

## Dear Parents,

I have given your child all kinds of ideas in class for a science fair project, and we have even done some demonstrations. However, I have realized that it is slightly difficult to try to help 20 students on an individual basis. If your child has not thought of a topic as of yet, I am providing some ideas to help.

The project needs these things:

- A project board/paper with the purpose and other parts (which will be put on poster board if chosen as one of the five projects from our class)
- A graph showing results (bar or line graph)
- 1-2 page research report with two or more references
- Notebook saying what you did every day you worked with the experiment (have at least three entries WITH THE DATE)

## Spectacular Science Fair Topics

- What kind of surface does a marble roll farthest on- carpet, wood flooring, or bubble wrap?
- How does the mass of a toy car affect how far it travels?
- How does air pressure affect how high a ball can bounce (measured in centimeters)?  
([http://www.sciencebuddies.org/mentoring/project\\_ideas/Sports\\_p007.shtml?from=Home](http://www.sciencebuddies.org/mentoring/project_ideas/Sports_p007.shtml?from=Home))
- In which kind of liquid do crystals grow the largest- in water, unsweetened apple juice, or 7-Up?
- How does color affect heating by absorption of light?  
([http://www.sciencebuddies.org/mentoring/project\\_ideas/Phys\\_p030.shtml?from=TSW](http://www.sciencebuddies.org/mentoring/project_ideas/Phys_p030.shtml?from=TSW))
- How do using different liquids on plants affect how tall it grows in centimeters?
- How is the stretching distance of a rubber band affected when placed in a liquid compared to being dry?
- How do different bugs react to different kinds of fruits? (How does the mass of each fruit change?)
- Does the shade of hair have an effect on being able to keep the human body warmer? (Project uses a thermometer)
- Does temperature affect the rate in which crystals form?
- Which type of acidic liquid will cause fruits to lose the greatest amount of mass?
- How does the design of a Styrofoam vehicle affect aerodynamic drag?
- Does a different style of a wing on a rocket have an affect on how far it travels in the air?
- How well do different lotions block out the sun's UV rays?

- Which liquid evaporates fastest- Tang, Coke, apple juice, or orange juice?  
(<http://www.virtualsciencefair.org/2006/fran6j2>)
- How does the design of a paper airplane have an effect on how far it travels?  
([http://www.sciencebuddies.org/mentoring/project\\_ideas/Aero\\_p009.shtml?from=TSW](http://www.sciencebuddies.org/mentoring/project_ideas/Aero_p009.shtml?from=TSW))
- Does size make a difference in how effective a parachute may be?
- How much liquid does it take for different types of boats to float?
- How does the tilt angle of a cylinder floating in water depend on the aspect ratio of a cylinder?  
([http://www.sciencebuddies.org/mentoring/project\\_ideas/Aero\\_p021.shtml?from=TSW](http://www.sciencebuddies.org/mentoring/project_ideas/Aero_p021.shtml?from=TSW))
- What kind of baseball bat is better in getting a ball to soar- a wooden or aluminum one?  
([http://www.sciencebuddies.org/mentoring/project\\_ideas/Sports\\_p016.shtml?from=Home](http://www.sciencebuddies.org/mentoring/project_ideas/Sports_p016.shtml?from=Home))
- Which type of wheel is best for speed and turns in skateboarding?  
([http://www.sciencebuddies.org/mentoring/project\\_ideas/Sports\\_p018.shtml?from=Home](http://www.sciencebuddies.org/mentoring/project_ideas/Sports_p018.shtml?from=Home))
- How does the strength of a magnet vary with temperature?  
([http://www.sciencebuddies.org/mentoring/project\\_ideas/Phys\\_p025.shtml?from=TSW](http://www.sciencebuddies.org/mentoring/project_ideas/Phys_p025.shtml?from=TSW))
- Which kind of water can be supercooled?  
([http://www.sciencebuddies.org/mentoring/project\\_ideas/Phys\\_p033.shtml?from=TSW](http://www.sciencebuddies.org/mentoring/project_ideas/Phys_p033.shtml?from=TSW))

**A neat website to continue your journey-**

**<http://pbskids.org/dragonflytv/scifair/index.html>**

Science Project Topics to <u>Avoid</u>	Why
Any topic that boils down to a simple preference or taste comparison. For example, "Which tastes better: Coke or Pepsi?"	Such experiments don't involve the kinds of numerical measurements we want in a science fair project. They are more of a survey than an experiment.
Most consumer product testing of the "Which is best?" type. This includes comparisons of popcorn, bubblegum, make-up, detergents, cleaning products, and paper towels.	These projects only are scientific if you understand the science behind why the product works as it does. However, that is a project normally on the level of a college student.
Any topic that requires people to recall things they did in the past.	Unreliable.
Effect of colored light on plants	Several people do this project at almost every science fair. You can be more creative!
Effect of music or talking on plants	Hard to measure.
Effect of running, music, video games, or almost anything on blood pressure	The result is either obvious (the heart beats faster when you run) or difficult to measure with proper controls (the effect of music).
Effect of color on memory, emotion, mood, taste, strength, etc.	Very difficult to measure, and everyone is different.
Any topic that requires measurements that will be extremely difficult to make or repeat, given your equipment.	Without measurement, you can't do science.
Graphology or handwriting analysis	Very difficult to measure, and everyone is different.
<b>BUILDING A MODEL, LIKE A VOLCANO</b>	What are you comparing?