

# SCIENCE PROJECT IDEAS - LEVEL 1

1. How much salt does it take to float an egg?	21. Do bigger seeds produce bigger plants?
2. What kind of juice cleans pennies best?	22. Which materials absorb the most water?
3. Which dish soap makes the most bubbles?	23. Do wheels reduce friction?
4. Do watches keep time the same?	24. What materials dissolve in water?
5. On which surface can a snail move faster — dirt or cement?	25. What is the soil in my schoolyard made of?
6. What brand of raisin cereal has the most raisins?	26. Does holding a mirror in front of a fish change what a fish does?
7. How can you measure the strength of a magnet?	27. What color of birdseed do birds like best?
8. Do ants like cheese or sugar better?	28. What holds two boards together better — a nail or a screw?
9. Can the design of a paper airplane make it fly farther?	29. Will bananas brown faster on the counter or in the refrigerator?
10. Do roots of a plant always grow downward?	30. Does temperature affect the growth of plants?
11. Can you tell what something is just by touching it?	31. Do mint leaves repel ants?
12. What kind of things do magnets attract?	32. Does a ball roll farther on grass or dirt?
13. What foods do mealworms prefer?	33. Do all objects fall to the ground at the same speed?
14. How long will it take a drop of food dye to color a glass of still water?	34. Does anyone in my class have the same fingerprints?
15. Does a bath take less water than a shower?	35. Which travels faster — a snail or a worm?
16. Can you tell where sound comes from when you are blindfolded?	36. Which paper towel is the strongest?
17. Can plants grow without soil?	37. Can plants grow from leaves?
18. Does warm water freeze faster than cool water?	38. Which dissolves better in water — salt or baking soda?
19. In my class who is taller — boys or girls?	39. Can things be identified by just their smell?
20. Do different types of apples have the same number of seeds?	40. With which type of battery do toys run longest?

## SCIENCE PROJECT IDEAS - LEVEL 2

1. How far does a snail travel in one minute?	21. Does the color of water affect its evaporation?
2. Do different types of soil hold different amounts of water?	22. Can you separate salt from water by freezing?
3. Will adding bleach to the water of a plant reduce fungus growth?	23. How does omitting an ingredient affect the taste of a cookie?
4. Does water with salt boil faster than plain water?	24. Do suction cups stick equally well to different surfaces?
5. How far can a person lean without falling?	25. Which student in class has the greatest lung capacity?
6. Can you tell time without a watch or clock?	26. How much weight can a growing plant lift?
7. How far can a water balloon be tossed to someone before it breaks?	27. Will water with salt evaporate faster than water without salt?
8. Does the shape of a kite affect its flight?	28. Does it matter in which direction seeds are planted?
9. Does an ice cube melt faster in air or water?	29. Which cheese grows mold the fastest?
10. Does sugar prolong the life of cut flowers?	30. Do all colors fade at the same rate?
11. How much of an orange is water?	31. Which brand of diaper holds the most water?
12. Which liquid has the highest viscosity?	32. In my class, who has the smallest hands — boys or girls?
13. Will more air inside a basketball make it bounce higher?	33. Which kind of cleaner removes ink stains best?
14. Does the color of light affect plant growth?	34. Does a plant grow bigger if watered by milk or water?
15. Does baking soda lower the temperature of water?	35. Which brand of soap makes the most suds?
16. Which brand of popcorn pops the most kernels?	36. Does a baseball go farther when hit by a wood or metal bat?
17. Which brand of popcorn pops the fastest?	37. Do living plants give off moisture?
18. How much can a caterpillar eat in one day?	38. Using a lever, can one student lift another student who is bigger?
19. In my class, who has the biggest feet — boys or girls?	39. What gets warmer — sand or dirt?
20. Do plants grow bigger in soil or water?	40. Which kind of glue holds two boards together better?

# SCIENCE PROJECT IDEAS - LEVEL 3

1. What type of line carries sound waves best?	21. Which way does the wind blow most frequently?
2. Can the sun's energy be used to clean water?	22. Does the size of a light bulb affect its energy use?
3. Does a green plant add oxygen to its environment?	23. For how long a distance can speech be transmitted through a tube?
4. Which metal conducts heat best?	24. Which grows mold faster — moist bread or dry bread?
5. What percentage of corn seeds in a package will germinate?	25. What type of soil filters water best?
6. Does an earthworm react to light and darkness?	26. Does the color of a material affect its absorption of heat?
7. Does the human tongue have definite areas for certain tastes?	27. Does sound travel best through solids, liquids, or gases?
8. Can same-type balloons withstand the same amount of pressure?	28. Do sugar crystals grow faster in tap water or distilled water?
9. Does the viscosity of a liquid affect its boiling point?	29. Can you see better if you limit the light that gets to your eye?
10. Does surrounding color affect an insect's eating habits?	30. How much of an apple is water?
11. Do children's heart rates increase as they get older?	31. What common liquids are acid, base, or neutral?
12. Can you use a strand of human hair to measure air moisture?	32. Do taller people run faster than shorter people?
13. What materials provide the best insulation?	33. Does the length of a vibrating object affect sound?
14. Is using two eyes to judge distance more accurate than using one eye?	34. Does a plant need some darkness to grow?
15. Do different kinds of caterpillars eat different amounts of food?	35. Who can balance better on the balls of their feet — boys or girls?
16. What plant foods contain starch?	36. Does exercise affect heart rate?
17. What keeps things colder — plastic wrap or aluminum foil?	37. Which dish soap makes the longest lasting suds?
18. Does heart rate increase with increasing sound volume?	38. What are the effects of chlorine on plant growth?
19. Do boys or girls have a higher resting heart rate?	39. Which type of oil has the greatest density?
20. Do liquids cool as they evaporate?	40. How accurately do people judge temperatures?

