



12th Annual Boones Ferry Primary Science Inquiry Fair

2016 K-2nd Grade Packet—Registration Due Jan. 22

“Every kid starts out as a natural-born scientist...” – Carl Sagan

Who: All Boones Ferry Primary students are *encouraged* to enter a project in our Science Inquiry Fair. **No Child is Too Young to Participate.** We hope most K-2 students will be involved this year!

What: The fair is a display gallery of student scientific inquiry and research projects. **A project doesn't have to be complicated and can be lots of fun.** The process is about asking a question and finding an answer. It can be as simple as “How many licks are in a Tootsie Pop?” or “Which dish soap makes the biggest bubbles?” Results are then displayed at the fair.

Our fair is non-competitive. Students explain their projects to other students, family, and fair visitors when their class visits the fair and during part of the evening as they stand by their projects.

Why: Science fair is a way to experience science in a fun, hands-on way. We are surrounded by science. Science is asking questions and finding answers. Science makes things work and solves problems. Science education feeds curiosity and wonder, and provides students with valuable concepts, life skills, and career options. It also helps develop an appreciation for the world. Participating builds self-esteem while being recognized with a certificate and medal!

Where: Projects are completed at home and displayed in the Fauna Gym

When: Feb. 23-24 8:00 a.m. – 2:00 p.m. and Feb. 24 5:30-7:00 p.m.

District Science Fair

All students are invited to attend the 15th annual CREST-Jane Goodall Science Symposium which will be held at West Linn High School on Friday, February 26, 2016. It is a great time to get new ideas for your next science fair project!

Types of K-2 Science Fair Projects:

- **Scientific Collection:** Collect and organize (sort) something of interest, answering questions related to observations made while exploring your world. Examples: What kinds of insects can be found in my backyard? What types of tree leaves can be found on my street?



- **Inquiry Research Project:** Start with a question or problem. You will look for answers and solutions by reading, talking to experts, and gathering information from many sources. Examples: How do clouds form? How does a solar cell work? How does a light bulb operate? What can people do to help bees?

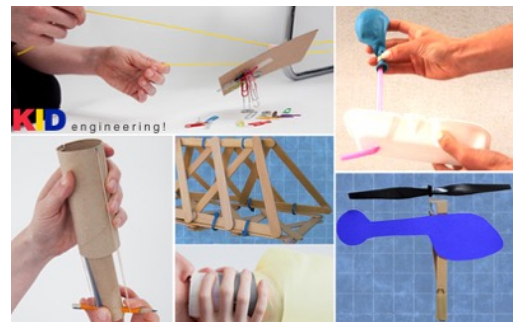


- **Consumer Science or Observation Project:** Study animal or human behavior or the environment. Examples: What brand of raisin cereal has the most raisins? What color of bird



seed do birds like better? Which is the warmest/coldest part of your home?

- **Inventions, Models and Designs:** Use science, math, and creativity to dream up and design an object or process to solve a real life problem. Write a computer program or use the engineering process to asking a question, brainstorm, plan, create, test, and make your design even better. Example: Can the design of a paper airplane make it fly further? Build a paper bridge that can hold the weight of a can of soup.



- **Experiment:** Conduct an experiment to find the answer to a question/problem. Use the Scientific Method: ask a question, do some research, make a hypotheses (your best guess at how it will turn out), plan and conduct your experiment, and



analyze your results. Examples: How much salt does it take to float an egg? Do all objects fall to the ground at the same speed?

How to Register:

To enter the Boones Ferry Science Inquiry Fair, fill out the entry form at the end of this document and return it to the office by **Friday, January 22**. The entry form must have a parent/guardian signature. We may contact you to confirm or obtain any missing information.

Getting Started:

The Boones Ferry and Wilsonville libraries have many resources to support your inquiry project. Our school website provides many links to help generate ideas and support your project. Last but not least, simply start by exploring the world around you and asking yourself- *what do I want to learn more about?*

Displays for K-2 Projects:

Families and other students will be viewing displays. These displays should communicate the process of finding the answer to a student's question. There should be an area for each part of the project on the display.

Information may be displayed in a variety of ways:

- Tri-fold poster board—Sold at office for \$3.00
- Pamphlet or poster.
- Diorama - large shoe box size

Helpful websites:

Check out more links on our website: Student Learning Links/Science Fair Resources

-The Internet Science Fair Project Resource Guide: Good general information and lots of links to idea websites. <http://www.ipl.org/div/projectguide>

--Science Buddies: Has a 40 question form that allows you to find an idea that matches your interest. Search by time required and grade level. Great site!
www.sciencebuddies.org/

--Crystal Clear Science Fair Projects: Good ideas but a lot of their projects require you to buy stuff. www.crystal-clear-science-fair-projects.com

--Science Fair Central at Discovery Education. <http://school.discoveryeducation.com/sciencefaircentral/>

For more resources on Experiment Process, please see the 3-5th grade packet posted on our website.

