How to Help Your Child Win a Science Fair

Wallace Elementary School Science Fair, 2013
Projects due: January 14, 2014, Tuesday
Science Night/Awards: January 17, 2014, Friday
Researched and Written by Deborah McAlister Holland
©2013 Deborah McAlister Holland All Rights Reserved
Presented and Modified with permission by Fred L. Holland
Wallace Science Fair Schedule

• December 6, Friday  **Question Due**
• December 13, Friday  **Hypothesis Due**
• December 18 – January 10,  **Work on Project**
• January 10, Friday  **Results - Conclusion Due**
• January 14, Tuesday  **Final Project Due**
• January 17, Friday  **Wallace Science Fair**
• February 3-4, Mon-Tue  **Regional Science Fair**
RISD Elementary Science Fair Brochure
Sent Home With Your Child (Blue)

Safety Rules and Display Rules

Step by Step Guide and Hints

RISD Elementary Science Fair Brochure

Safety Rules and Display Rules

Your Project - Step by Step

1. Start as soon as possible to prevent a last minute project and put yourself plenty of time to investigate your own idea.
2. Decide on your topic. Think about things you are interested in. What questions do you have that can be answered through investigation rather than reading? Try to think of the area in science and topics covered which can be interesting with your results.
3. Many projects will follow a basic scientific method. These steps usually include:
   - Ask the Problem/Question: what are you trying to find out?
   - Develop a Hypothesis: what do you think will happen? What would you predict based on past experiences or previous knowledge?
   - Identify what you already know about the problem or question. Do you need to find out? What research needs to be done in order to answer the question? What is necessary background information?
   - Formulate your hypothesis: what will you set up an investigation to answer your question? (Remember to change or modify your hypothesis during your investigation.)
4. List the Materials: what will you need to complete your investigation?
5. Outline your procedures, what are the steps you will follow to perform your experiment?
6. Record the results. What did you discover based on your investigation?
7. Describe the data and your conclusions. How would you decide based on the results? How do you explain your answer in response to your hypothesis? Can we see you results as possible evidence? Interpret the results of your experiment. Do you agree with your hypothesis, or not?
8. Draw a display board and portray your findings as specified in the Brochure. Be neat and abundant.

When can parents help?

- Give encouragement, support, and perhaps a little help
- Make sure the project is working as you would like.
- Help your children understand that science is not just a subject, but a way of thinking and a part of everyone's day.

Helpful Hints

- A Guide for Parents: You'll need to be flexible, understanding, patient.
- Make sure you display is large, easy to see.
- Print out your display and hang it up on a wall.
Your Job: Help & Guide

- Don’t do the work for your child.
- Let your child make mistakes – children learn much from their own mistakes!
- Read the rules with your child. Enforce safety standards and help your child follow the rules.
- Schedule the work and supervise the work.
- Ask questions of your child’s teacher
- Email: fredddallas@gmail.com
- Use the Subject Line: SF Hints for Child’s Name
Why Science Fair Matters

• Major part of grade.
• Teaches real-world problem-solving skills.
• Looks good on a magnet school application.
• In upper grades, there are prizes and scholarships.
  – National: $1 million in prizes
  – Regional $250K in scholarships
## What Parents CAN & CAN’T Do

### Parents Can & Should:
- ✓ Brainstorm.
- ✓ Explain concepts.
- ✓ Show them how to use required tools.
- ✓ Purchase supplies.
- ✓ Take photos of your child doing the work. (Make sure the child can’t be identified in photos!)

### Parents Can’t & Shouldn’t:
- - Assemble, build, or “help” with project or display.
- - Do the research for them.
- - Purchase a “kit”.
- - Write reports.
- - Record data.
- - Calculate results.
- - Create drawings or graphs.
Read and Follow the Rules

• Don’t bring prohibited items to school, or to a regional science fair.
• “No identifiable information” on display.
• Don’t leave part of the project at home on the day it’s due.
• Rework your display for Regionals.
• Focus on discovery, not winning.
• Every child that does a science fair project by themselves and completes a project board is both a winner and a scientist!
Start Early

- Regional Science Fair Prizes go to projects that take time.
  - Elementary School: 30-90 day projects
  - Junior High School: 90-180 day projects
  - High School: 6 month to 1 year projects
  - Multi-year projects at the national level
Answer a Real Question

- Building a model is not a science fair project.
- Winning science fair projects answer a question that can’t be answered by looking at Wikipedia.
  - Kids are great at asking this kind of questions.
  - If you know the answer, can Google the answer, or know that your child ever did it in class for a grade, don’t do a project on it.
Every Science Fair Project Needs:

- A question (why the experiment was done)
- Hypothesis (what the student expected to happen)
- List of supplies
- Methodology or Procedure (a “how to” or “Step by Step” description of the experiment)
- Data (charts, graphs, photos, drawings, observations, information collected during the experiment) recorded by the child in a dated log book and shown on project display.
- Results as a Conclusion (what happened)
- Analysis (what the data means, and why it proves or disproves your hypothesis)
Where does the work show up?
Size Matters: Use Bigger Displays

• Big displays are allowed.
  – Store-bought displays are half the allowable size.

• More room for:
  – Graphs & charts
  – Information
  – Photos

• Judges spend just a few minutes per entry to pick finalists.
Good Displays Matter

- North Dallas Regional Elementary Science Fair
- 222 projects per grade
- 1,553 projects
- <3 minutes to per project
Creating a Great Display

Same Project – Two Displays – 125 photos – 14 graphs – 25 page Notebook

2012 Wallace Grand Prize Winner

2012 Regional Science Fair Honorable Mention
What Your Display Needs

• Lots and lots of charts, graphs, and data tables.
• A notebook or journal.
• Clear photos of the process, equipment, and results.
  – Make sure that any required safety equipment (gloves, goggles, tongs, hot pads, etc.) are clearly visible in the photo.
  – Make sure that anything identifying (faces, scars, t-shirts with school or camp logos on them, hair, etc.) is not shown in the journal of on display.
• A story that makes sense.
• Readable, attractive presentation “boards.”
Money-Saving Tips

• Don’t buy fancy letters.
• Print photos at home.
• Borrow equipment.
• Flinn Scientific Catalog.
• Let your child’s creativity show.
  – Judges like hand-drawn illustrations.
  – Interesting photos are eye-catching.
Some Eye-Catching Displays
Some Eye-Catching Displays
Some Eye-Catching Displays

Expectations change with grade level. Use props where needed.
Some Eye-Catching Displays
QUESTIONS?

Contact: fredddallas@gmail.com or 214-340-4774