



**Bear Tavern School
Science Fair
APRIL 15, 2011
5:00pm – 8:30pm**

Dear Parent/Guardian,

Your child has been invited to take part in the Bear Tavern Science Fair, an exciting event that encourages students to think like young scientists. There are many educational benefits to participating, and what better way to demonstrate that science can be fun!

We ask that you encourage your child to participate and if they decide to take part, that you monitor his or her progress along the way. Your support is key, but please remember that the project or invention is to be completed by the student.

Should you have questions or need assistance, support is available from members of the science fair committee. Please contact Jacquie Genovesi (genovesi@ansp.org) for project or invention guidance. For any other questions, please contact:

Donna Costanzo ([737-3083](tel:737-3083)/donna1116@comcast.net) or Angela Jacobs([333-0537](tel:333-0537)/angelajacobs@comcast.net).

Please visit the BTPTO Web Site for project tips and Science Fair updates! A Registration form is provided in this packet. Please submit completed forms to the PTO mailbox at school by **March 11, 2011**(c/o Science Fair/Invention Convention).

Kindergarten, 1st, 2nd and 3rd Grades

Students in the above grades may participate in one of the following ways:

1. Collection with classification

A collection is a set of objects which have been placed into groups according to similar properties.

Format for Collection Project (please include the following information in your display)

- Title of Collection
- Personal observations and Information about the Collection
- Classification Scheme of collected items
- References and Acknowledgements

Example of a Collection Project:

Suppose you collect twelve rocks from your neighborhood. You might group them according to *color*, *size*, or how much they *sparkle* or you might put the rocks into categories of *hard* or *soft*.

Here are some more examples of things to classify:

feathers	pieces of bark	seeds	eggshells
Lenses	insect nests (empty!)	fossils	leaves

2. Exhibit

This category includes Models, Demonstrations, Displays and Observations with reports.

An exhibit can be a model, a demonstration, or a display. Information about the exhibit can be included in a written report, with or without pictures.

Format for an Exhibit (please include the following information in your display)

- Title
- Written Information/ Explanation of what the Exhibit shows
- Personal observations *and* Results and Conclusions if applicable
- References and Acknowledgements

Examples of 4 Different Types of Exhibits:

- a) Demonstration – You can *demonstrate* how light reflects off of different things. You might arrange a set of mirrors to show how a beam of light from a flashlight bounces from one mirror to another. Your report could explain that light travels in straight lines. Many demonstrations are found in books like Mr. Wizard, which are available in the library.
- b) Model – You can make a *model* of an engine out of cardboard. Diagrams could show the parts, and your report could explain how an engine works.
- c) Display – You can make a *display* about monkeys, showing pictures of different kinds of monkeys. Your report could tell where the monkeys live, what they eat, and some interesting habits.
- d) Observation – You can *observe* something and then draw or write about it. An example is the changing color of leaves in autumn. You could draw a picture and write about it. You could research information from books, internet, etc. to explain your observation.

3. Invention

Students in grades k, 1st and 2nd may draw, color, paint, etc. a picture of an invention. Inventions should be simple designs that solve a problem or improve a process.

Format for an invention

- Title
- Background on the problem or process
- Explanation of how the invention works to improve the problem or process including diagrams, photos, drawings etc.

4th & 5th Grade

These projects will be judged for 1st, 2nd, 3rd place and honorable mention (judging criteria can be found on PTO website):

Students may participate in one of the following ways:

1. Collection with classification

A collection is a set of objects which have been placed into groups according to similar properties.

Format for Collection Project *(please include the following information in your display)*

- Title of Collection
- Personal observation and Information about the Collection
- Classification Scheme of collected items
- References and Acknowledgements

Example of a Collection Project:

Suppose you collect twelve rocks from your neighborhood. You might group them according to *color*, *size*, or how much they *sparkle* or you might put the rocks into categories of *hard* or *soft*.

