

HACKENSACK

FIVE SIX & MIDDLE

SCHOOLS

2011



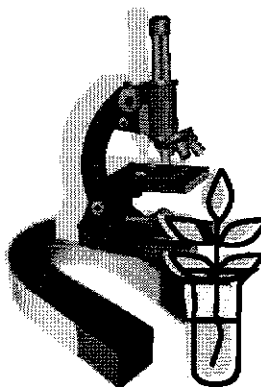
Science Fair

Student Guidebook



Contents

- **Welcome Letter**
- **Scientific Method Background**
- **Sample Websites**
- **Sample Score Sheet**
- **Science Fair Application**



Dear Student/Parent/Guardian,

You are cordially invited to participate in this year's science fair, which will be held on **March 29-30, 2011** in the Hackensack Middle School gymnasium. The competition, which is open to all students in grades five, six, seven, and eight, requires that you design a science project that uses the scientific method to answer a question or solve a problem. You may work alone or with a partner. However, if you work with another student, he or she must be in the same grade as you. Prizes will be awarded for first, second, and third place in each grade level, and honorable mention prizes will be given out. In addition, there will be a grand prize winner for the best science fair project, regardless of grade level.

All displays will be set up on the day of the competition at a designated time during the school day or immediately after school. They will remain on display through the week so classes can come to view them. **Make sure you can be present on the evening of Tuesday, March 29th** when the judges come to evaluate your project and interview you. Award **presentations** are the next evening, **Wednesday, March 30th**.

Your science teacher may want to include your project as part of your grade, so be aware of any additional instructions from him or her.

If you would like to participate in the science fair, please submit the enclosed application form to your science teacher. Follow your science teacher's directions for the deadline; but it will be due **no later than January 27th, 2011**.

Important Note: In order for a project to be eligible for judging and a prize, the project must be in school on **Tuesday, March 29th during the school day**. There will be a strict grace period until 4PM for extenuating circumstances.

Good Luck!

The Scientific Method

You will need to design and carry out your experiment, display data and results, and present your conclusions to the judges on the evening of the science fair.

- Remember it all starts with a **question**. "What cleans better, X-Brand detergent, or Y-Brand detergent?" "Will a plant grow taller if watered once per week or once a day?" "Will my hand feel colder in the plain glove or the blubber glove when placed in ice water?" Make sure it is a question YOU can investigate. It should be able to elicit measureable or observable results.
- State your **Hypothesis**, or educated guess, in response to the question you posed. A good hypothesis is able to be tested. By experimenting, you can prove or disprove your hypothesis.
- Write out your **experiment**, step by step. If someone else wanted to repeat your work at a later date, they would be able to by reading your procedure. List all the materials you used.
- Take measurements, identify changes, record your observations. Now organize the **data and results** on your display board. Use tables, charts, graphs, photos, etc. It's a good idea to have a special record book dedicated to your science project. Write down any thoughts you have during the process. It's okay if it's not polished. It shouldn't be.
- Write up your **conclusions**. Did your experiment meet your objectives? Was your hypothesis proved or disproved? If disproved, why do you suppose it didn't work? (Don't forget that even failed experiments can be good...they can lead to new discoveries!) What things did you learn from this experiment? What experiments could be done based on this experiment in the future? How does it affect you and/or others? This is a great opportunity to make connections and shine!
- Create your display using a tri-fold board. They are easy to organize and they stand on their own. You can make one out of cardboard or purchase one at any stationary store.

Here's just one suggestion for a display lay-out:

QUESTION _____ HYPOTHESIS _____ _____ _____ MATERIALS _____ _____	TITLE _____ EXPERIMENT: _____ _____ _____ _____ PHOTOS OR GRAPHS PHOTOS OR GRAPHS	DATA AND RESULTS _____ _____ _____ CONCLUSIONS _____ _____ _____ _____
--	---	--

SOME WEBSITES TO CHECK OUT:

nyelabs.com

exploratorium.edu

science-project.com

brainpop.com

THIS LINK WILL TAKE YOU TO MR. MOCERA'S WEBSITE AND TO A COPY OF THIS GUIDEBOOK:

www.hackensackschools.org/webpages/mmocera/resources.cfm

**HACKENSACK 5IVE6IX & MIDDLE SCHOOLS
SCIENCE FAIR
SAMPLE SCORE SHEET**

Participants: _____ Project # _____ Grade 5 6 7 8

Please check (✓) one line for numbers 1 through 5.

