

Central Elementary School's



Exploring the World of Science

in Hampton Township for over 20 Years!

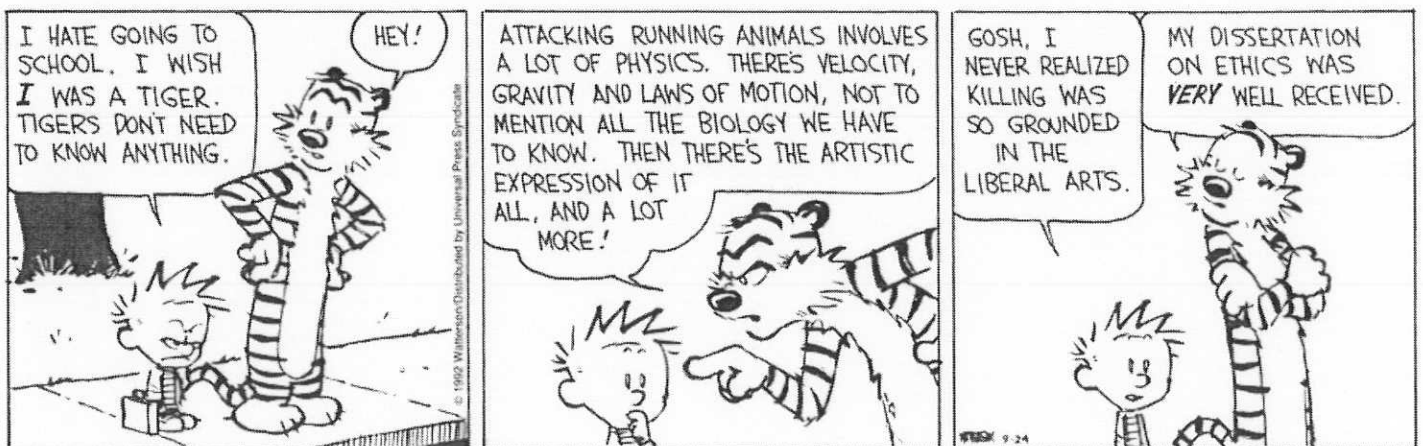


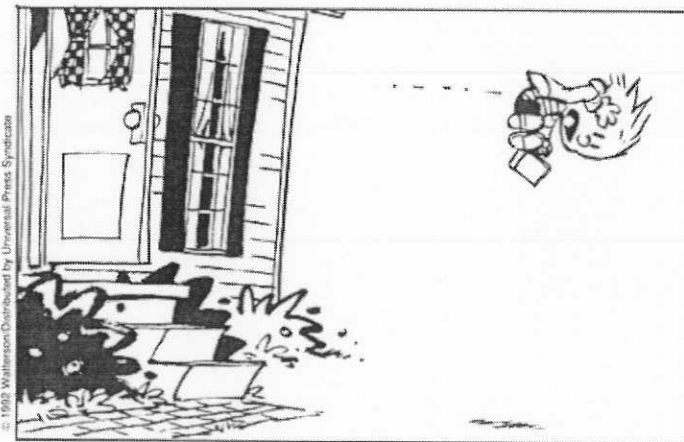
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If you have any questions, please don't hesitate to contact me.

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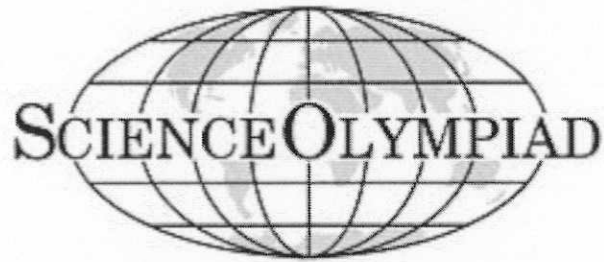
I HATE SCHOOL! I'M
NOT GOING TO SCHOOL
EVER AGAIN! I REFUSE!



I THINK MOM LETTERED
IN SHOT PUT HER
JUNIOR YEAR.



