



High School Science Project Idea List

PROJECT IDEAS

PLANTS
What is the effect of spacing on the growth of vegetation?
To what extent does pH affect the germination of grass?
What is the effect of different soil mixtures on the growth of vegetation?
What is the effect of planting depth on germination?
How does acid rain affect leaf development?
What is the effect of gravity on the roots of a plant?
What is the effect of moon phases on germination?
What is the effect of microwaves on germination?
How does cigarette smoke affect transpiration rate?
How does car exhaust affect transpiration rate?
How do levels of carbon dioxide and oxygen affect germination rates?
How does thigmotropism affect the growth of morning glory tendrils?
How does irradiation affect the germination of radish seeds?
How does the dose and method of application affect the activity of glyphosate-based weed killer?
Can water plants be used to determine water quality?
What is the ideal proportion of earthworm castings to soil for young garden plants?
How does the amount of light affect a plant's phototropic response?
Does location along the stem affect the rate of leaf growth?
Does seed size affect ideal planting depth?
Does companion planting affect growth rate?
Does Pavlovian conditioning affect growth rate?
Does stoma density affect the loss of water through transpiration?
Which type of seed is the most effective in serving as a bioassay?
Are dandelions as effective as commonly prescribed antibiotics against bacteria?
How does cloning affect the quality of a plant?

LIFE SCIENCE – MICROBIOLOGY, INVERTEBRATES...
How does temperature affect the activity of mealworms?
To what extent does the amount of food affect the population size of mealworms?
How does different colored light affect the behavior of earthworms?
What effects does temperature have on the activity of earthworms?
How does the intensity of light affect crickets?
How does air temperature affect the frequency that a cricket chirps?
What is the effect of temperature on the behavior of brine shrimp?
How do different levels of salinity affect brine shrimp?
What is the effect of different pH on snails?
How do vibrations affect the behavior of ants?
How does surrounding color affect an insect's eating habits?
Does different colored light affect how many moths you catch?
Do certain substances repel snails (or slugs); if identified, can these repellent substances protect garden plots/citrus trees from snails (or slugs) and the damage they cause?
Does temperature affect the rate of butterfly development?
How do food preservatives affect the growth of microorganisms?
Which has more of an effect on a hummingbird's selection of a food source: color or sugar content?
Which method of meat thawing leads to the least amount of bacteria contamination?
How do changes in acidity affect the survival rates of an invertebrate population?
What is the effect of acid rain on lichens?
Do Microban polymer-based chopping boards inhibit bacteria growth?
Which cooking spices are most effective in killing microorganisms?
Does ultraviolet light affect yeast fermentation?
Do electric and magnetic fields affect the rate of growth of <i>E. coli</i> bacteria?
Does outside temperature affect the frequency of cricket chirps?
Does a butterfly's wing angle affect flight performance?

ANATOMY AND PHYSIOLOGY
Does the volume of sound affect heart rate?
Does exercise affect memory retention?
What is the effect of age on reaction time?
To what extent does age affect the sensation of hearing?
To what extent does age affect 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?
What is the effect of left/right handedness on reaction time?
To what extent does the amount of light affect the acuity of vision?
To what extent does the amount of light affect accuracy of vision?
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?
What is the effect of cooking time on the amount of vitamin C remaining in food?
How does exercise affect heart rate?
Does repeated exposure to antibiotics affect bacterial resistance?
Which type of acne medication is most effective against acne caused by bacteria?
Does eye color affect the ability to identify colors in low light?
Does the time of day affect a person's height?
Does what you see with your eyes affect what you experience in other parts of your body?
Does the shade of human hair affect its ability to insulate the body?
Does shampoo affect the tensile strength of hair?
Does playing video games affect EEG results?
Does transcendental meditation affect heart rate?
Does gender affect olfactory perception?
Does body position affect heart rate?