1. Shows use of the Scientific Method on the Display Board

- _____ 5 pt. Presents all steps of the SM on the board clearly with noticeable headings
- _____ 4 pt. Presents each step of the SM on the board with headings
- _____ 3 pt. Presents each step of the SM on the board with some headings
- _____ 2 pt. Presents some steps of the SM on the board with some headings
- _____ 1 pt. Presents some steps of the SM on the board with no headings

2. Presents Scientific Data in a Well-Organized, Visually Appealing display:

- _____ 5 pt. Board is neat and very attractive, with clear information, tables, charts, pictures & headings.
- _____ 4 pt. Board is neat, with clear information, tables, charts and/or pictures.
- _____ 3 pt. Board is neat, with information, with one or two tables and/or charts, and with pictures.
- _____ 2 pt. Board has headings with information.
- _____ 1 pt. Board has headings with limited information.

3. Shows Knowledge of the Scientific Method through oral presentation:

- _____ 5 pt. Student explains all steps, showing much understanding of experimentation.
- _____ 4 pt. Student explains all steps, showing understanding of each step.
- _____ 3 pt. Student explains at least 5 steps, showing understanding of each step.
- _____ 2 pt. Student explains most steps, with prompting from judges.
- _____ 1 pt. Student tries to answer questions from the judges.

4. Shows Enthusiasm and Interest through Oral Presentation:

- _____ 5 pt. Student is excited about the project and eagerly tells about it with much detail.
- _____ 4 pt. Student is pleasant and shares information with some detail.
- _____ 3 pt. Student is pleasant and shares information.
- _____ 2 pt. Student tells about the project, when asked.
- _____ 1 pt. Student answers some questions about the project.

Indicate the points earned for each of the questions (0-5 pts):

- _____ How interesting is the project?
- _____ If there is one, evaluate the project notebook provided with the display
- _____ How adequate is the conclusion to this project?
- _____ Can the average person understand the project?
- _____ Does the student understand all the facts and/or theories?

Indicate the points earned for each of the questions (0-5 pts):

- _____ Does the project indicate extensive planning and/or outside research
- _____ Is the project distinctive? (A real "WOW")

_____ **If it is evident that an adult did most of the project, deduct 10 pts.**

Total Points: _____

Hackensack Five Six and Middle School Science Fair Application (2 pages)

Science Teacher Approval
Initials _____
Science Fair Committee Approval
Initials _____

Please **print** your responses **clearly** on this form and return to Mr./Ms. _____ in Room _____
no later than _____, 2011.

Name: _____ HR Teacher _____ Grade _____

Science Teacher _____ Science Period _____

Project Title _____

Will you be working alone? _____ If you are working with someone else, please list here:

*****NO MORE THAN TWO PEOPLE PER ENTRY*****

Partner Name	Partner HR Teacher	Partner Science Teacher	Partner Science Pd
--------------	--------------------	-------------------------	--------------------

We allot each project exhibit a 3ft. x 3 ft. space; do you need more space than that? YES NO

Do you need access to an electrical outlet? YES NO

If you have any other **special requirements**, please indicate them here. Note that we do not provide technical equipment such as computers, televisions, etc.:

Project Proposal/Plan

Define the Problem/Ask a Question – (Write what you want to find out.) (Be sure it is a question you are able to test and measure and not a just a research question that you can look up.)

Hypothesis – (Based on your current knowledge, what do you think will happen and why?)

Experiment – (How will you test and measure your hypothesis?)

A. *Materials:* (List all the materials you will need to carry out the experiment.)

_____	_____
_____	_____
_____	_____

B. *Procedure:* (Number and list the steps you plan to follow to carry out the experiment.)

What kind of table, chart, graph, photos, etc will you use to record and present your **Data**?

Important Note:

In order for a project to be eligible for judging and a prize, the project must be in school on **Tuesday, March 29th during the school day**. There will be a strict grace period until 4PM for extenuating circumstances.

Permission Signature:

I have reviewed this guidebook and application. I give permission for my child to participate in the Science Fair on March 29-30, 2011.

X _____ **Date** _____
Parent/Guardian Signature

ALL PARTICIPANTS WILL RECEIVE:

- **A PARTICIPATION MEDAL**
- **A CHANCE TO SHOW OFF YOUR SCIENCE SKILLS TO PARENTS, TEACHERS, ADMINISTRATORS, AND EVEN SCIENTISTS!**
- **BRAGGING RIGHTS FOR A WHOLE YEAR**

ALL AWARD WINNERS WILL RECEIVE:

- **A CERTIFICATE**
 - **RECOGNITION BY THE SCHOOL**
 - **THE OPPORTUNITY TO BE MENTIONED IN THE CITY'S NEWSPAPER**
 - **AN AMAZING AND MEMORABLE TRIP TO THE BUEHLER CHALLENGER CENTER!**
 - **EVEN MORE BRAGGING RIGHTS!**
 - **AND... YOU NEVER KNOW... YOU MAY GET SOME \$\$\$ IN YOUR POCKETS...**
-

Science Fair Committee

Brad Allen
Lil Cuervo
Cheryl Dungey
Rick Flynn
Mike Mocera
Mario Santivanez

201-646-8170

email:

hackensacksciencefair@hackensackschools.org