

# Science Fair Rules

## GENERAL RULES

- ✓ One exhibit per students, no team efforts.
- ✓ Maximum Board Size: no larger than 42 inches wide, across the front and including the sides, when standing; 18 inches front to back; and 45 inches high. See display board rules for drawing. The actual board can be up to 30 inches across the back and 12 inches for each wing for a total of 54 inches. Display board dimension will be strictly enforced. Unless approved by the Coordinator beforehand, oversized projects will be disqualified and not accepted for judging.
- ✓ ***Each project must have a "Mentorship Form" attached to the back of the right-side wing. This form will list those who assisted the student with the project and what help was given.***
- ✓ Discourage displaying valuable items. (Use pictures, drawings, etc.)
- ✓ Student's name, school, teacher, and grade must be displayed on the back of the board.
- ✓ **The Monroe County Intermediate School District will not accept displays before 9:00 AM on March 25, 2015.**
- ✓ **Projects are not accepted on a walk-in basis. Students must be pre-registered by their school's science fair coordinator.**
- ✓ Photographs of the student are not to be displayed on the front of the board.
- ✓ The journal or report should NOT contain any identifying information (i.e.: *student's name, address, school, etc.*).

## SAFETY RULES

- ✓ Any exhibit requiring electrical power will use dry cell batteries only.
- ✓ The use of open flame, flammable chemicals or liquids, or explosive, toxic or caustic substances will be prohibited—student may show these variables by photograph or drawing only.
- ✓ **NO! Live animals or insects. NO! hazardous materials. NO! chemical substances. NO! glass display cases/containers. NO! toxic household materials. NO! live bacteria/viruses (student may show these by photograph or drawing). NO! use of electrical outlets.**
- ✓ All types of containers for water or other safe liquids must be in plastic and airtight.

## Grade Level Categories

- Kindergarten
- Grades 1-2
- Grades 3-4
- Grades 5-6
- Grades 7-8

## Classification Of Projects

- Physical Science
- Earth Science
- Life Science
- Working Models (no kits) [K-8]
- Scientific Studies [K-2] (See \*NOTE)

**\*NOTE: Scientific Studies will only be accepted from pupils in grades K-2.** Please be advised that any student in grades 3-8 will not be allowed to enter a Scientific Studies project. Scientific Studies must be started **AFTER** May of 2014.

## Awards

Awards will be given in each category and division.  
All entrants who display a project receive a participation certificate. Other award details can be found on page 12, "AWARDS".

## Judging

Judging will take place on Thursday, March 26, 2015. **Judges' decisions are final!**

# Project Information

## PROCEDURES FOR PROJECTS

- Study the problem carefully by thinking through each step.
- Make specific plans using a scientific method to explore your ideas: hypothesize, observe, measure (metric measurement preferred), record and conclude.
- Read and take notes on your topic (*at least 3 resources, please*).
- Question people who have information of knowledge about your topic. Keep a record of their assistance for the mentorship form required with your project.
- Keep a notebook/journal/log for documentation and accurately record your ideas, methods, observations, important details or thought calculations and data. Use charts, graphs, or tables to organize information.
- Write a report explaining the purpose of your project, your findings, and conclusions; how you did your work and what references you used (*list people, books, websites, etc.*).
- Plan your display board after your project is completed. Be sure it is within size limits.

## TYPES OF PROJECTS

### Experiments (K-8) - Physical Science, Life Science, Earth Science/Space

- Think of a question. Write a prediction or hypothesis.
- Set up an experiment that will help you answer the question. The experiment need not be original.
- As you conduct your experiment, record your results, including all measurements and observations.
- Make a conclusion that answers your question based on your experiment results.
- Experiments may be original or based on previous research. It is most important to follow experiment design, collect data, and draw some accurate conclusions based on the data.

### Working Models (K-8)

- Think of a model, write a prediction.
- As you build your model, record your results, including all measurements and observations.
- Make some conclusions about how this model will solve a problem.
- Kit models are not permitted for any grade.

### Scientific Studies (K-2) - Collections, Observations, Data Interpretation

- As you are working on your Scientific Study, be sure to include all measurements and observations.
- Collect biological or geological specimens and arrange them in some order.
- Make conclusions about the relationship among the items in your collection and its arrangement, i.e. sea shells arranged according to their common locations.

