



2011 Science Fair Handbook



February 1, 2011

Dear Parents and Students,

We are pleased to announce that the 2011 Murray Avenue **SCIENCE FAIR** will be held on **Thursday evening, May 19th** and during the school day on **Friday, May 20th**. While participation is voluntary, all students in **GRADES 3-5** are encouraged to take part in this fun and rewarding experience.

The annual Murray Ave. Science Fair fosters the spirit of scientific curiosity, exploration and wonder in our children. Through science projects of their own choosing, children can explore topics that truly interest them. These science projects provide unique opportunities for hands-on, child-directed, active learning. They de-mystify science, making it fun and accessible. They can also boost children's confidence, creativity, organization and presentation skills.

Our Science Fair celebrates the notion that home can be a wonderful place to learn. Parents are encouraged to serve as guides and supporters of their child's efforts, but not to do the work for them.

The non-competitive approach of the Science Fair enables all children to be winners. Each child will receive positive recognition for participating.

We hope that you will take an active part in making this event a success for your child. The Science Fair Committee will guide you along the way and try to answer any questions you have.

In the interests of conserving paper the **complete Science Fair Handbook** including the **Project Form Application** is available online: to find this, go to www.mamkschoolspta.org/murray and click on "**Science Fair.**"

All applications are due **Friday, March 4th**.

Sincerely,

Jennifer Monaco, Principal
Cruz Soler, Assistant Principal
The PTA Science Fair Committee



THE MURRAY AVENUE SCIENCE FAIR

What is the Science Fair?

The Science Fair is a fun, exciting event where you and other kids get a chance to display your own science projects. You can work alone or with friends, but please, no more than 4 in a group.

What is a Science Project?

A science project can be an experiment, collection, model, report, or demonstration about a topic or question in science that you find interesting.

How do you do a Science Project?

This booklet will help you learn how to do a Science Fair Project. Follow the simple, step-by-step directions on the following pages.

When should you do it?

Although you have several months to do your project, it doesn't have to take a lot of time. Check the schedule on page 2 and you plan your time wisely.



SCHEDULE

<u>THINGS TO DO</u>	<u>DATES</u>
Franklin Institute Interactive Assembly	January 31
Read Science Fair Booklet online at www.mamkschoolspta.org/murray	February
Think of a project idea.	Feb-March
Fill out and return the Science Project Form to box outside main office or mail to address on form.	No later than Friday March 4
Receive confirmation of your project.	By March 25
Purchase display board at school.	Friday, April 1 and Monday, April 4
Work on your project.	April, May
Bring in your project and set up after school.	Thursday, May 19 3 – 5 pm
Come to the Science Fair and tell parents and visitors about your project.	Thursday, May 19 6:30 – 8 pm
Visit the fair with your class.	Friday, May 20
Take your project home.	Fri, May 20, 3:00 PM

Please remember for the safety of all participants the following rules must be adhered to:

- No live animals permitted at the Science Fair.
- No food items may be handed out as part of the project.
- No harsh or dangerous chemicals allowed.
- No oversized projects. All projects must fit within the provided table space in front of the display board.



SCIENCE FAIR PROJECT FORM

Please complete one form per project. If doing a group project, please submit only ONE completed form for your whole group.

Name _____

Grade/Teacher

_____ Phone _____

Parent's E-mail

(Fill out below if more than one student is working on project):

Name _____

Grade/Teacher

_____ Phone _____

Parent's E-mail

Name _____

Grade/Teacher

_____ Phone _____

Parent's E-mail

Name _____

Grade/Teacher

_____ Phone _____

Parent's E-mail



1. For my/our science project I/we want to do a (check one):

collection model demonstration
 experiment report

2. The question for my/our science project is:

?

