

PROJECT TOPICS

EXPERIMENT IDEAS

Plants

- How does the duration of light affect plant growth?
- How does the color of light affect the growth of plants?
- What are the effects of temperature on the germination of bean seeds?
- What is the effect of spacing on the growth of radish seeds?
- How does magnetism affect the height of bean seeds?
- To what extent does pH affect the germination of rye grass?
- What is the effect of different soil mixtures on plant growth?
- What is the effect of planting depth on the germination of seeds?
- To what extent do various concentrations of salt water affect plant growth?
- What is the effect of detergents on the germination of bean seeds?
- What is the effect of gravity on the roots of a plant?
- What is the effect of temperature on the ripening of a banana?

Animals

- How does different colored light affect the behavior of earthworms?
- How does the intensity of light affect crickets?
- What is the effect of background color on the color of a lizard?
- What is the effect of temperature on the behavior of fish?
- How do different levels of salinity affect shrimp?
- How do vibrations affect the behavior of ants?
- What is the effect of height above ground on the attraction of birds to a feeder?

Human Body

- Who generally have bigger hands (feet), boys or girls?
- Who are generally taller, boys or girls?
- Who generally have larger lung capacity, boys or girls?
- How does vision effect the sensation of taste?
- What is the effect of age on reaction time?
- To what extent does age effect the sensation of hearing?
- To what extent does age effect the sensation of smell?
- What is the effect of exercise on pulse rate (or blood pressure)?
- What is the effect of walking/skipping/running on respiration rate?
- Does listening to different types of music affect how well you can perform mental tasks?
- Does watching T.V. affect how well you can perform mental tasks?

PROJECT TOPICS

Earth & Space

- Does the sun rise at the same time and in the same location in the sky?
- Does the moon rise at the same time and in the same location in the sky?
- What is the effect of freezing temperatures on rocks?
- To what extent do different types of soils retain water?
- What is the effect of rain on soil covered with different types of foliage?
- What is the effect of wind on different mixtures of soil?
- What is the effect of temperature on crystal growth?
- What is the effect of temperature on the evaporation of water?
- What is the effect of the length of a wing on the length of flight of a paper airplane?
- To what extent does sunlight affect the temperature of soil?
- To what extent does sunlight affect the temperature of water?
- How do different surfaces absorb the sun's energy?

Physical

- How does length, tension, or mass of a guitar string affect the pitch of sound?
- How do different solids affect the transmission of sound?
- What is the effect of heat on different liquids?
- What is the effect of household liquids and powders on red cabbage juice?
- How is the strength of a magnet affected by different materials (glass, cardboard, paper)?
- What is the best shape for a kite to lift off quicker?
- How is the distance a skateboard rolls affected by the amount of mass on the skateboard?
- To what extent does temperature affect the height that a ball will bounce?
- How do the number of batteries & the way they are connected affect the brightness of a bulb?
- How does the density of an object affect its buoyancy?

Environmental

- What is the effect of recycling on the amount of wastes that goes to the landfill?
- What materials that are thrown away at home could be reused at school for learning projects?
- How do oil spills affect feathered animals, furry animals, fish, sand and shells?
- Which plant and food wastes breakdown and can be composted easily into new garden soil?
- Which native plants will attract hummingbirds, butterflies, or more birds into an environment?
- Which native plants require less irrigation water and provide year round color to a landscape?
- What natural remedies are effective at controlling harmful insect that attack garden plants?
- What steps can be taken at home or school to reduce the trash sent to the landfill?
- What steps can be taken to reduce energy consumption in your home or school over time?
- What steps can be taken to reduce water use at home or school?

PROJECT TOPICS

ENGINEERING IDEAS - Design, test, and improve...

FLIGHT ENGINEERING

- ways weight can be used to balance wing length for the longest flight of a model airplane.
- the wing span of a model airplane to increase its flight air time
- different launch systems (vertical, 45 degree, and horizontal) for maximum flight distance
- safety restraint designs for infants traveling on aircrafts.
- sound separation systems to separate adult air passengers from crying babies.
- comfortable seating for longer flights

WASTE RECYCLING ENGINEERING

- a system to insure all paper, plastic and/or aluminum cans are being recycled properly
- a trash can to reduce the space recyclables such as paper, plastic, aluminum take up
- a trash can that motivates kids to sort recyclables properly
- new ways to reuse commonly wasted materials so they don't take up space in our landfill
- a system to reuse or recycle school supplies so they aren't wasted
- a way to keep people from disposing of harmful liquids and solids down the sink drain
- a way to reuse old clothes
- inexpensive and safe ways to compost vegetation and/or food scraps back into soil

MECHANICAL ENGINEERING

- your favorite furniture
- your favorite sports equipment
- easy, safe ways to mount you favorite music player to your bike
- a wind powered device that moves water up hill
- a rubber band powered cart or train (connected carts)
- a hand powered coin sorter
- a mechanical arm that throws balls to a hitter
- a Ping-Pong ball throwing catapult

ENERGY CONSERVATION ENGINEERING

- a portable solar powered chocolate s'more cooker
- an LED clock powered by a fruit or veggie battery
- a wind powered LED light reading visor
- a solar powered personal fan for a baseball cap
- a solar powered speed racer