**Collections must be started on or after May of 2014.**

# Display Board Rules

## BOARD RULES

Board construction should be durable, tri-fold boards only. The board may be painted or covered with cloth, contact paper, etc. Moveable parts must be firmly attached and safe; all project apparatus must fit in front of the display board. Any research papers and data notebooks, journals, and/or logs **must** be displayed. The whole display should fit in an area that is 42" wide X 24" front to back X 36" high. We can accommodate a few larger displays, but you **must** get prior permission to do so, from the Science Fair Coordinator.

## REQUIRED INFORMATION ON BACK OF BOARD

### Identification

- Put the following student information on a 3" x 5" card, and attach it in the middle of the back of the board: Name, Grade, Teacher, and School Name.
- Complete the "Mentorship Form" and put it on the back of the right side flap.

### Board Descriptions

Required information to appear on the front of the board.

#### ✓ Title

Letters should be bold; may be a statement, phrase, or question.

#### ✓ Purpose

This section should be short and to the point. State the reasons for doing project. What do you want to find out or discover through doing the project?

#### ✓ Materials (Required for experiments only)

List materials used. Be thorough and complete. Indicate quantities where appropriate.

#### ✓ Procedure

State the steps you used in doing this experiment, model, or collection.

#### ✓ Hypothesis

A statement predicting the final outcome of the project.

#### ✓ Log/Journal

A log, journal, or documentation of ideas, methods, observations, calculations and other data should be kept. This should contain all information about the project including everything listed on the board.

#### ✓ Citations Or Work Cited

List all sources used such as books, magazines, newspapers, encyclopedias, internet sites, museums, parents, mentors, and teachers as resource persons. Do not list actual proper names of people -- use titles (*i.e.*, parent, teacher, etc.). There must be at least three sources. You should use a standard form for your citations. Check with your teachers for their requirements.

#### ✓ Results/Conclusion

##### • K-8 - Summary 5-8

Re-state your purpose and then results of your work. In a few sentences, support specifically what you have learned, discovered, or found out from doing the project. This should be no longer than one page in length. Get right to the point. This section is very important. The conclusion should be based on both the purpose and the results. It should state clearly whether the prediction or hypothesis was confirmed.

