**BIG THOMPSON ELEMENTARY**

**2012 SCIENCE FAIR**

**PARTICIPANT PACKET**

Congratulations for participating in the first Big T science fair! Good luck with your project! Enclosed are worksheets for you to use during the process, which may help you organize your data.

Also, if you find that your topic does not work or you want to do something else, **the library has projects from start to finish**! Just make sure that you turn your display into school by Tuesday, May 8th!

The Science Fair is Wednesday May 9th from 2:20-6pm. Judges will be at your display between 2:30-4pm to ask you questions about your project. Your parents will be asked to leave your display when the judges are asking you questions. These will be simple questions, so please don’t fret! The judges want to just make sure you know your topic. You are required to be at your display between 2:20-4pm, but things do come up in our very busy lives and we know that you may not be able to be at school during the science fair. You may still display your Project. Parents can view displays anytime between 2:30-6pm. You may take home your project either at 6pm when the Fair is ended, or the next day. Ribbons will be awarded at 4:30pm.

The following is information about what a science project involves, what information should be on your display boards and dates to remember. Your teachers should be able to answer any question you have. The number one rule for science fair is HAVE FUN!

**Scientific Method**

Your science project is an investigation using the scientific method to discover the answer to a scientific problem. Before starting your project, you need to understand the scientific method. It is the process of thinking through the possible solutions to a problem and testing each possibility for the best solution. The scientific method involves the following steps: doing research, identifying the problem, stating a hypothesis, conducting experimentation, and reaching a conclusion. **Research** is the process of collecting information from your own experiences, knowledgeable sources and data from exploratory experiments. Do use references from printed materials (books, journals, magazines and newspapers, including all online sources). The **Problem** is the scientific question to be solved. It is best expressed as an “open-ended” question. For example “How does light affect the reproduction of bread mold on white bread?” Do limit your problem and do choose a problem that can be solved experimentally. The **Hypothesis** is an idea about the solution to a problem, based on knowledge and research. While the hypothesis is a single statement, it is the key to a successful project. For example “I believe that bread mold does not need light for reproduction on white bread.” **Project Experimentation** is the process of testing a hypothesis. Do have only ONE changed variable (independent variable) during your experiment. Do repeat the experiment more than once. Do have a control variable – something that remains the same and do organize your data. **Project Conclusion** is a summary of the results of the project experimentation and a statement of how the results relate to the hypothesis. If applicable, the conclusion can end by giving ideas for further testing. Don’t change your hypothesis. Don’t leave out experimental results that don’t support your hypothesis. Do give possible reasons for the difference between your hypothesis and the results. Do give ways that you can experiment further to confirm results.

**Display**

Your display represents all the work that you have done – anything that represents your project such as models made, items studied, photographs, surveys and the like. It must tell the story of the project in such a way that it attracts and holds the interest of the viewer. It should be thorough, but not too crowded so keep it simple. The title and other headings should be neat and large enough to be read at a distance of 3feet. A short title is often eye-catching. The following headings are examples: Problem, Hypothesis, Experiment (materials and procedures), Data, Results, Conclusion, and Next Time. Before you glue everything down, lay the board on a flat surface and arrange the materials a few different ways. This will help you decide on the most suitable and attractive presentation.

Unacceptable for Display:

1. Live Animals

2. Microbial cultures or fungi, living or dead

3. Animal or human parts, except for teeth, hair, nails and dried animal bone

4. Liquids, including water

5. Chemicals and/or their empty containers, including caustics, acids and household cleaners

6. Open or concealed flames

7. Batteries with open-top cells

8. Combustible materials

9. Aerosol cans of household solvents

10. Controlled substances, poisons, or drugs

11. Any equipment or device that would be hazardous to the public

12. Sharp items, such as syringes, knives, and needles

13. Gases

**Dates to Remember**

If you need help with your project or can’t do it from home, you can do your project at school. Even though you won’t be able to work on the project every day, the dates listed below are dates you will be able to work on it:

Friday, April 13th – last day to return the Participation Form to your teacher

Friday, April 20th lunch/recess – come to science lab to work on your project!

Wednesday, April 25th – come to the gym to work on your project from 2:20-4:30!

Friday, April 27th lunch/recess – come to science lab to work on your project!

Friday, May 4th lunch/recess – come to science lab to work on your project!

Monday, May 7th – lunch/recess – come to science lab to work on your project!

Tuesday, May 8th – Bring project to School!

Wednesday, May 9th – Science Fair – 2:20-6pm!

Thursday, May 10th – Bring projects home!