This NEVER happens during Science Olympiad Week!! 😊



Exploring the World of Science

Checklist

- Bin Check (All Year)
- Planetarium (Sept. Don)
- Order Students (January)
- Create Teams (January)
- Order Medals and Trophies (Jan-Feb)
- Team Organization Day (February)
- Parent Volunteer Letter (February)
- T-Shirt Order (March)
- Event Schedules (March)
- Individual Student Schedules (April)
- Contact Luncheon, Speakers and Event Volunteers (April)
- Schedule Non Competitive Events (April)
- Schedule Team Building Events (April)
- Preliminary Events/Study Guides (April)
 - (Mystery Powders, Reflection Relay, Rubberband Catapult.)
- \$\$ for Nutrition Zone (PTO does this)
- High School Volunteer Sign Ups (May)
- Assign Parents and Teachers to Events (April)
- LabRatz (May after the Olympiad for next year)

Bin Check- During the year each event is placed in a bin and replenished so it is ready for the Olympiad. All I have to do is pull it off the shelf and place it in the room for the volunteer to run. Everything needed is inside.

Order Students- Every student is given a number 1-4. One being a great science student and potential leader of the team. Three would be a student who struggles academically. Four is either a behavior problem or a special needs student or any other student who might need extra help to succeed.

Create Teams- We try to create teams of eight that are split boy/girl, 4th/5th grade, from different homerooms and heterogeneously grouped.

Team Organization Day- Students pick their team name and schedule their events.

Parent Volunteer Letter- Includes a description of the event, a volunteer form and a t-shirt order.

Event Schedules- From the team schedule, we create an event schedule so when a parent comes in to run the event, they know exactly who is coming and at what time.

Student Schedule- Also from the team schedule, each student writes in their competitive events. Later we will add the non-competitive events in their free sessions and type the final schedule that they receive each day.

Contact and Schedule Guest Speakers, Event and Luncheon volunteers.

Teambuilding Events- Because our students participate in 4th and 5th grade, we have enough events for two years so they do not repeat them.

Preliminary Events- Three of our events require work ahead of time. Mystery Powders, Reflection Relay and Rubberband Catapult all have pre-work that needs done before the event so we complete a few weeks ahead of time. In addition, many of our events have study guides and these are passed out at this time as well so students can study topics on their own if they so choose.

Contact PTO to make sure they have everything needed to run their Nutrition Zone Event.

High School Volunteers- I send an announcement to be read at the high school each year asking for upper classmen to come and help. My Olympiad is 3 days and high school volunteers can sign up for one day.

Assign Parents- Once you have contacted parents about their availability you can assign them and teachers to individual events and send them directions for the event they will be running.

At this point, everything is done and you're ready to go! Congratulations!

Science Olympiad Team Organization Day

The following information will help your teamwork through the organizational process for Science Olympiad scheduling. It is important that your team reads and understands all the information provided before trying to schedule team members into the team events. **Working carefully and following the directions** will keep problems to a minimum and will assure that each team member gets fair treatment in choosing events.

1. In your team folder, you will find a master scheduling chart and event description sheets. Each team member will take an event description sheet home to share with parents. On your sheet, you may want to mark the events in which you are entered and the teammates with whom you will be working.

THE COMPLETED MASTER SCHEDULE IS TO BE RETURNED TO:

- Mr. McCutcheon, Mrs. Mytinger, or Mr. Nail

2. Each group should:

- a. Become acquainted with each other. Cooperation among team members will be very important to the success of your team.
- b. Work together to choose a team name.

3. Rules for choosing team events:

- a. Read over the events so that you have a general understanding of what you will have to do in that event.
- b. Take into consideration individual talents, interests, and skills. Each person should choose a variety of "types" of events. Choose some construction activities and some pencil paper activities.
- c. **MIX UP PARTNERS!** Mix boy and girl partners and fourth and fifth grade partners. Work with **every other member** of your team. **IF YOU DO NOT FOLLOW THIS RULE AS A TEAM, WE WILL ASSIGN THE EVENTS AND YOU WILL NOT BE GIVEN CHOICES. IT IS THE TEAM'S RESPONSIBILITY TO SEE THAT THE SAME PEOPLE ARE NOT ALWAYS WORKING TOGETHER!**
- d. Be sure to schedule absent team members for events. Be fair in choosing so that they will have a variety of events.
- e. **5th grade students MAY NOT enter an event in which they competed during last year's Science Olympiad.** The teachers will use the schedule from last year to make sure that this does not happen.

