BENJAMIN FRANKLIN ELEMENTARY

2019 SCIENCE FAIR HANDBOOK

Division B: Third & Fourth Grade

Thursday, February 21, 2019

Display board set-up begins at 5:30 pm
Judging starts promptly at 6:00 pm

Registration forms (found at http://www.benpto.com/) should be returned to school by February 8th

Example display boards from past years:

If you have any questions, contact Gail Quigley Smith at gailqs22@gmail.com

SCIENCE FAIR OVERVIEW

All students attending Benjamin Franklin Elementary are welcome to participate in the annual science fair. This handbook contains the rules for the science fair, as well as useful information pertaining to how a student should go about preparing for the science fair, and sample experiments.

Guidelines for Division B (3rd and 4th grade)

1) Participants will make a tri-fold display board about an experiment they have conducted. Tri-fold display boards (36 in X 48 in) are sold at Walmart and Office Depot.

2) Completion of a "My Science Fair Notebook" (found at http://www.benpto.com/) is suggested to assist students in organizing their findings and aid them in the creation of the display board, but is not required. Students who complete the notebook will earn up to 4 points on the judging rubric (see bottom of page 4).

3) Please write your name(s) and grade(s) on your display board, under your project title.

4) Each entry will be provided with space on a table at the fair for their experiment and display board.

5) Students should be prepared to briefly discuss their project with judges and answer questions about it.

6) The projects in this division will be grouped into several categories. Participants are eligible to win 1st, 2nd and 3rd place medals in their assigned category.

Experiment Safety Guidelines

The following safety guidelines were put in place in an effort to make the fair a safe and fun experience for all attending:

1) No electric power, tape, thumbtacks, or other supplies will be available at the fair.

2) Animals, electrical equipment, hazardous chemicals, or heat sources may NOT be brought to the fair.

3) Mechanical equipment, glass items, or any item with sharp edges may NOT be brought to fair.

4) Parents must supervise children at all times during the fair.

5) No animals should be harmed in the process of scientific discovery by students.

SCIENTIFIC METHOD OVERVIEW

1) **Question**. The first step is to come up with a testable question in an area of science that interests you. *For example: How do weather conditions affect how fast a puddle evaporates?*

2) Research your question by collecting information from your own experiences, reliable resources and observations.

3) Create a **Hypothesis**, which is an idea about the solution to your question. The solution will be based on your research. *For example: When the day is warm, we think that the puddle will evaporate faster than a cooler day because the heat from the sun will dry up the puddle faster.*

4) Design procedures (list materials and conduct experiments) to test the hypothesis.

5) Make observations, collect data, and document your findings. Take pictures or draw pictures (if needed) to illustrate your findings.

6) Form a conclusion supported by your data and results. After you have collected all your data and documented your findings, analyze it. Ask yourself, "What is the data telling me? What does it all mean?" State whether your hypothesis was correct.

REFERENCES THAT INCLUDE EXAMPLES OF SCIENCE FAIR PROJECTS

Benbow and Ann and Colin Mably. Master the Scientific Method With Fun Life Science Projects. Berkeley Heights, NJ. Enslow Publishers, Inc. 2010.

Vancleave, Janice. Guide to More of the Best Science Fair Projects. New York. John Wiley & Sons, Inc. 2000.

http://www.education.com/science-fair/ http://www.all-science-fair-projects.com/

http://chemistry.about.com/od/sciencefairprojects/a/sciproelem.htm

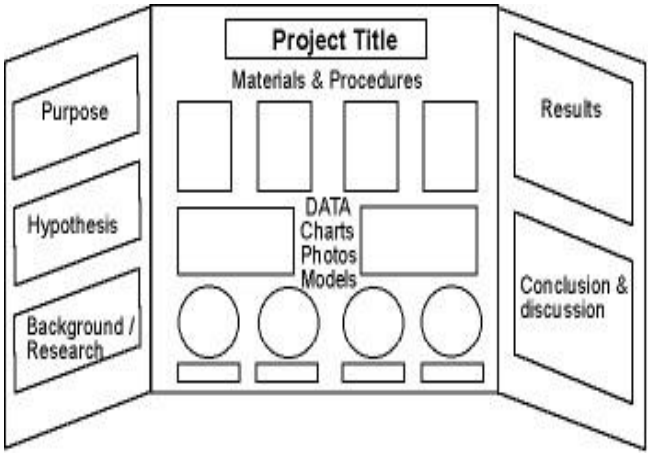
http://www.sciencekids.co.nz/projects.html

http://www.scholastic.com/resources/article/lets-investigate/

DISPLAY BOARD

The tri-fold display board is an important tool for the presentation of your research. It is used to present the main areas and conclusions of your project so that others can easily understand what you have accomplished.

Display Board Check list	
Title of project	
Your name	
Your Question	
Background Information/Research	
Your Hypothesis	
List of Materials and Methods	
Data/Results	
Conclusion	



JUDGING CRITERIA

Judges will use the following criteria to judge your project. The maximum number of points is 40.

Part I Scientific Procedure:	**IMPRESSIVE**		**ADEQUATE**		**MINIMAL**
Clear & specific Question	4	3	2	1	0
Clear & specific Hypothesis	4	3	2	1	0
Methods listed step by step	4	3	2	1	0
Thorough Data (graphs, tables, photos, etc.)	4	3	2	1	0
Conclusion supported by Data	4	3	2	1	0
Science Handbook completed	4	3	2	1	0
Part II Originality:					
Original topic or approach to question	4	3	2	1	0
Part III Student Involvement:					
Display shows student involvement in project (photos, writing by student, etc.)	4	3	2	1	0
Discussion with student shows that student understands results of experiment	4	3	2	1	0
Part IV Display Presentation					
Board has a logical “flow”; is neat and attractive	4	3	2	1	0