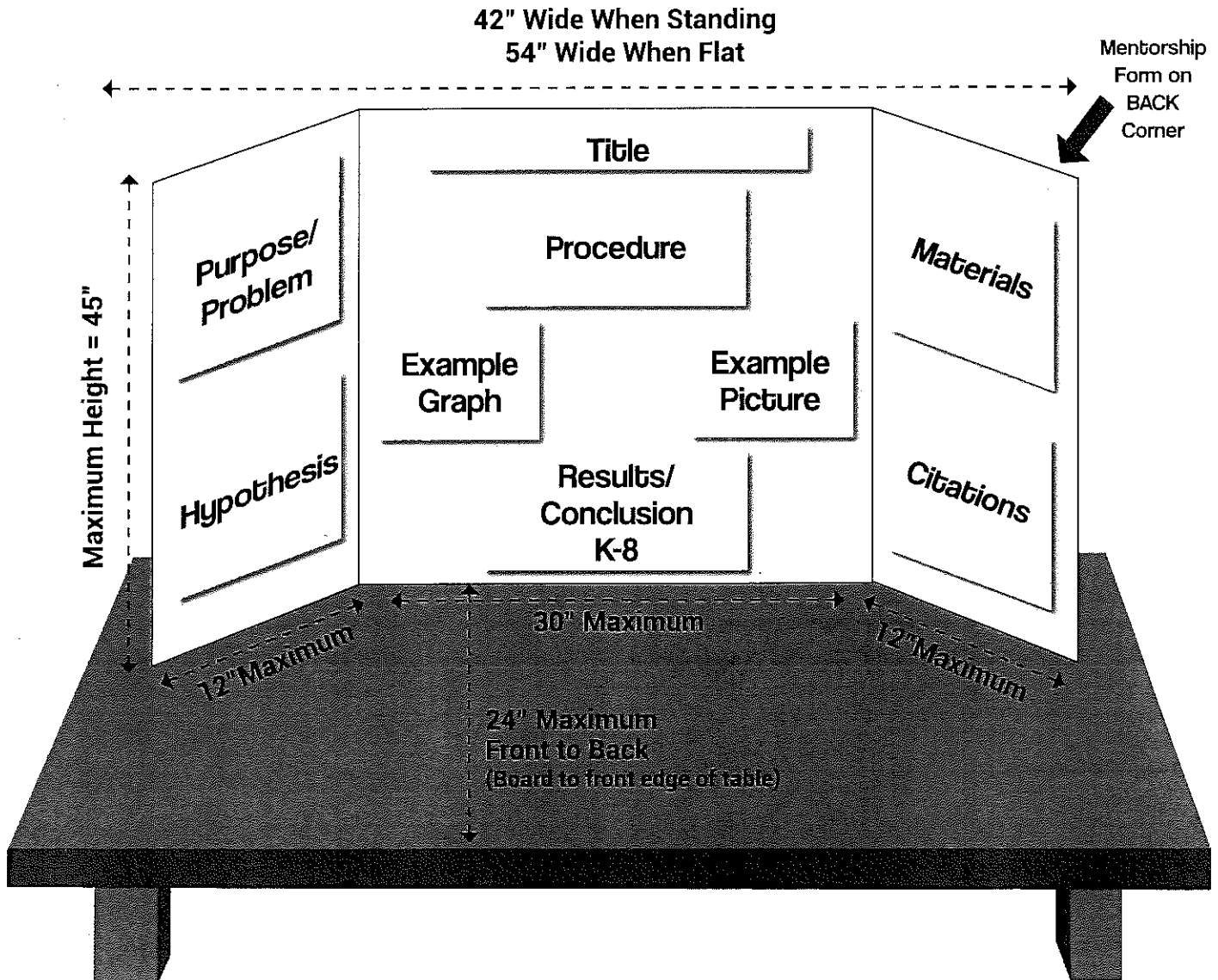
##### • Grades 5-8 Summary

The summary should include successes, pitfalls, sources of errors, way of improving the project, etc.

# Display Board

Must include the following and all items must be placed as shown.

- ✓ Title
- ✓ Purpose
- ✓ Procedure
- ✓ Hypotheses
- ✓ Citations
- ✓ Materials
- ✓ Results/Conclusion  
K-8 - Summary 5-8
- ✓ Mentorship Form



# General Research Tips

All written material(s) must be original. No project should be copied directly off any other resource.

## PROGRAM GOALS

- To give students an opportunity to conduct scientific research using available resources.
- To give students an opportunity to display their scientific talent and provide recognition of this talent.
- To provide students with an opportunity to exchange, both orally and in writing, scientific realistic, individual goals.
- To give students an opportunity to develop science research skills that are available in later schooling and life.
- To motivate students to pursue careers in science, mathematics, engineering, or the social sciences.

## Science Fair Projects Should Be

- |                                                       |                                                                                   |
|-------------------------------------------------------|-----------------------------------------------------------------------------------|
| ✓ Problem centered                                    | ✓ Preparing an exhibit                                                            |
| ✓ A controlled experiment                             | ✓ Inquiry-oriented using scientific method                                        |
| ✓ Collecting data-recording data                      | ✓ Testing of predictions or hypothesis                                            |
| ✓ Repeating the experiment to verify results          | ✓ Preparing a research paper                                                      |
| ✓ Knowing goal has been reached                       | ✓ Exploring the unknown                                                           |
| ✓ Based on conclusions drawn from collected data      | ✓ Based on using the processes of science to solve problems                       |
| ✓ Based on easily accessible & often simple materials | ✓ Making a presentation to classmates, friends, or judges at a local science fair |

## Sources of Ideas

Science books  
Lab Manuals  
Periodicals  
Teachers  
Nature centers  
Scientists  
Clubs  
Hospitals

Newspapers  
Corporations  
Museums  
Zoos  
Internet & on-line databases  
Veterinarians  
Librarians

Businesses  
Science TV stations  
Airports  
TV & radio stations  
Science centers  
Medical personnel  
Industries

## You Could Also Visit These Science Fair Websites:

<http://yoursciencefairprojects.com>  
<http://sciencemadesimple.com>  
<http://www.sciencebob.com/>  
<http://sciencebuddies.org>

<http://science-fair-projects-online.com>  
<http://www.ipl.org/div/projectguide>  
<http://www.all-science-fair-projects.com>  
<http://www.super-science-fair-projects.com/>