- f. Some events have special coding:
Science Bowl participants must indicate who will be the **B**iology expert, the **P**hysical Science expert, and the **E**arth/Space expert. Put the **B, P, or E** in the block beside each name under that event.

Write It/Do It participants must decide who will **WRITE** in the morning session and who will **DO** in the afternoon session. Write the letter code in the appropriate place.

- g. Most events will require 2 team members to compete. Events, such as Science Bowl and Science Jeopardy will require 3 team members. Pentathlon will require 4 team members.
- h. Some similar events are coded with the same color. **DO NOT CHOOSE MORE THAN ONE EVENT OF THE SAME COLOR CODE.**

4. Event arrangement:

- a. Events are shown in half-day sets divided by spaces. The sets are arranged according to day and time. **No one should be scheduled for more than TWO events in any morning or afternoon time frame.** This will make it impossible to fit in your events.
- b. On Wednesday afternoon, most team members may choose **only one event.** One or two of your teammates may have to sign-up for two events to be sure every event has enough participants.
- c. **It is very important that you choose your events from the different sets, and you should be spread over all the time sets – one or two events from each time period. If possible, your choices should allow you to compete in an event each morning and afternoon.**
- d. ***The events must be spread as evenly as possible among the team members!

1. Teams of 9 ----- 5 students will compete in 9 events
4 students will compete in 10 events

2. Teams of 8 ----- 5 students will compete in 11 events
3 students will compete in 10 events

Note: Any schedule may be changed if there are scheduling conflicts or if you don't follow directions. Take your time and work carefully!

Team Name :
 Team Number : 1

		Thursdays AM		Thursdays PM		Total		Total Wed + Thurs		
Name	Room	Time								
1.)										
2.)										
3.)										
4.)										
5.)										
6.)										
7.)										
8.)										
9.)										
10.)										
			Charts and Graphs	Room 22	~	9:25 - 9:55				
			Puffmobiles	Back of Gym	~	9:25 - 9:55				
			Write It! (Partner 1)	Room 25	~	9:25 - 9:55				
			Color My World	Art Room	~	10:00 - 10:30				
			Cool It!	Cafeteria	~	10:00 - 10:30				
			Hangman	Room 24	~	10:00 - 10:30				
			Grab-A-Gram	Room 23	~	10:35 - 11:05				
			Circuit Wizardry	Room 29	~	12:35 - 1:05				
			Science Bowl	Gym	~	12:35 - 1:05				
			Treasure Hunt	Ball Field	~	12:35 - 1:05				
			Do It (Partner 2)	Room 25	~	1:10 - 1:40				
			Estimania	Room 28	~	1:10 - 1:40				
			Mystery Boxes	Room 27	~	1:10 - 1:40				
			What's the Matter?	Room 22	~	1:10 - 1:40				
			Out Of This World	Room 26	~	1:45 - 2:15				
			Total							
			Total Wed + Thurs							



Exploring the World of Science
Team Organization Day

Wednesday Before You Get Checked:

29 X's marked? _____ **Did you mark how many events everyone has?** _____

Everyone has different partners? _____

Is anyone scheduled for two events at one time? _____

Is everyone in at least one event in the morning and afternoon? _____

Does everyone have close to the same number of events? _____

Thursday Before You Get Checked:

29 X's marked? _____ **Did you add Wednesday's total with Thursday's total for each person?** _____

Everyone has different partners? _____

Is anyone scheduled for two events at one time? _____

Is everyone in at least one event in the morning and afternoon? _____

Does everyone have close to the same number of events? _____

Are there different people in the same colored events? _____

In **Science Bowl** did you mark "P" for Physics, "B" for Biology and "E" for Earth Space?