3. This is what I/we plan to do for my/our science project:

4. These are the things I/we will be bringing to the science fair:

5. Electrical outlet is needed. YES NO (please circle one)

6. My parents and I have talked about my project:

(Print name of student)(Parent's signature)

Parents: Would you like to volunteer for an hour or two during set-up or during the Fair? YES NO (please circle one)

Return the two pages of the Project Form to the Science Fair box outside Murray's main office by Friday March 4th. Or mail to: Science Fair Committee, c/o Dahna Freidus 3 Ridgeway Road, Larchmont, NY 10538



The Role of Parents in the Murray Avenue Science Fair

Your main role is to offer encouragement, guidance and support to your child. Try to keep the whole process enjoyable and positive.

Here are some specific ways you can feel good about helping your child:

Encourage your child to begin right away to think about the Science Fair.

Start by reading The Science Fair Handbook together.

Help your child decide whether to work alone or with a friend. Some families find it easier just to work with their child. Others find their kids take more initiative when they work with a friend or two.

If your child is having a hard time deciding on a project idea, here are a few helpful hints:

Check out the Science Fair Resource Area in the Murray Library. There are books on display with lots of project ideas.

Surf the web. Some great sites that may spark an idea are:

www.cdli.ca/sciencefairs

www.ipl.org/div/projectguide

www.cool-science-projects.com

www.sciencebuddies.org

www.pbskids.org/zoom/activities/sci

www.fi.edu/learn/index.php

www.exploratorium.edu

www.passporttoknowledge.com

www.scifair.org



Draw on your child's own talents and interests. A pianist did a project one year on how a piano makes sounds. Two Little Leaguers did a experiment testing the effect of different bats on hitting baseballs.

Help your child acquire the materials needed for the project. Most projects should require only a few items from the supermarket, pharmacy or hardware store. You are not expected to spend a lot of money. (Please note: Store-bought science kits are not permitted.)

Be a good audience. Once the project is near completion, let your child practice telling you all about it. Be positive, ask questions, and don't forget to offer encouragement! (At the fair, volunteers will walk around and interview all the participants—not to test them, but to make sure each child gets a chance to talk about his/her project.)

Help your child transport the project to school on the day of the Science Fair (Thursday, May 19th) between 3 – 5 pm and back home the next day right after school (Friday, May 20th).

Mark your calendar for Thursday, May 19th, 6:30 – 8:00 pm, and be there!

Walk around and ask other kids about their projects. You can learn a lot and at the same time make them feel great!



Do's and Don'ts For Parents

DO . . .

- Encourage your child to do a science project.
- Listen carefully and patiently to your child's ideas about what he/she wants to do for the Science Fair.
- Keep the project simple enough so that your child can do the work required.
- Guide and support your child's efforts.
- Serve as a practice audience, asking questions.
- Impress upon your child the importance of working safely.
- Refer often to the schedule in this handbook and help him organize his/her time accordingly.
- Contact the Science Fair Committee if you have any questions:

Melanie Kraut 630-4111 (melkraut@aol.com)

Terri Girardi 917-623-8264 (terri.girardi@gmail.com)

Dahna Freidus 834-0655 (dahna.freidus@gmail.com)

DON'T . . .

- Guide your child toward a question that may be too difficult or a topic that is too broad.
- Spend money on commercially available science kits—
 - they are not allowed.
- Make your child do too much work on the project at one time.
- Insist on perfection. It's not a contest.
 - The point is to have fun with science.
- Do the work for your child. (If you find yourself saying, "Move over, let me do it!" you're probably too involved.) Remember, the Science Fair is for the kids.



How To Do A Science Project

Step 1: Think about the type of project you want to do.

There are five types of projects:

COLLECTION - a group of similar things such as insects or leaves, organized and displayed in an interesting way.

MODEL - a representation of something such as a heart, a car, or a dinosaur. (This could be something you make out of clay, paper maché, cardboard, or draw. No store-bought kits, please).

REPORT - a written summary of information about a science topic, usually with pictures or diagrams.

EXPERIMENT - a test carried out to learn something new about a science topic. (Take photos of your experiment!)

