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March 2010

The "Spirit" of Science Fairs

Science fairs bring weeks of research and experimentation out of the lab and into the limelight. Students want to succeed, earn good grades, and catch the eyes of judges and observers with a successful project. Unfortunately, not all projects turn out as planned, and not all hypotheses are proven.

It is crucial that parents, teachers, and judges work together to create a science fair environment that



values the spirit of science and the scientific method. Students learn by working through the steps of a science project, even if it doesn't go as expected. With many examples of science fraud in science news, it's important to talk with students about science ethics and honesty and to help them know what to do when a project takes an unexpected turn. A science fair should be a positive and educational experience. On the blog, we've got advice for keeping the outcome of a science project in perspective.



"Science Mom" Encourages Hands-On Science at Home

Highlighting the science that lurks in every kitchen, Science Buddies' very own "Science Mom," Courtney Corda, appeared on the San Francisco TV show View from the Bay last week with a hands-on cooking project.

Encouraging parents to use everyday situations and activities (like making dessert) to make science engaging and fun, Courtney demonstrated the role of enzymes and proteins with the Science Buddies project Which Fruits Can Ruin Your Gelatin Dessert?

Our Science and Engineering Careers Page Continues to Grow!

Science Buddies has completed over 100 profiles of science, technology, engineering and math careers. Here is just a sample of some of the new career profiles that can be found on our <u>Careers page</u>:

- Animal trainer
- Anthropologist
- Cartographer and photogrammetrist
- Environmental engineering technician
- Hydrologist
- Math teacher
- Physical therapist
- Power plant operator
- Software quality assurance engineer and tester
- Surveyor

Strong Hypotheses

"If [I do this], then [this] will happen."

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Adding fruit to a gelatin dessert sounds simple enough, but the proteins in some fruits actually keep gelatin from solidifying. As Courtney explained, the gelatin experiment helps demystify the way proteins and enzymes work within the body.

"Cooking is a great introduction to chemistry for kids," says Courtney, "and something as ordinary as gelatin can help kids see how things work." Plus, you get to eat your results!

Watch the video clip.

Intel ISEF is Coming!

The 2010 Intel International Science and Engineering Fair (ISEF) will be held May 9-14 in San Jose, California. Intel ISEF gathers the world's most creative, intelligent, and resourceful high school students from over 50



countries to compete for more than \$3 million in awards and scholarships.

Science Buddies will be at ISEF with Symantec Corporation to present an award that recognizes outstanding computer science research.

Science Buddies applauds all students who will be attending ISEF this year--it's a tremendous accomplishment! If you or a student of yours is going to ISEF with a Science Buddies project, we'd love to know. Email us at scibuddy@sciencebuddies.org.

Updates to the Advanced **Project Guide**

Resources in our **Advanced Project Guide** are designed to help students who are conducting advanced research and participating in top-level competitions like ISEF.

Thanks to Intel Foundation, the following materials are now available:

> **Experimental Design for Advanced Science Projects:** Creating a definitive experiment to test your hypothesis requires thought, problem solving, and experience. This guide

The hypothesis is at the heart of the science project. After deciding upon a question to study, you make an educated guess, a prediction about the outcome of your experiment. Good hypothesis statements follow a certain format and share many properties. Our staff scientists have put together a set of tips and examples to help students and classes write better hypotheses.

From Apprehension to Accolades: One Student's Inspiring Journey to ISEF

Does the idea of a science fair seem overwhelming? Think you don't have what it takes--the lab equipment, the support, the ideas? Science Buddies recently interviewed Ronit Abramson, now a student at Yale, and discovered how she overcame her initial fear of science fairs and ended up a 2009 Intel ISEF winner with a backyard science project using diatoms to detect pharmaceuticals in streams and rivers.

Read her story, Ronit Abramson--From My Backyard to the Intel ISEF, and get inspired to experience science fairs for yourself.

Making ScienceBuddies.org **Even Easier to Use**

We are always working to find ways to make our resources and website even easier to use. In recent months, we've added several enhancements:

- Advanced Search Options: You can now narrow your search to more accurately find the information you want.
- Report a Problem: If you spot something wrong on our Project Idea pages, from a typo to a factual error, we hope you'll click the "Report a Problem" button in the sidebar and let us know!
- Share This: Easily share Project Ideas with friends and peers with a click of a button.
- Improved "Favorites": We've

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- Increasing the Ability of an
 Experiment to Measure an Effect:
 Can't decide if you are seeing a real effect in the trial run of your experiment or not? The practical tips in this guide will help you maximize your ability to see and evaluate an experimental effect.
- Data Analysis for Advanced Science Projects: You might be surprised to learn that professional scientists and engineers don't just wait until the end of their projects to evaluate their data--they start thinking about how the data will be analyzed when they design the experiment. Why? And what kinds of analysis should you plan to do with your science project data? This guide gives you the inside scoop.

Looking for a Perfect Project for *You?*



Our <u>Topic Selection Wizard</u> can help guide you to a science project that fits your areas of interest *and* meets science fair requirements. Give it a try today!

made it even easier to mark and access your "favorite" Science Buddies projects.

(Note: If you access our website in a shared environment, we recommend using "Email This" to send yourself a link to your favorites and "recommendations" in case they are erased when another user browses our site.)

Amazon.com Giveaway

We're giving away five \$10 Amazon.com gift cards! For a chance to win, send an email to amazon@sciencebuddies.org with the following information:

- Your full name
- Your favorite science project

(Don't have a favorite? Browse the Science Buddies Project Ideas directory and pick the one you would most like to do!)

We'll randomly draw five lucky winners from all *complete* entries received before March 9. (U.S. entries only. One entry per person.)

Follow Science Buddies

The <u>Science Buddies at Facebook</u> page makes it easy to learn about new projects, drawings and giveaways, and other Science Buddies' news. Mark yourself a "fan" to see our updates in your news feed. Can't Facebook? Consider <u>subscribing to our blog feed</u>, or follow us at Twitter.



Show Your Science Buddies Support!



Support Science Buddies *and* get cool stuff! The <u>Science Buddies CafePress store</u> now features all kinds of logo-wear--from SiggTM bottles and hats to t-shirts and more. Stop by and check it out!

Help Spread the Word

If you have a friend, colleague, or family member that you think would enjoy Science Buddies and the Science Buddies newsletters, please do forward a copy of this month's newsletter.

(If you received a copy of the newsletter from a friend and would like to sign up, please visit: http://tinyurl.com/ydgjbsq.)

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Science Buddies News: The "Spirit" of Science Fairs, Science Mom, and...

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