Here are some more examples of things to classify:

feathers	pieces of bark	seeds	eggshells
Lenses	insect nests (empty!)	fossils	leaves

2. Exhibit

This category includes Models, Demonstrations, Displays and Experiments with reports.

An exhibit can be a model, a demonstration, display or experiment. Information about the exhibit can be included in a written report, with or without pictures.

Format for an Exhibit *(please include the following information in your display)*

- Title
- Written Information/ Explanation of what the Exhibit shows
- Personal observations *and* Results and Conclusions if applicable
- References and Acknowledgements

Examples of 4 Different Types of Exhibits:

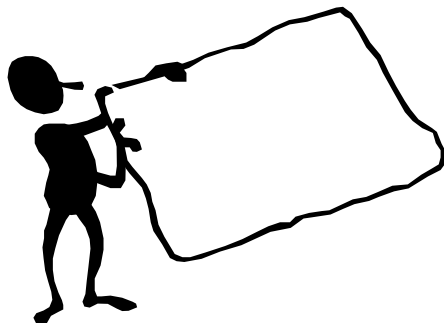
- a) Demonstration – You can *demonstrate* how light reflects off of different things. You might arrange a set of mirrors to show how a beam of light from a flashlight bounces from one mirror to another. Your report could explain that light travels in straight lines. Many demonstrations are found in books like Mr. Wizard, which are available in the library.
- b) Model – You can make a *model* of an engine out of cardboard. Diagrams could show the parts, and your report could explain how an engine works.
- c) Display – You can make a *display* about monkeys, showing pictures of different kinds of monkeys. Your report could tell where the monkeys live, what they eat, and some interesting habits.
- d) Experiment – You can perform an actual experiment. Some sample topics are listed below:
- 1) Do quarters and feathers fall at the same speed?
 - 2) Is yeast a living organism?
 - 3) How does water move through a plant?
 - 4) Does music affect blood pressure?

3. Invention

Students in grades 4th and 5th who choose to participate in the Invention Convention must make a prototype or model of their invention. Diagrams, photos and drawings may be included to support or explain the invention.

Format for an invention

- Title
- Background on the problem or process
- Explanation of how the invention works to improve a problem or process including diagrams, photos, drawings etc.
- Model or prototype



Putting It All Together on a Display Board!

What is a Display Board?

For almost every science project, you will need a display board to show your work. Display boards are large, self-standing pieces of cardboard that usually come in three connected panels that fold up when not being used. The typical size of an unfolded display board is 36" tall by 48" wide. Any color can be used. Display boards can be purchased at various stores (such as Michael's, Staples, Office Depot, and Wal-Mart).

Organizing the Information on a Display Board

- Choose a title that accurately summarizes your project and that will get attention! The title should be big enough so that people can read it from across the room.
- Do not put your name on the front of the display board – judges prefer to view the projects anonymously. Instead, write your name on the back top corner of the project.
- Organize your information so that people can easily understand what you did and how you did it. Include each step of your project. To find the format that you need to use on your display board, refer to the "Classification", "Exhibit" or "Invention" section in this packet.
- You can either glue or tape your paper to the display board. Be sure to proofread each section before you attach it!
- You can use the small area in front of your display board to display your apparatus and/or your notebook (not all projects will have these). *Check the rules* to make sure that your item is allowed to be displayed or contact one of the science fair coordinators if you have questions.

Basic Rules for the Science Fair

Due to safety concerns, certain objects will not be permitted in Science Fair or Invention Convention displays:

Objects not permitted

1. Fermentation or distillation involving ethyl alcohol
2. Viable tissue or microbial cultures
3. Sharp items such as razor blades or hypodermic needles
4. Open flames
5. Electrical devices that need to be plugged in (any electricity must be battery generated)



- Please get the registration form in by the deadline of **March 11, 2011**. We need a firm head count by this date for our sponsors who are supplying food, tee-shirts, ribbons, etc.
- Please make sure that your child's name is on the **back** of their display board or on the **bottom** of their invention.