



THE SKY'S THE LIMIT!

Elementary School Level

*Information for Entering a
Science Fair Project*

*WATKINS GLEN CENTRAL
SCHOOL DISTRICT*

*Science Fair
March 17, 2012
Watkins Glen Elementary School*

Watkins Glen Central School District

January 12, 2012

Dear Elementary Parent:

The first Watkins Glen Central School District Science Fair is scheduled for Saturday March 17th at the Elementary School. (A snow date will be determined at a later date if necessary.) Participation in this science fair is voluntary. It is intended to offer an enriching and rewarding academic opportunity that will encourage students' interest in science and technology. In so doing, children can develop critical thinking and problem-solving skills while independently pursuing topics of specific curiosity.

Children who participate in the Science Fair will need a mentor. It is expected that this mentor will be a parent, other relative or family friend. It is not expected that this mentor will be the child's teacher. The mentor's job is to:

- help child with project choice
- direct or take child to find background research information
- help child get materials needed for the project
- ensure safety precautions are taken
- listen to child work through ideas
- help child fill out time-line and project entry form
- assist with transportation to the Science Fair

Please note that the mentor does not:

- do the project for the child
- make competition the project focus

Students will set up their projects at the Elementary School cafeterias on Saturday morning, March 17, between 10:00 and 10:30 a.m. The projects will be open for public display between 10:30 and 11 am. Children will have the opportunity to talk to evaluators about their projects at 11:00 am. Please note that parents must wait outside of the cafeteria while evaluators interview the children. Evaluation forms describing the areas that the students will be interviewed on are included in this packet. You may want to practice an interview with your child.

After a child has completed his/her interview with the evaluators he/she will be escorted to his/her parents and may at that point leave. You may return at 5:00 to see the certificates and ribbons earned and to pick up any materials you do not wish left at the school. We would like to keep the projects and ribbons at the school for display during school hours on Monday, March 19. You may pick up the projects at the end of the day on that Monday.

Please keep the attached packet for reference and review the materials in it. They include:

- time-line
- project proposal form (due back by Jan 27)
- suggestions for deciding on a science project
- safety rules
- science project ideas

Additional information on how to prepare the science fair projects will be handed out with the approved project proposals when they are returned to the students on Feb 3.

We would like to acknowledge the Donovan Academy for their help in providing much of the information contained in this packet and the Corning Inc. Foundation for providing the funding to make this event possible. If you have any further questions, please contact Steve McFarland at the Watkins Glen Elementary School, Jim Murphy at the Watkins Glen Middle School, or Sonya McCauley at 535-2359 (mccauleysd2002@yahoo.com).

Sincerely,

Watkins Glen Science Fair Committee

ELEMENTARY STUDENT TIME LINE

1. Jan 17 – 20 Teachers send packets home with interested students
2. Jan 27 Submit project proposals to Mr. McFarland
3. Feb 3 Receive approval for your project idea
4. _____ Pick a topic and read about it
5. _____ Plan your project
6. _____ List the materials you need. Be sure you check at home for materials you already have.
7. _____ Set up and do your project. If you are doing an experiment, use the Science Experiment Worksheet in this packet
8. Feb 23 Help to be made available after school to any participating Science Fair students that would like additional resources. (to be held in 4th grade science lab.)
9. Feb 24 Reminder notices mailed to registered students. Please note that if you do not receive the reminder letter at this time you are not registered for the Science Fair.
10. Mar 2 Start preparing display board and talking with your mentor about your project. (Remember you will have to talk about your project with evaluators on March 19)
11. Mar 7 Help to be made available after school to any participating Science Fair students that would like additional resources. (to be held in 4th grade science lab.)
12. March 17 Science Fair. Take your project to the Watkins Glen Elementary School Cafeteria between 10:00 and 10:30. Interviews with evaluators will begin at 11:00. Return at 5:00 to pick up any materials you do not want to leave at school.
13. March 19 Projects will be on display at Watkins Glen Elementary School. Please pick up your projects at the end of the day.

GENERAL INFORMATION SHEET FOR SCIENCE FAIR

GENERAL: The Watkins Glen School District is sponsoring its first Science Fair “The Sky’s the Limit”. It will be held March 17 at the Watkins Glen Elementary School Cafeterias.

PARTICIPATION: Any student in grades K to 8 may enter a project. For grades K – 4, one or two students may work together for a single project, three or four students may work together for a group project, or five or more student may enter a classroom project. Students in grades 5 – 8 may enter projects completed by an individual student or by two students working as partners.

MENTORS: All students must work with a mentor. A mentor is an **adult** who is willing to assist a student in defining a project idea, provide guidance in setting up the project, experimental procedures and analysis of results, and who insures that the student follows the rules, regulations and safety requirements of the Science Fair. A mentor **DOES NOT** do the project for the student. All work should be the student’s own. Students may choose their own mentors: a teacher, a relative, a neighbor, or a friend.

SET-UP: Projects will be set-up Saturday morning, March 17, 2012 at the Watkins Glen Elementary School Cafeterias between 10:00 and 10:30 AM. Students will be responsible for setting up their own displays.

EVALUATIONS: All projects will be evaluated on Saturday, March 17, 2012 between 11:00 AM and 12:00 PM. Evaluators will interview each student regarding his/her project. Once the evaluation process begins only students participating in the Science Fair and evaluators may be present in the exhibition area.

