

## Possible Inquiry Science Fair Project Ideas...

Inquiry projects are investigations the student conducts on a particular area of science.

Good questions are often framed in this format:

How does \_\_\_\_\_ (*independent variable*) affect  
\_\_\_\_\_ (*dependent variable*)?

Example: *How does the release height of the ball drop affect how high it bounces?*

## **REMEMBER TO CHANGE/TEST ONLY ONE VARIABLE**

### **Life Science Idea's (Project involving plants will need to be started very soon)**

How does the angle of light affect plant growth?

How does the rate of watering affect plant growth?

How does light color affect plant growth?

How does temperature, light amount, or some other factor affect mold growth on bread?

How does (fertilizer type or vitamin supplement) affect plant growth?

How does (water amount or type of moisture) affect seed germination?

How does (motion or music) affect plant growth?

How does (yeast amount, sugar amount, temperature light amount) affect yeast fermentation?

How does (soap, temperature, sunlight, chlorine amount) affect algae growth?

How does the type of container affect how long a food lasts?

How does the( temperature or sense of smell) of a certain food affect the ability to tastes differences in meats, soft drinks, baby food, fruits or vegetables, or sweets?

How does talking on a cell phone affect a person's reaction rate?

How does age affect reaction time?

Do left handed or right handed people have better reaction times?

Do boys or girls have better reaction times?

How does (amount of acid, salt, mulch) affect plant growth?

How does food color affect how people react to food taste?

How does odor affect plant growth?

How does changing (sugar amount, baking soda amount, or changing another ingredient) affect cookie (size, shape, texture or taste)?

How does a person's (age, gender) affect time it takes their heart to return to normal after exercising?

How does soil type affect a plants root length?

How does amount of human hair added to soil affect plant growth?

How do levels of pH affect plant growth?

How does overcrowding affect plant growth?  
How does smoking affect a person's lung capacity?  
How does changing (temperature or amount of moisture) affect the germination of monocots (corn) or dicots (beans)?  
Which type of surface do certain critters prefer?  
How does temperature affect movement of (a certain critter or fish)?

### **EARTH SCIENCE IDEA'S**

How do different types of terracing affect soil erosion?  
How do different amounts of (wind or water) affect erosion of (sand, clay or loam)?  
How do different rates of (wind, watering, sloping) affect erosion?  
How do different salts affect the rate of snow melting?  
How does adding various salts to water affect the evaporation rate?  
How does surface area affect evaporation rate?  
How does (building design or materials) affect impact of an earth quake?  
Which changes temperature faster, soil or water?  
How does soil type affect how much water it can hold?  
How does type or color of soil affect how fast it can warm up or cool down?  
How does soil type (sand, dirt or clay) affect water drainage?  
How does (time, temperature, etc) affect crystal growth?  
What causes the most weathering of limestone, marble or granite?  
What design is best for a solar house?  
How does a water softener affect the amount of suds formed when added to the water?  
How does the amount or type of mineral dissolved in water affect its boiling or freezing point?  
How does mineral type affect its hardness?

### **PHYSICAL SCIENCE IDEA'S**

How does the shape of the hole affect the falling speed of a parachute?  
How does the speed of pulling a fish line affect its strength?  
How does the shape or size of a sail affect how far it travels?  
How does the angle of launch affect how far a dart travels using a dart gun?  
How does the color or type of material affect how heat is absorbed?  
What makes the best insulator or conductor of heat?  
How does (temperature, surface roughness, etc) affect friction?  
Which materials have the most strength? (hair, wool, cotton, silk, nylon, polyester)  
How does temperature affect battery life?  
How does temperature affect how fast glue or paint will dry?  
How does (shape, weight, area, wheels) affect speed of a model car?  
Which type of packing material is best for protection against breakage?

How does the (size, material, temperature) of a ball affect how high it will bounce?  
How does (material, weight of wearer, sole pattern) affect shoe traction?  
How does (weight, material, size, angle of ramp) of a ball affect its rolling speed?  
How does air space affect effectiveness of an insulator?  
How does (wing size, shape weight, design) affect how far an airplane will travel?  
How does temperature affect the strength of a magnet?  
How does bridge design affect its strength?  
How does material type affect how well it can be charged by static electricity?  
How does the type of material affect how well sound can travel?

## **Other possible sources for idea's:**

*[www.all-science-fair-projects.com/](http://www.all-science-fair-projects.com/)*

*[www.sciencebuddies.org/mentoring/project\\_ideas.shtml](http://www.sciencebuddies.org/mentoring/project_ideas.shtml)*

*[othello.mech.northwestern.edu/~peshkin/scifair/chias\\_ideas.html](http://othello.mech.northwestern.edu/~peshkin/scifair/chias_ideas.html)*

## **What should be included on Science Fair Display:**

- 1. Investigative question**
- 2. Prediction (What you think is going to happen based on your past experience and research?)**
- 3. Materials needed**
- 4. Procedures (steps):**
- 5. Data (results in chart or graph form)**
- 6. Conclusion- 1 paragraph (What do the results mean? Is there anything you would change if you were to do this again?)**
- 7. Further Investigations: (What else would you like to investigate that is related to this topic?)**
- 8. Daily Lives: How might your investigation affect the daily lives of you or others?**
- 9. Sources of information: include if you used any outside sources**