
4. A comparative study of various packing materials.
5. How much money can a pool cover save?
6. Which candle is the best buy?

7. Which light bulb is most efficient?
8. Are TV commercials louder than regular programming?
9. Which battery is the best buy?
10. How much does it really cost to run a refrigerator?
11. Which stain remover works best?
12. Which detergent removes grass stains best?
13. Which detergent cuts grease the best?
14. Which detergent has the longest-lasting suds?
15. The effectiveness of pre-washing products.
16. Waterproofing agents – which is best?
17. The effects of deodorants on clothes.
18. Which paint protects wood the best?
19. The effectiveness of different wood preservatives.
20. Shampoo evaluation.
21. Water solubility of suntan lotions.
22. Meat, fat, and moisture content of hotdogs.
23. Do sausages vary in fat and water content?
24. Which popcorn pops the most?
25. Up to bat – wood or aluminum?
26. Fishing lines to test strength.
27. Sole traction – which sole is best?
28. Skateboard wheels – which are best?
29. Leaky faucets – how much do they cost us?
30. Which uses more water: a shower or a bath?
31. Which container (or wrapping) preserves food best?
32. Which paper towel is most absorbent?
33. Which diaper is best?
34. Which lighter has the most fuel?
35. Comparison of locks – which is best?
36. Which nails have the best holding power?
37. The best air pressure for an ATC (3-wheeler).
38. How long are yellow lights at various intersections?
39. Do parking meters give us the right time?

**Physical Science**

1. Which metals conduct heat best?
2. Measuring the calories in a peanut.

3. Which material makes the best heat insulator?
4. The efficiency of airspace as an insulator.
5. Which color of liquid absorbs the most heat?
6. Which color container absorbs the most heat?
7. Which color container cools off the quickest?
8. How temperature affects the height at which different balls bounce.
9. How heat affects recording tape.
10. Do black bottom pools keep the water warmer?
11. How constant is the temperature in my refrigerator?
12. How accurate is the temperature knob on my oven?
13. The effects of temperature on the strength of dry cells.
14. The effect of light on dyed materials.
15. Calculating liquid density using light refraction.
16. Materials that absorb sound.
17. String telephones – what materials work best in conducting sound.
18. Conductivity of various liquids.
19. How temperature affects the amount of electricity given off by a solar cell.
20. How increasing the number of batteries affects the speed of a motor.
21. What is the voltage range of the GE-14 bulb?
22. The strength of a magnet vs. distance.
23. Do magnetic fields affect the sound quality on a recording tape?
24. The effects of washing on dyed materials.
25. Which fabrics are most fire-resistant?
26. Which toothpaste is most abrasive?
27. The amount of dissolved salt in drinking water.
28. Can saltwater be desalted by freezing?
29. Popcorn – a graphical analysis of pops per second.
30. Strength of different woods.
31. Ink evaluation with paper chromatography.
32. Splat – a study of droplet patterns.
33. Chlorine levels in our drinking water.
34. The effects of swimming pool water (chlorine) on hair.

35. Testing sugar in soft drinks.
36. Comparison of vitamin A content in frozen, canned, and fresh peas.
37. Which foods have starch (or sugar, fat, protein, etc)?
38. Testing various orange drinks for vitamin C.
39. How fire affects roofing materials.
40. How well do various fabrics absorb dye?
41. Who has greater body density: boys or girls?
42. How strong is a spider web?
43. How does the tail affect the flight of a kite?
44. What shutter speed is needed to photograph a moving fan?
45. The velocity of water through different tubes (same size, different material).
46. The velocity of water through different tubes (same material, different size).
47. The velocity of different liquids through the same size tube.
48. Density of various liquids.

### **Life Science**

1. Does a magnetic field affect the growth of beans?
2. Does electricity affect the growth of beans?
3. Does temperature affect the growth of plants?
4. How do plants react to different kinds of music?
5. How detergents affect the growth of plants.
6. Do plants grow better with tap water or distilled water?
7. The effects of root-bounding on plant growth.
8. Do roots always grow down?
9. Do mirrors affect the way plants grow?
10. Does leaf surface area affect plant growth?
11. Leaf size vs. location.
12. Effects of artificial vs. natural light on plants.
13. Under which color cellophane do plants grow best?
14. Can you give a plant too much fertilizer?
15. Testing different potting soils.
16. Which mulch covering works best?
17. Does the phase of the moon affect the germination of seeds?
18. Do seeds sprout better in warm or cold climates?
19. How does gravity affect the growth of seeds?
20. Does acid rain affect the germination of seeds?

21. Under which thickness of plastic do radishes grow best?
22. How the amount of light affects the growth of marigolds.
23. Do avocados ripen more evenly with the stems left on?
24. Which banana has the most sugar: green, yellow, or brown?
25. Comparing the moisture content of five varieties of apples.
26. Effects of the environment on popcorn (heat, cold, moisture, time, etc).
27. Does aspirin prolong the life of cut carnations?
28. How detergents affect the growth of algae in pond water.
29. A study of marine growth on various surfaces.
30. Do earthworms help plants grow?
31. Do goldfish grow larger in a larger tank?
32. Hamster activity and the phases of the moon.
33. Can the color of unborn rabbits be predicted?
34. How many grams of food does a rabbit eat per day?
35. Will a chicken lay more eggs with rock music playing?
36. Do pyramids preserve food?
37. How does our vision affect our taste?
38. Light vs. vision: which color is best?
39. Night vision and the effects of color objects.
40. The effect of color of depth perception.
41. Does a blindfolded person walk in a circle?
42. The relationship between age and response time.
43. Can you recognize your own profile?
44. Left-handed, right-hand transference using "mirror-tracing".
45. Reading and remembering with different colored paper.
46. Flexibility: boys vs. girls
47. Do adults know U.S. geography (or math skills, science fundamentals, etc.)?
48. How do people react when seeing a teenager shoplift?
49. How teeth react to different liquids?
50. Do taste buds grow weaker as you get older?
51. Hot tubs and their effect on blood pressure.
52. Effects of foul smells on blood pressure.
53. Lung power of different age groups.