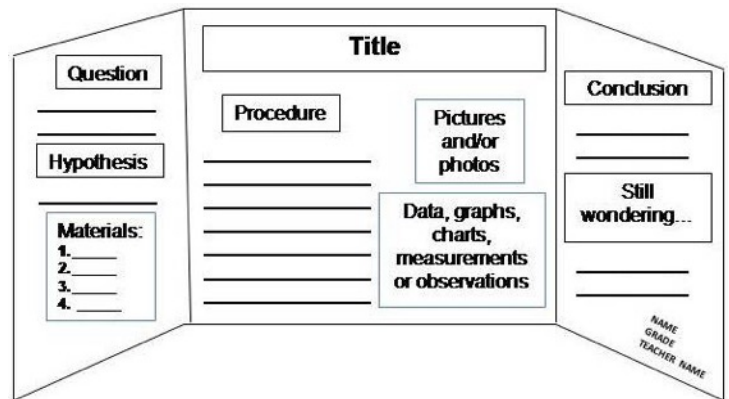
Questions? Contact Margaret Wattman-Turner, wattmanm@wlwv.k12.or.us, 503-673-7310

Entry expectations:

Example of a Science Fair Board

Your project display should:

- ✓ Demonstrate an understanding of the scientific experimental process or be an exploration of a scientific topic that you would like to share with others
- ✓ Show your own ideas and work
- ✓ Be neat and creative (handwritten okay, but be neat)
- ✓ Use correct spelling
- ✓ Use photos when possible. Provide models when appropriate.
- ✓ Use graph, tables, and charts to present data if possible.



Your display board should also include:

- ✓ A project title, generally your question
- ✓ Your name, grade, teacher and school
- ✓ Background information: What you learned through your initial research and how you decided what you wanted to learn more about
- ✓ Hypothesis: What you thought would happen
- ✓ Procedure: What you did
- ✓ Results: What happened
- ✓ Conclusions: What you learned, if your hypothesis was supported

****Students presenting a research or other project need not necessarily follow this recommended format for the display board.***

Projects **may not include**: If it can spill, hurt, or cause an allergic reaction it is not allowed.

- Science or math kits from stores
- Expensive or non-replaceable property (Is it too fragile to touch?)
- Live animals, reptiles, bugs or bacterial specimens (observations of live animals are permitted)
- Matches or flames, chemicals or flammable substances
- Electricity passing through an un-insulated wire. Electrical projects should be battery powered. No power will be available to the display tables.
- Uncontained messes or liquids, or anything that may cause stains
- Breakable items, peanuts, tree nuts, or latex
- Blood, gory products or illustrations

Suggestions for Parents:

- **Help your child get started** – a project idea may be something that your child is interested in, curious about, or a subject he/she is learning about in class. Look in books and on websites for experiment ideas that might expand into a project. Have your child think about the following sentence stems:
 - I want to do _____. I want to find or show _____. I think that _____.
I want to learn more about _____. What will happen if _____?These thoughts help children learn about the world around them!
- **Complete Registration**- Work with your child to fill out and sign the entry form.
- **Encourage your child** – the science inquiry fair is meant to be a *fun* learning experience, engaging children in continuous questions about the world around them. It is non-competitive. Parents do not need a background in science, mathematics, or technology to be a support!
- **Monitor your child's progress** – changing ideas, missing items, over-looking steps, and not managing time effectively are common occurrences in any project. Help guide your child towards completing a finished project. This is an excellent opportunity to teach organization over time, a skill children need to develop.
- **Avoid doing your child's project for them** – handwritten signs and descriptions in their own words are great! However, support with typing or data input, depending on the age of your child, may be helpful.

Calendar:

Jan. 11-22	Turn in your registration form by January 22. Gather information on your topic. Formulate your question and your hypothesis based on what you have learned.
Jan. 22-29	Design your study or experiment to find out the possible answers to your questions. Remember, if you are doing an experiment, you must try to <u>control all of the variables</u> that you can and note those variables you cannot control. Begin your study/experiment.
Feb. 1-14	Continue work on your study or experiment. Remember <u>to allow time</u> to repeat your experiment and engage in your study. You may want to begin working on how you will present your findings.
Feb. 15-27	Finish your experiment or study. Develop a way to display your work. Present your findings to friends and family. You should be able to answer most questions about your research.
Feb. 22	Bring your project to school Monday, Feb. 22 between 5:00-6:30 p.m. Your project will be checked and set up at this time.
Feb. 23-24	Viewing will be open to classes 8:00 a.m.-2:00 p.m. Families are welcome to attend.
Feb. 24	Science Fair Night is Feb. 24, 5:30 p.m.-7:00 p.m. Students attend with their family and receive their medal. Students must take their projects home immediately after the evening exhibit.

Steps in a Research Inquiry Project

1. **Question and Wonder**
Choose a topic or area of interest, something you wonder about.
2. **Create an inquiry question**
Your question should be broad enough to invite inquiry, yet not so broad that research will be overly challenging.
3. **Research** Dive into your research. **Read, Look and Listen**
Use books, computers, films, observe and talk with experts.
5. **Analyze and Interpret—Aha!**
Review your research and summarize your findings. Determine the answer to your initial question.
6. **Share**

What do you think the answer to your question is? (prediction or hypothesis)

Student signature: _____

***Note to Parents**

This project should be student-driven. The majority of planning, researching, designing and display preparation should be done by students. Child designed displays are encouraged!

Parents and other adults may help with: Planning and organizing, gathering materials, and assisting with display construction or typing.

Volunteers are needed for the Science Fair. I am able to help:

- _____ Lead classroom groups during school hours Tuesday or Wednesday, Feb. 23 and 24
- _____ Helping with set-up Monday, Feb. 22, 5:00-6:30 pm
- _____ Helping with tear-down Wednesday, February 24 after the family viewing (7:00 p.m.)

Parent Signature: _____

Home/Cell Phone: _____ Email: _____