Friday Before You Get Checked:

27 X's marked? _____ **Did you add Wed., Thurs., and Friday's total for each person?** _____

Is anyone scheduled for two events at one time? _____

Is everyone in at least one event in the morning and afternoon? _____

Are there different people in the same colored events? _____

If it is a team of 8 does everyone have 10 or 11 events? _____ (5 with 11 / 3 with 10)

If it is a team of 9 does everyone have 9 or 10 events? _____ (5 with 9 / 4 with 10)



Exploring the World of Science

March 2, 2015

Dear Parents/Guardians,

It is that time of year!!! Central Elementary School's Science Olympiad for 4th and 5th grades will take place on **May 20 – 22 2015**. Please take the time to read this letter and be aware of our plans. *It is our hope that you will consider being involved in Science Olympiad.*

Students have been assigned to one of the twenty-four teams, and the teams have met to choose representatives to compete in each of the forty events. The medals awarded to the winning students of each event will be presented during the three days of competition. Final awards, including team trophies, will be given by the end of the school day on Friday, May 22, 2015.

We are looking for guest speakers on interesting, science related topics, monitors for the competitive events, preparation of events ahead of time and help with the luncheon for all of the volunteers. If you would be willing to help with any of these or the other items listed on the next page, please let us know!

Finally, there is a \$20 student fee that covers your child's team shirt, medals, trophies, the Lab Ratz assembly and small group presentations, and replacement materials for all of the events. If the cost is prohibitive, please let us know, as we are sure other arrangements can be made.

Thank you,

The 4th and 5th Grade Science Teachers

Parent Checklist

_____ *Volunteer Form*

_____ *T-Shirt Form*

_____ *\$20 Cash or Check to HTSD*

PLEASE RETURN THIS FORM BY FRIDAY, MARCH 20, 2015

I am willing to help with the 2015 Science Olympiad on the following days:

- Wednesday, May 20 ____ a.m. ____ p.m. ____ all day
- Thursday, May 21 ____ a.m. ____ p.m. ____ all day
- Friday, May 22 ____ a.m. ____ p.m. ____ all day

I am willing to help with the 2015 Science Olympiad in the following ways:

- ____ Monitor competitive and noncompetitive events during the Olympiad days.
(May include scoring tests in the competitions).
- ____ Help with preparation *during the weeks before the Olympiad*. This would require checking the materials for some of the events. **When would you be available?**
- ____ Chair/Co-chair a luncheon committee (Help set up, serve and tear down)
- ____ Prepare and donate food for the luncheon
- ____ Take pictures of Olympiad Events for us to display.
- ____ Help with the Nutrition Zone
- ____ Help prepare snacks for the Nutrition Zone (*before the event*)
When are you available?

I am willing to be a Guest Speaker for the 2015 Science Olympiad.

- Name _____ Phone # _____ Email _____
Topic _____ (Please note speaking day(s) above)
- I know of a speaker who might wish to participate in Olympiad.
Name _____ Phone # _____ Email _____
Topic _____ (Please note speaking day(s) above)

If you said YES to any of the volunteer opportunities, please fill out your contact information below.

Name _____ Email _____
Home Phone # _____ Cell Phone # _____
Child's Name _____ Homeroom Teacher _____

Please be sure of your availability, *especially during Olympiad days*, as we depend on volunteers to be present as scheduled.



Exploring the World of Science

T-Shirt Order Form

The shirts will be ordered as soon as possible so that they will arrive in time for Science Olympiad. Please take a moment to fill in the necessary information and return it to your child's teacher, with the \$20 (cash or check) Student fee payment, no later than **Friday, March 20, 2015**.

The shirts will be ordered in an **ADULT** size, team color, with the team names printed on the back. Please order a shirt size that will be comfortable for your child. If you are unsure, it is much better to order a shirt slightly larger.

If paying by check, please make it out to HTSD.