# Fifth and Sixth Grades Models

## Scientific Thought, Thoroughness, Skill

Is the problem/purpose clearly stated?	5	4	3	2	1	0					
Is the hypothesis stated?	5	4	3	2	1	0					
Are the materials listed	5	4	3	2	1	0					
Is a log/journal included with appropriate research information and notes?	10	9	8	7	6	5	4	3	2	1	0
Was a summary included?	5	4	3	2	1	0					
Does the model demonstrate a clear scientific principle?	10	9	8	7	6	5	4	3	2	1	0
Is there evidence of background research?	10	9	8	7	6	5	4	3	2	1	0
Were the steps of building and demonstrating the model clear and easy to follow?	10	9	8	7	6	5	4	3	2	1	0
Data is clearly shown? (i.e. tables, graphs, and illustrations)	5	4	3	2	1	0					

(Possible 65 Points) Total Number of Points \_\_\_\_\_

## Originality and Creative Ability

How unique, original or ingenious is the problem?	5	4	3	2	1	0
How unique, original or ingenious is the approach?	5	4	3	2	1	0
How unique, original or ingenious is the solution?	5	4	3	2	1	0
How unique, original or ingenious is the appearance?	5	4	3	2	1	0

(Possible 20 Points) Total Number of Points \_\_\_\_\_

## Data

Was appropriate data organized, neatly presented	5	4	3	2	1	0
Were graphs, charts, illustrations or photos used?	5	4	3	2	1	0
Does the display show logical order, good workmanship, correct grammar and spelling?	5	4	3	2	1	0
Is work cited and displayed on board?	5	4	3	2	1	0
Does the Summary state successes and pitfalls, and ways of improving the project?	5	4	3	2	1	0

(Possible 20 Points) Total Number of Points \_\_\_\_\_

## Additional Comments

We liked \_\_\_\_\_

\_\_\_\_\_

We wish you had \_\_\_\_\_

\_\_\_\_\_

# Fifth and Sixth Grades

## Scientific Thought, Thoroughness, Skill

Is the problem/purpose clearly stated?						5	4	3	2	1	0
Is the hypothesis stated?						5	4	3	2	1	0
Are the materials listed/the procedure outlined?						5	4	3	2	1	0
Is a data log/journal included with appropriate research information and notes?	10	9	8	7	6	5	4	3	2	1	0
Are variables limited?						5	4	3	2	1	0
Are constants controlled?						5	4	3	2	1	0
are sample sizes sufficient?						5	4	3	2	1	0
Is summary of the data analyzed (raw and smooth)	10	9	8	7	6	5	4	3	2	1	0
Was conclusion just and properly drawn?	10	9	8	7	6	5	4	3	2	1	0

Total Number of Points \_\_\_\_\_

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How unique, original or ingenious is the problem?						5	4	3	2	1	0
How unique, original or ingenious is the approach?						5	4	3	2	1	0
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Total Number of Points \_\_\_\_\_

## Additional Comments

We liked \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

We wish you had \_\_\_\_\_

\_\_\_\_\_

# Science Fair Awards Ceremony

**7:00 p.m.** – The Science Fair awards ceremony will begin. The winner and their families will be invited to receive their awards. An invitation to the awards ceremony is included with the judging sheet in the manila envelope.

***Students who did not receive an award are welcome to begin taking their projects home at 7:00 p.m.***

## Mentorship Form

**Complete the form below and attach it to the back of the Project Board.**

It should be placed in the upper left-hand corner of the right wing. This form **must** be displayed on the project. Students are permitted to receive as much help from adults as they need, but all assistance must be listed on this form.

***This form must be complete and attached to the back of the display board.***

- ☐ I did **not** have adult assistance with this project.
- ☐ I did have adult assistance with this project as listed below:

Title of Person Assisting \_\_\_\_\_

Assistance Given \_\_\_\_\_

Title of Person Assisting \_\_\_\_\_

Assistance Given \_\_\_\_\_

Title of Person Assisting \_\_\_\_\_

Assistance Given \_\_\_\_\_



# Fifth and Sixth Grades

## Scientific Thought, Thoroughness, Skill

Is the problem/purpose clearly stated?						5	4	3	2	1	0
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Total Number of Points \_\_\_\_\_

## Additional Comments

We liked \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

We wish you had \_\_\_\_\_

\_\_\_\_\_

# Fifth and Sixth Grades Models

## Scientific Thought, Thoroughness, Skill

Is the problem/purpose clearly stated?						5	4	3	2	1	0
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Does the Summary state successes and pitfalls, and ways of improving the project?						5	4	3	2	1	0

(Possible 20 Points) Total Number of Points \_\_\_\_\_

## Additional Comments

We liked \_\_\_\_\_

We wish you had \_\_\_\_\_