DEMONSTRATION - a physical display explaining or showing something about a science topic.

Step 2: Choose an area of science that interests you.

What would you like to learn more about? To help you get an idea, look at the list of categories below and check those you like. Or add some of your own. There are lots of great ideas in the special Science Fair section of the Murray Library and on the websites listed above.

Step 3: Think of a question about an area of science that interests you. We've listed some sample questions to help you.



SAMPLE QUESTIONS:

COLLECTIONS

How do rocks compare?
How do insects compare?

MODELS

What does the human heart look like?
How do human lungs work?
What does a spider web look like?
What does an atom look like?
How does a telegraph work?

REPORTS

Why do bee stings hurt?
How does a spider spin a web?
How do we catch colds?
How do bees make honey?
How does a microscope work?

EXPERIMENTS

What does a plant need to grow?
Which kind of soil is best for growing plants?
How much water do you use in a day?
How does temperature affect plant growth?
Why do some things float and others sink?

DEMONSTRATIONS

How can you tell the age of a tree?
How does a megaphone work?
What causes day and night?
How can you clean dirty water?
What objects do magnets attract?

Step 4: Collect information to help answer your question.



Visit your school library or your local library for resource books, magazines, websites or encyclopedias. Check some of the websites recommended in this Handbook or in the Science Fair Resource Center at the Murray Library.

Step 5: Fill out the Science Project Form.

Return it to the Science Fair box outside the main office or mail it to the address on the form, no later than Friday March 4th. You will receive a confirmation letter approving your project by March 25th.

Step 6: Do your science project.

Below are some suggestions to follow for your science project.

COLLECTION

1. Collect the interesting objects.
2. Organize and display the objects in an interesting way.
3. Tell how and where you collected the objects.
4. Explain: How are they different? How are they similar? Where are they found? What makes them the way they are?

MODEL

1. Make a model of the object you chose.
2. Display your model in an interesting way.
3. Tell how your model is like (or not like) the real thing.
4. Explain how it works.
5. Tell what you learned from making the model.

REPORT

1. Read the information you found about your question.
2. Organize, summarize, and write about the information.
3. Make charts, pictures, and diagrams.
4. Display your information in an interesting way.
5. Tell what you learned from your report.

DEMONSTRATION

1. Think of an interesting way to answer your question.



2. Display your demonstration through photos, words and/or examples.
3. Explain what your demonstration shows.
4. Tell what you learned from your demonstration.

EXPERIMENT Use the Scientific Method:

1. Plan a test to answer your question. Make a guess about what you think the answer to your question might be. (This guess is called a hypothesis.)
2. Do the test.
3. Display your test and results in an interesting way, through tables, graphs, charts, writing or photos.
4. Explain what you did and what happened in your test.
5. Tell what you learned from your test.

Step 7: Display your project with pride.

For the Science Fair you will need to display your project so that all visitors will be able to easily view your work. The science fair committee will be selling sturdy three-panel Foamcore display boards that stand up on a table, on April 1st and 4th. You can write directly on the boards, or attach print-outs of your report, photos and drawings. You can use the table space in front of your display board for any models, demonstrations, experiments, etc. (Please remember, oversized projects are not allowed).

Step 8: Practice telling people about your project.

How did you get the idea? What was the hardest part? What was the coolest thing you learned? At the Science Fair, people will be interested in your project—so be ready to show what you know!

Step 9: Take your science project to school and set it up.

Step 10: At the Fair, tell visitors about your project.



IMPORTANT SAFETY RULES

1. Make sure your parents have approved your science project and the materials you plan to use. No dangerous chemicals allowed.
2. Work in a safe place. Ask your parents where you can do your science project.
3. Wash your hands each time you stop working on your project.
4. Wear an old T-shirt or apron when doing your science project to protect your clothes.
5. Clean up any spills right away. Clean up your work area when you are finished.
6. Keep all materials out of reach of young children.