Thank you,
4th and 5th Grade Science Teachers

----- Please detach and return with payment. -----

Child's name: -----

ADULT Shirt size: (circle one) S M L XL XXL

Child's homeroom teacher: -----

Team name: ----- Team number: -----

RETURN BY: Friday, March 20, 2015

Science Olympiad

Wednesday Morning

Event: Mystery Powders

8:55 - 9:25

9:30 - 10:00

10:05 - 10:35

10:40 - 11:10

6 _____

13 _____

3 _____

1 _____

7 _____

15 _____

8 _____

2 _____

9 _____

16 _____

17 _____

4 _____

10 _____

18 _____

19 _____

5 _____

11 _____

21 _____

22 _____

12 _____

20 _____

23 _____

24 _____

14 _____

Event _____

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Name

Homeroom

Team Name

Team #

Wednesday Morning

Wednesday Afternoon

8:50-8:55 Report to First Event

8:55-9:25 _____

12:25-1:05 _____

9:30-10:00 _____

1:10-1:40 _____

10:05-10:35 _____

1:45-2:15 _____

10:40-11:10 _____

2:20-3:00

Lab Ratz Assembly in Gym

Thursday Morning

Thursday Afternoon

8:55-9:20 Awards in Gym

12:35-1:05 _____

9:25-9:55 _____

1:10-1:40 _____

10:00-10:30 _____

1:45-2:15 _____

10:35-11:05 _____

2:20-3:00

Science Bowl Final in Café

Friday Morning

Friday Afternoon

8:55-9:20 Awards in Gym

12:35-1:05 _____

9:25-9:55 _____

1:10-1:40 _____

10:00-10:30 _____

1:45-2:15

Jeopardy Final in Gym

10:35-11:05 _____

2:20-3:00

Final Awards and Trophies

Central Elementary School

SCIENCE OLYMPIAD EVENTS

AERODYNAMCIS (2 participants per team)

Team members will construct a paper airplane using given materials and fly it towards a target placed on the floor. The plane must be aerodynamically designed. The plane which lands with its nose closest to the center of the target wins.

ARMOR FOR AN EGG (2 participants per team)

Team members will be given ditto paper and masking tape. They will construct a protective shell for a raw egg. Eggs will be dropped from increasing heights until the egg breaks or until only one team is left. Armor must be constructed so that the egg can easily be removed after each drop for inspection by the judges. Minor cracks will be allowed, but no liquid may leak out. Highest drop wins. (Participants may not compete in NAKED EGG DROP)

BARGE BUILDING (2 participants per team)

Each team will build a barge from foil provided. The foil barge which floats the greatest number of pennies without taking on water is the winner.

BLOOD AND GUTS (2 participants per team)

Team members will cooperate to answer questions and identify parts of the human body.

BOTTLE MUSIC (2 participants per team)

Teams will tune glass containers on site to play several preselected songs and demonstrate knowledge of music basics. Glass containers will be provided the day of the competition.

BRIDGE BUILDING (2 participants per team)

Participants will be given at the Olympiad site fifty plastic straws and twenty straight pins. They are to construct a suspension bridge that spans the greatest possible distance and is able to

support at least one chalk eraser placed by the judge in the center of the bridge. (Participants may not compete in STRUCTURES.)

CALCULATOR CONTEST (2 participants per team)

Team members will be asked to complete a variety of math problems using a hand-held non-programable calculator which will be provided.

CATEGORIES (2 participants per team)

Team members will work individually to complete a chart of various science categories. Each term must begin with preselected letters of the alphabet. Team members' scores will be combined for the team score.

CEREBRUM CHALLENGE (2 participants per team)

Team members will cooperate to solve math brain teasers and logic problems.

CHARTS AND GRAPHS (2 participants per team)

Participants will study charts and graphs to answer a variety of questions. (Participants may not compete in MAP READING.)

CIRCUIT WIZARDRY (2 participants per team)

This event will test students' knowledge of simple electric circuits. Participants should know the difference between open and closed circuits, the difference between series and parallel circuits, and have a general knowledge of electricity.

COFFEE CAN RACERS (2 participants per team)

Team participants must construct their own racer from a coffee can (any size) following the instructions provided. No other materials may be used. Racers may be painted or decorated as long as the basic construction is not altered. Competition is for greatest distance traveled in a straight line, not time.

COLOR MY WORLD (2 participants per team)

Team members will use water color chemistry to formulate color equations to reproduce given hues. (Example: 2 drops red and 4 drops blue produce blue violet.) Participants should have a general knowledge of primary colors, secondary colors, various hues, and the color wheel. Additional color quizzes may be part of this event.

