



**LASF SCIENCE FAIR**  
**Suggestions for Science Projects**  
Grades K – 3

**Plants**

1. Can you grow a plant upside down?
2. Can you grow a plant in artificial light?
3. What conditions are needed by a plant to grow?
4. What is the best amount of water for plants?
5. What is the best amount of light for plants?
6. How much weight can a growing seed lift?
7. How does water get to the leaves from the roots?
8. Can plants grow from the “eyes” of a potato?
9. What different kinds of plants grow from grass?
10. Do seeds develop into plants when it is cold?
11. Are plants harmed by heat?
12. Do plants grow equally well in light of different color?
13. Can plants grow from leaves?
14. Can a plant find its way through a maze?
15. What does osmosis do to dried legumes?
16. Do plants give off water?
17. Can sprouts tell the difference between up and down?

**Your Senses**

1. How important is the sense of smell in tasting foods?
2. How helpful are two eyes in judging distances of objects, as compared to one?

**Water**

1. Are the bubbles in soda water and in regular water the same?
2. Do different types of soil respond differently to moving water?
3. Can you measure the empty space in a jar of marbles? *Hint: try water*
4. Can water dissolve more sugar or salt?
5. Which solids dissolve best in water?
6. What effect does heat have on the ability of water to dissolve different substances?

7. How much water does soil contain?
8. What fraction of the weight on an apple in water?
9. Can you grow crystals from sugar and water?

**Surface Tension**

1. What kinds of screens can be made to stay on top of water?
2. Does a piece of screening remain on top of water if the water has detergent in it?
3. Does a piece of screening stay up as well on a concentrated salt solution as it does on plain water?
4. Which detergent cleans the best?
5. What types of liquids or solutions make the best bubbles?

**Air Pressure**

1. Do suction cups stick equally well to different surfaces (wet, dry, bumpy, etc)?
2. Which empties of water easier: a container with one hole or two? Does it make a difference where the holes are placed?
3. How accurately can you predict the weather by monitoring a barometer?
4. How is the rate of flow of a siphon affected by the width of the tube and the difference in the water levels?

**Carbon Dioxide**

1. Is carbon dioxide heavier than air?
2. Under what conditions does soda water retain its carbon dioxide?

**Bicycles**

1. How effective are wheels in reducing friction? Use a spring scale to pull a skate on its wheels and again when dragged on its side.
2. How much difference in friction force is there when objects are dragged on smooth surfaces and rough ones?
3. How much effect do roller bearings have in reducing friction in a wheel?

4. Compare the forces required to pull a boy on a bicycle on different surfaces.
5. How can you use a bicycle to measure the distance between two places?

### **Flight**

1. Does air curve around a bottle when you blow on it? Put a candle behind a bottle and find out. Try wider and narrower bottles and stand closer and further away from the bottle.
2. What shape parachute works the best?
3. What shape paper airplane flies the best?

### **Space**

1. Does weight affect how an object will be thrown off a record turn table? (Centrifugal force)
2. How do various objects affect the spin of a large bowl floating in water? (Place the objects in a bowl)
3. Build a reaction engine that operates by means of falling water. Use a rectangular plastic bottle. Drill holes in opposite sides near the left bottom corner. Suspend the bottle from a string with a loop centered over the opening. Hold the bottle over a pan or sink and fill it with water. As the water pours out, off center, the actions cause reactions that make the bottle spin. Which size holes and what placement provide the best speeds and/or best spins?
4. Prove that gas expands when heated.
5. Can a boat be powered by the use of baking soda and vinegar?

### **Magnetism**

1. Under what conditions do magnets attract or repel?
2. Through what materials will magnetism pass?
3. Which is the strongest of several magnets?
4. What materials does a magnet attract?
5. Can you detect a weak magnet by the use of a compass?
6. Does placing a magnet into a coil of wire create an electrical current in the wire?

7. Does electrical current flowing through a coil of wire produce a magnetic field? (Use you compass to find the field)

### **Static Electricity**

1. What types of objects produce static electricity when rubbed on other materials? Which combinations are best? (Try looking at your experiment in a darkened room)
2. What effect do warm, cool, humid, or dry weather have in the production of static electricity?
3. What types of materials are best for producing lights in a fluorescent lamp by rubbing the lamp?
4. What type of charge (+ or -) is produced on various materials when rubbed on a cloth? (A balloon takes on a (-) charge)
5. What types of materials are attracted to charged materials?
6. What motion do you observe among small objects when they are placed on a charged plastic dish container? (Use small bits of paper, lint, hair, etc. Pass your fingers underneath - does the mixture change)
7. Can static electricity separate a mixture of salt and pepper?
8. What factors affect the ability of charged objects to cling to the wall?

### **Electric Current**

1. What objects conduct electricity best?
2. Sparks may be produced by momentarily short-circuiting a flashlight cell. These sparks create radio waves that can be detected by a nearby radio set as static noise. What conditions interfere most with type of radio transmission? What can enhance this type of transmission? (Try an aerial on the flashlight)

### **Light and Sight**

1. Under what conditions can glass be invisible?
2. How can water be used to see around a corner?
3. Is window glass uniform? (Look for distortion in the appearance of objects on the other side)
4. What do you see in your fish tank? (Take photos of distortions and reflections seen in a fish tank)

### **Mirrors**

1. Do images in a mirror bounce straight back at you? (Try seeing how the placement of a flashlight affects where its image is seen on a wall)
2. Can you look around the corner? (Build a periscope)
3. What is the difference between “transparent”, “translucent”, and “opaque”?

### **Heat**

1. Do liquids expand when heated? (CAUTION: Do not heat flammable liquids!)
2. Does work produce heat? (Try bending, twisting, rubbing, or hammering objects such as metal wires and sheets)
3. How accurately do people judge temperatures?
4. How accurately do different thermometers measure temperatures?
5. What affects how people perceive the temperature of a bowl of water?
6. When heated by a light source or the sun, does water heat faster in a dark vessel or a light vessel? (Start with cold water and use a thermometer if possible)
7. Does evaporation of a liquid cause cooling?

### **Sound**

1. How far can you transmit speech through a string with a string telephone?
2. Does a tube have to be straight in order for sound to be transmitted through it?
3. What size and shape of megaphone transmits sound the farthest?
4. What materials can transmit sound the best?