PUBLIC EXHIBITION: The Science Fair will be open to the public on Saturday March 17 between 10:30 and 11 AM.

PLANNING PACKET: This planning packet will provide general information regarding the science fair; a registration form; a time line for planning; and a list of ideas that can be used for deciding on a project.

OFFICIAL REGISTRATION FORMS: Registration for students begins the week of Jan 17 when packets are distributed and ends Jan 27 when forms must be submitted to teachers. The project proposals will be reviewed and approvals will be notified by Feb 3. Reminder notices will be sent home Feb 24 confirming students who are registered. If you do not receive a confirmation letter, you are not registered. Contact Mr. McFarland at the Elementary School, Mr. Murphy at the Middle School, or Sonya McCauley (mccauleysd2002@yahoo.com) if you submitted a proposal but do not receive a letter.

IDEAS FOR PROJECTS: There are lists of websites and Science Fair project ideas attached to this packet. Students are encouraged to pursue their own areas of interest with scientific investigation and are not required to select a project from the attached lists.

SCIENCE FAIR PROJECT PROPOSAL

Elementary Level

March 17, 2012

Official Registration Form

YOU MUST FILL OUT AND RETURN THIS FORM TO BE REGISTERED FOR THE FAIR

Name: _____ Grade: _____

Teacher: _____

Home Phone: _____

Address: _____

Project Title:

Project Description (Please use back of this page if necessary):

This project is:

_____ an experiment

_____ a model

_____ a scientific principle

_____ a collection

If you have any special requirements for your project display (electrical outlet, etc), please check here. Please only request electricity if it is critical for your display. You will be responsible for bringing your own extension cords, adaptors etc to the school. Please note if you will need assistance with other materials.

_____ I will need an electrical outlet

_____ Other special needs: _____

Parent Signature: _____ Date: _____

Please return this form to your teacher or to Mr. McFarland by January 27.

SAFETY RULES

1. **ALL PROJECTS MUST BE APPROVED BY TEACHER AND MENTOR BEFORE BEGINNING.**
2. Wear safety goggles and follow standard safety practices when working with fire, hot liquids, or caustic chemicals. Parent approval and supervision is required for these projects.
3. All experiments using vertebrate animals or humans as subjects should cause no harm or undue stress to the subject(s). These projects require approval from Mr. McFarland or Mr. Murphy before beginning.
4. No live vertebrate may be exhibited at the fair (models, toy animals, or photographs should be used instead). Exceptions may be granted with special permission.
5. No human body parts should be displayed. Exceptions are teeth, hair and nails.
6. Students should avoid doing experiments involving bacteria cultures. Bacterial cultures may not be exhibited.
7. No controlled substances should be exhibited.
8. No dangerous or combustible chemicals should be displayed. Rockets or engines must not contain fuel. All chemicals displayed should have the contents clearly marked on the container.
9. No open or concealed flames will be permitted for displays at the science fair.(Use pictures if necessary.) Devices producing temperatures greater than 70 degrees C must be adequately insulated.
10. Expensive or fragile items should not be displayed. Valuable items essential to the project should be simulated or photographed.
11. Items to be displayed in front of backboard should be adequately secured (ie. Batteries, wire, switch and motor – secure to a piece of plywood and place in front of backboard.)
12. Carefully pack all materials when transporting to and from the fair.
13. The following electrical safety rules must be observed:
 - a. Wiring must be properly insulated and fastened.
 - b. Household and high voltage circuits must include an adequate overload safety device.
 - c. High voltage equipment must be shielded with a grounded metal cage or box to prevent accidental contact.
 - d. Approved cords and switches must be used for circuits operating on 110 volts. Open knife switches are not acceptable for circuits exceeding 12 volts.
 - e. Wet cell batteries with open tops are not permitted.
 - f. Devices generating dangerous rays (vacuum tubes, lasers, etc.) must be properly shielded. Only class 1 and II lasers may be operated at the exhibit. These lasers:
 1. Must have a protective housing preventing access to them.
 2. Be operated only in the presence of teh exhibitor and be disconnected when not in use.
 3. Be accompanied by adequate warning signs (ie. “Danger! Laser radiation, do not look into beam.)

HOW TO CHOOSE A SCIENCE PROJECT

- I. Choose a Subject.
 - A. Start by listing subjects that interest you (baking, painting, football, swimming, music, dancing, skating)
 - B. List questions from each area that you think might be interesting to answer. (“What does butter do for cookies?”; “How do different paints behave on different surfaces?”; “How does temperature affect a football’s air pressure?”; “Do fins really make you swim faster?”; “How does vibration make music?”; “How fast can a ballerina spin?”; “Which are faster: rollerblades or ice skates?” Make your questions as specific as possible.
 - C. Choose one that you think you can answer. This is the “Problem” you will solve. While choosing, consider these three questions:
 1. Will it be interesting and safe?
 2. Can I get the necessary equipment or materials to do it?
 3. Will I have enough time to complete it?
- II. Decide if answering your problem will “Demonstrate a Scientific Principle” or require an “Experiment”.
 - A. Demonstration of a scientific principle will explain how something works (an electric motor) or why something happens the way it does (what causes rainbows)
 - B. An experiment will test a hypothesis (or educated guess) on what you think will happen when you answer your problem.
 1. Your hypothesis does not need to be correct.
 2. The experiment will test it to see if the hypothesis is right. For example, “I expect butter will make cookies stick together.”
 - C. Research available resources. Find out as much as you can about your topic.