COOL IT! (2 participants per team)

Teams will be given a cup containing a given amount of solidly frozen ice. They will cooperate to use the material provided to construct a container that will keep the ice frozen. Winners will be determined by the judges who will measure the amount of water in the cup after a set period of time.

ESTIMANIA (2 participants per team)

Teams will estimate the volume, length, height, circumference, etc. of various objects and situations. Predictions will be in metric units and non-standard units such as paper clips, gumballs, cars, etc.

GRAB-A-GRAM (2 participants per team)

Teams will cooperate to pick up various materials in a given number of grams. Points scored equals the number of grams "difference" from the target amount the "grab" is. Lowest score wins.

JEOPARDY (3 participants per team) (Friday Afternoon Final)

Modeled after the TV game show, answers will be given and teams must provide the correct question. Questions will come from a variety of science categories. (Participants may not participate in SCIENCE BOWL)

MANIPULATIONS (2 participants per team)

Participants will create figures, match patterns, and solve problems using tangrams and pentominoes. Materials will be provided.

MAP READING (2 participants per team)

Participants will work together to answer questions about a variety of maps. (Participants may not compete in CHARTS AND GRAPHS)

MEASUREMENT (2 participants per team)

Participants will be asked to complete various measuring tasks using measuring tools provided.

MYSTERY BOXES (2 participants per team)

Team members will have an opportunity to observe materials in closed boxes using senses other than sight. They will fill out a chart answering questions about the mystery items. Most correct observations wins.

MYSTERY POWDERS (2 participants per team)

Teams will be asked to identify a mixture of common white house-hold powders. Students will be given materials to test the powders. Vinegar, water, iodine, and heat tests will be possible. (Students in this event must attend a preparation session before the Olympiad to complete a data table; possible held after school.)

NAKED EGG DROP (2 participants per team)

Raw eggs will be dropped from increasing heights into a landing pad/catching device which will be built by the team on site. Eggs and building materials will be provided at the competition. Nothing may be attached to the egg. (Participants may not participate in ARMOR FOR AN EGG)

NAME THAT SCIENTIST (2 participants per team)

Participants will cooperate to identify famous scientists and their contributions to science.

OUT OF THIS WORLD (2 participants per team)

Participants will cooperate to answer questions about and identify planets, stars, the sun, astronauts, space, and related information.

PAPER ROCKETS (2 participants per team)

Students will construct and fly a paper rocket using directions provided. Rockets will be launched toward a predetermined target. (Participants may not compete in AERODYNAMICS)

PENTATHALON (4 participants per team)

Your team will compete against the clock. Each team member will complete a physical activity and then answer a science question in a relay format. Shortest total team time to complete the course in all five activities wins.

PUFFMOBILES (2 participants per team)

Team members will be given materials such as straws, pins, beads, and paper. They will construct a vehicle which they will blow along a course. Puffmobiles will race against the clock. Fastest time wins.

REFLECTION RELAY (3 participants per team)

Three team members, each supplied with a small mirror, cooperate to bounce a light beam from a light source onto predetermined targets. Other reflection activities or questions may be part of this event at the discretion of the coordinators.

RUBBER BAND CATAPULT (2 participants per team)

Participants will use a catapult device to shoot rubber bands at a target placed within a certain range. Participants will be helped to complete a data table which will show distance covered for different shooting angles and stretches. Data tables should be brought to the competition. At the competition, teams will be told the distance of the target, and will use their data to help them adjust their catapult.

SCIENCE BOWL (3 participants per team) (Thursday Afternoon Final)

Team members will answer science questions in a "college bowl" format on a rotating basis. Each team should designate experts in the following: EARTH/SPACE, BIOLOGY, AND PHYSICAL SCIENCE. (Participants may not compete in JEOPARDY)

SCIENCE CROSSWORD (2 participants per team)

Each team will attempt to complete a science crossword puzzle using science terminology.

SCIENCE HANGMAN (2 participants per team)

Teams will attempt to guess a scientific name, term, or phrase by first guessing letters as in the TV game show Wheel of Fortune.

