



What is a Science Fair?

A science fair is an exciting event where students can showcase the science projects they have completed and students, families and teachers can admire and learn from them.
Fair Checklist:

What is a Science Project?

A science project <u>asks & answers a **question**</u> about science. The topic should be interesting to you and be something you can **evaluate** and **measure**. It can be an **investigation** or an **invention** covering any area of science, such as:

- **Physical Sciences:** magnetism, sound, light, matter (chemistry), structure (engineering)
- Life Sciences: animals, plants, human body, behavior
- Earth & Space Sciences: weather, geology, stars, planets

A project can also be a model or demonstration, such as a volcano or solar system, or a collection of elements (like rocks).

Who Can Participate?

January-February √ Begin researching project in

 Begin researching project ideas and possible experiments

Feb 13th

✓ Submit the project registration form

Feb -March

✓ Start conducting experiments

March

✓ Finalize results & prepare presentation

March 26, 2015 @ 4pm:

Display project at Science Fair!

The science fair is open to ALL STUDENTS, however projects must be completed at home outside of the school day.

Can Parents Help?

We **encourage** parents and guardians to participate in these projects, but the level of involvement depends on the age of the student: younger grades may need more help choosing, designing and presenting a project, whereas older students should be able to handle more themselves. Tips for helping your student with a science fair project:

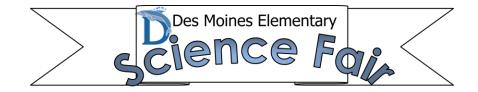
- Help them choose an age- or grade-appropriate project, keep the "question" *simple* & fun.
- Focus on the scientific *process* rather than a complex experiment.
- After the project has begun, help them stick to the original question
- Assist with time & schedule management to properly complete experiments and prepare reports.
- For the younger grades, help your student with experiments and preparing the presentation

Resources for Students or Parents:

- Science Buddies has an interactive project selector tool to help find an age- and interest-appropriate project
- <u>http://www.sciencebuddies.org/science-fair-projects/project_ideas.shtml#helpmefindaproject</u>
- Education.com has many project ideas for all ages. <u>http://www.education.com/science-fair/all/</u>
- Steve Spangler Science: Project ideas and kits for purchase http://www.stevespanglerscience.com/
- <u>Discovery Education</u>: Lots of tips on project presentations and project ideas. <u>http://school.discoveryeducation.com/sciencefaircentral/index.html</u>
- Cool Science: Under the "Kid Zone" Link there are Experiments. <u>http://www.coolscience.org</u>
- Bill Nye the Science Guy: has "home demos" that can be formatted into projects for presentation http://billnye.com

Note: Tri-fold display boards are available **from your teacher** for any student signed up to do a project.

More information about science fair rules, the scientific method and presentation tips will be available to students that return a project registration form.



Project Ideas

Here is a sample of the kinds of projects you might consider for the science fair

Kindergarten

- Exploring Static Electricity with Sticky Balloons: Can static electricity make a balloon "sticky"?
- **The Speed of Sound on a String:** demonstrate sound's ability to travel through air vs. through a piece of string.

<u>1st Grade</u>

- **Density: A Simple Exploration:** To explore the density of various liquids and objects and how they interact with each other.
- How Well Does Sound Travel Through a Gas? A Liquid? A Solid?: Experience sounds travelling through things in different states: a bag of air, a bag of water, a wooden block

2nd Grade

- What Makes Honey Crystallize: Have you ever noticed that honey crystallizes in a jar when you leave it in the cupboard for a long time? What is crystallization? What might make it happen faster?
- Will Some Colors Keep You Cooler than Others? Which keeps you cooler on a hot day, a black shirt or a white shirt? What about other colors? How can you find out?

3rd Grade

- In Search of the Longest Lasting Soap Bubble: Explore substances that cause a bubble to last longer.
- Will a Ball Bounce Higher If It Is Dropped from a Greater Height? What factors affect how high a ball bounces? Do some balls bounce higher than others? If you drop a ball from a high place, will it bounce higher than if you drop it from lower down? How can you find out?

4th Grade

- How to Stop Soda From Exploding: Students will discover whether tapping the top or the side of the can will stop a vigorously-shaken can of soda from exploding into a sticky mess and the logic behind it.
- How Does Distance Affect the Strength of a Magnet? Magnets pull iron and steel objects toward them. Does it matter how far away from the object the magnet is? How can we measure the effect of distance on a magnet's strength?

5th Grade

- Which Metal Conducts Heat Best? What is heat? How can you tell when something is hot? If you leave a metal spoon in a hot drink, how does it feel? Does heat travel through metals? Do some metals conduct heat better than others do?
- How Does Distance Affect the Spreading of Light? If an object is close to a light, how does it look? How does it look if it is farther away? What happens to light as it travels across a distance? How can you find out?

<u>6th Grade</u>

- **Make Your Own Lava Lamp**: explore the relationship between oil and water in terms of density as well as hydrophilic/hydrophobic compounds.
- **The Amazing Self-Inflating Balloon:** Start a chemical reaction that will make a balloon inflate itself!

Science Project Examples: Extracted from <u>http://www.education.com/science-fair</u>





2015 Science Fair:

Project Registration Form

Name:		Teacher:	Grade:
Project Title:			
roposed Que ho, Which, Why,		o you want to find out or design? Do some	research and think about How, What, Whe
lypothesis/	Prediction: What do you thin	<i>k will happen and why?</i> "If <i>[<u>I do this]</u>, then</i>	<u>[this]</u> will happen because <u>[<i>why</i>?]"</u>
xperiment: illect.	How will you test your hypothesis	? Briefly describe the overall steps you will	take in your experiment & what data will yo
nducting experii	nents, creating the presentation a	nplete your project? (allow time for selec about 2 weeks of pre-work and 4 weeks to e	
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Teachers: Please put completed forms in PTSA President's Box