ENVIRONMENTAL SCIENCE
What is the effect of recycling on the amount of waste that goes to the landfill?
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 insects that attack garden plants?
What native plants can be introduced into irrigation ponds to promote aquatic habitats?
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 potable water use at home or school?
What is the effect of terracing on soil erosion?
Which soil surface erodes the least?
How does the amount of water affect composting efficiency?
How does the amount of light affect composting efficiency?
Does the season affect the pH of precipitation?
What type of de-icer is least harmful to grass?
Does product size affect product-size to packaging-size ratio?
Do recycled materials affect the performance of a product?
How does advertising affect whether people recycle or not?
Does convenience affect the amount of recycling people do?
How does the environment affect the decaying process in wood?
Does parking lot sediment affect aquatic organisms?
Does water temperature affect dissolved oxygen levels?
Does turbidity affect dissolved oxygen levels?
Do phosphates affect dissolved oxygen levels?

EARTH AND SPACE SCIENCE
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 air pollution on precipitation?
To what extent does sunlight affect the temperature of soil?
To what extent does sunlight affect the temperature of water?
To what extent does humidity affect evaporation?
How does the pH of rain affect limestone?
How does the angle of the sunlight affect the temperature of soil or water?
How do different surfaces absorb the sun's energy?
How does slope affect stream velocity?
Do sunspots affect weather patterns?
Is tornado size affected by water temperature?
Which structure type is least affected by tsunamis?
Does soil porosity affect water retention?
Does fertilizer run-off affect algae growth?
Does soil liquefaction affect earthquake movements?
Does temperature affect pH and salinity?
Does soil management affect soil quality?
What has the greatest affect on evaporation: air temperature, water temperature, or wind speed?
Does the sun's angle affect the output of a solar cell?
Which type of wood resists water absorption best in a natural state and with surface coatings?

CHEMISTRY
What is the effect of temperature on the volume of air?
What is the effect of heat on different liquids?
To what extent do different insulating materials affect heat loss/gain of water?
Does changing the level of oxygen affect exothermic oxidation rates?
Does the volume of a gas affect its temperature, when pressure is held constant?
Does the volume of a gas affect its pressure, when temperature is held constant?
Does time after it has been picked affect the amount of vitamin C found in an orange?
What is the effect of cooking time on the amount of vitamin C remaining in food?
Does hydrogen peroxide concentration affect the rate of the iodine clock reaction?
Does electricity affect pH?
What factors affect/control oscillating chemical reactions?
How does temperature affect the intensity and duration of luminescence?
How does temperature affect the glow of the chemical <i>luminol</i> ?
Does dissolving chemicals in water affect the freezing point of the solution?
Which provides more electrolytes to athletes, sports drinks or orange juice?
Does the evaporation of standing rainwater affect its pH?
Does storage temperature affect the pH of juice?
Do plant-based insect repellents work as well as synthesized chemical repellents?
What are the effects of Polyacrylamide and Polyacrylate on soil erosion?
Does electricity affect pH?
Which mixture is most effective in eliminating skunk scent?
What is most effective in detoxifying run-off?
Do chemical preservatives in packaging break down or do they remain in soil after the packaging has been composted?
Do the properties of natural plastic change depending on what you use for a dairy source (acid source)?
Does salinity affect speed of sound?

ENGINEERING
Which building material is the best insulator?
What is the best insulator to keep ice from melting?
Which concrete mixture is strongest?
What is the effect of roof pitch on snow load?
Which cell phone uses the least amount of battery power?
Which bridge design is most stable in earthquakes?
Which building design is most stable in earthquakes?
Which wind turbine blade angle is most efficient?
Which cell phone builds a better spectrophotometer to investigate the absorption of visible light in differently colored light solutions?
Which polarimeter studies the ability of glucose solutions to polarize light best?
Which device is best for capturing the changes of the Briggs-Rauscher (BR) reaction for analysis on a computer?
Which battery is best for cleaning tarnished silverware without scrubbing?
What can be done to increase the amount of oil that can be moved through a pump?
Do fingerprint ridges affect the ability to pick up objects?
Does the ability of a golf ball to bounce affect the distance it travels?
How does the air pressure inside a football helmet affect cushioning?
At what angle should the blades of a wind turbine be positioned?
How does material density affect sound transmission?
Does the color of a building affect its indoor temperature?
How do under-inflated tires affect the difficulty of riding a bike?
Which blade design is best for windmills?
Which type of sound barrier is most effective?
Does the particle size of sand affect brick strength?
Which material is best for the construction of a hot air balloon?
Which material is best in a sandbag for preventing a flood?