Following is a list of questions that may offer ideas for experimental science projects. You can make your own list of variables for many of these questions.

#### BIOLOGY

- What affects the speed of germination (the time it takes a seed to sprout)?
- What affects your heart rate?
- Which saliva has more bacteria, a human's saliva or a dog's saliva?
- What eats away the enamel on your teeth?
- What affects your body temperature?
- What affects your blood pressure?
- What is lung capacity related to or affected by?
- Do women blink faster than men?
- How does the temperature affect the water uptake of celery plants?
- Is soil necessary for plant growth? Does soil chemistry affect plant growth?
- What factors affect the growth of mold?
- Do different kind of plants grow on north or south slopes?

#### ASTRONOMY

- How does the time of day affect a shadow's length?
- Is there a relationship between the phases of the moon and our weather?
- Does the sun set at the same point each night?
- Does the moon rise and set in the same place at the same time?
- In what direction does the moon move?

#### CHEMISTRY

- Which antacid is best at neutralizing stomach acid?
- What liquid causes iron to rust the fastest?
- Do all metals rust at the same rate?
- What liquid or solution will shine a penny in the least amount of time?
- Does the temperature of the water affect the speed at which something dissolves?
- What combination of vinegar and baking soda makes a bottle rocket go the highest?
- What affects the speed at which effervescent antacids (like Alka Seltzer) dissolve?

#### EARTH SCIENCE

- Does the volume of a stream affect its flow rate?
- What is the best method for slowing down erosion?
- Do both sides of a curved stream erode at an equal rate?
- What influences crystal growth?
- How fast do stalactites form?

#### ENVIRONMENTAL SCIENCE

- What is the best material for soaking up oil from an oil spill?
- What influences the speed of decomposition?
- Do paper and plastic grocery bags decompose at the same rate?
- What is the best method of composting?

#### PHYSICS - ELECTRICITY AND MAGNETISM

- What influences static electricity?
- Is static electricity affected by humidity?
- What foods (ex. potato) conduct electricity?
- What influences the operation of a solar cell?
- What influences the strength of an electromagnet? (number of wire wraps, wire gauge, diameter of nail)

#### PHYSICS - FLUIDS

- Does wind speed remain constant as it goes over a flat area, between houses, and between tall buildings? (make a model and use a fan for wind)

- Do all liquids act the same way? How many drops of water can a penny hold. Try other liquids and compare.
- Which boat shape can move the fastest through water?
- Does the temperature of the water affect the amount of space it takes up?
- Does movement of air affect the rate of a liquid's evaporation?
- Does the diameter of the tube of a the siphon affect the speed at which the liquid flows?

#### PHYSICS - HEAT

- What insulating material works best at preventing the loss of heat in a jar of hot water?
- Does the temperature of water affect its evaporation rate?
- Do different colors of water absorb heat at different rates?
- What effect does color have on temperature?
- Do different kinds of chocolate (white, milk, dark, semi-sweet, etc.) melt at the same rate?
- Does the size of a container's opening affect the rate at which the liquid's temperature decreases?
- Does temperature affect the rate at which paint dries?

#### PHYSICS - LIGHT

- Is your shadow the same on grass, soil, sand, and snow?
- Does the thickness of the filament affect the brightness of the light bulb?

#### PHYSICS - MECHANICS

- What affect the swing of a pendulum? (string length, mass of pendulum)
- What affects the height of a ball's bounce? (surface, height dropped from, density, temperature)
- Does the length of a ramp (inclined plane) affect the amount of force needed to pull a load up a ramp?
- Do items of different weights, but the same size and shape, fall at different rates?
- What variables affect the flight of an airplane?

#### PHYSICS - VIBRATION

- What solids do sounds travel through best? (measure sound with a decibel meter)
- What is the best soundproofing material?

#### OTHER POSSIBLE IDEAS

- Environment Temperature vs. Crystal Size
- Detergents vs. Cleaning power
- Types of ice melting substances vs. time to melt
- Types of music vs. mad minute
- Types of paper airplanes vs. hang time
- Types of liquids vs. surface tension
- Color of pool vs. temperature of water
- Size of meteor vs. crater size
- Density of meteor vs. crater size
- Car weight vs. distance traveled
- Ramp height vs. distance traveled
- Surface material vs. distance traveled (friction)
- Baking soda/vinegar mixture vs. gas produced
- Types of liquids vs. time to digestion
- Amount of shaking vs. time for liquids to separate
- Temperature of liquid (syrup) vs. viscosity (tendency to flow)
- Type of soil vs. water retention
- Planting conditions vs. Plant growth
- Types of cosmetics vs. ph levels
- Types of fruits/veges vs. Vita C levels
- Types of cleaners on oily feathers vs. cleanliness
- Left/Right handedness vs. reaction time
- Gender or age vs. optical illusion
- Water temperature vs. time to dissolve Alka Seltzer
- Yeast foods vs. gas produced