SPELL SCIENCE (2 participants per team)

Participants will individually take a spelling test of science words. Team score will be a total of the two members' scores.

STRUCTURES (2 participants per team)

Participants will construct a tower, on site, using only 25 straws and 10 straight pins. The tallest structure which stands for 10 seconds is the winner. (Participants may not complete in BRIDGE BUILDING)

TREASURE HUNT (2 participants per team)

Participants will demonstrate skills in compass reading, and estimating distances by using a compass and a set of written directions to locate a specific point in the competition area.

WEB OF LIFE (2 participants per team)

Participants will cooperate to answer different kinds of questions about living things and their environment, including identification of living things, their ecosystems, classifications, special features, as well as questions about current environmental and ecological issues.

WHAT'S THE MATTER? (2 participants per team)

Participants will work together to answer questions about matter, atoms, molecules, compounds, etc. Participants will classify matter, identify simple chemical symbols, and answer a variety of questions about matter.

WHAT WENT BY? (2 participants per team)

Participants will be asked to identify and provide information about different objects, especially those found in nature.

WRITE IT/DO IT (2 participants per team)

One team member is shown a tinker toy contraption. He/she will write a description of the object and explain how to build it in the first half of the competition. Then the other team member will use the written directions and tinker toy pieces to try to build the contraption in the second half of the competition. Teams must designate one person to "write" and one person to "do".

Science Olympiad
Assessment Anchors
And
Eligible Content Connections

<u>Activity</u>	<u>Assessment Anchor</u>	<u>Eligible Content</u>
1. Aerodynamics	S4.A.2.1 Apply the skills necessary to conduct an experiment or design a solution to solve a problem	S4.A.2.1.2 Design and describe an investigation to test on variable
2. Armor for an Egg	S4.A.1.3 Recognize and describe change in natural or human-made systems and the possible effects of those changes	S4.A.1.3.2 Describe relative size, distance, or motion
3. Barge Building	S4.C.1.1 Describe observable physical properties of matter	S4.C.1.1.1 Use physical properties (e.g. mass, shape, size, volume, color, texture magnetic property, state (i.e. solid, liquid, gas), conductivity (i.e. electrical, heat) to describe matter
4. Blood and Guts	S4.B.1.1 Identify and describe similarities and differences between living things and their life processes	S4.B.1.1.1 Identify life processes of living things (e.g., growth, digestion, respiration)
5. Bottle Music	S4.C.2.1 Recognize basic energy types and sources, or describe how energy can be changed from one form to another	S4.C.2.1.4 Identify characteristics of sound (e.g. pitch, loudness, echoes)
6. Bridge Building	S4.A.3.2 Use models to illustrate simple concepts and compare the models to what it represents	S4.A.3.2.3 Use models to make observations to explain how systems work (e.g. water cycle, sun-Earth-moon, etc.)

Science Olympiad
Assessment Anchors
And
Eligible Content Connections

<u>Activity</u>	<u>Assessment Anchor</u>	<u>Eligible Content</u>
7. Bridge Building	S4.A.3.2 Identify appropriate instruments for a specific task and describe the information the instrument can provide	S4.A.2.2.1 Identify appropriate tools or instruments for specific tasks and describe the information they can provide (e.g. measuring: length-ruler, mass-balance scale, volume-beaker, temperature-thermometer: making observations: hand lens, binoculars, telescope: calculations-calculators
8. Categories	S4.C.1.1 Describe observable physical properties of matter	S4.C.1.1.2 Categorize/group objects using physical characteristics
9. Cerebrum Challenge	S4.A.2.1 Apply skill necessary to conduct an experiment or design a solution to solve a problem	S4.A.2.1.4 State a conclusion that is consistent with the information/data
10. Charts and Graphs	S4.A.3.2 Use models to illustrate simple concepts and compare the models to what it represents	S4.A.3.2.1 Identify what different models represent (e.g. maps show physical features, directions, distances; globes represent Earth; drawings of watersheds depict terrain; dioramas show ecosystems; concept maps show relationships of ideas)
11. Circuit Wizardry	S4.C.2.1 Recognize basic energy types and sources, or describe how energy can be changed from one form to another	S4.C.2.1.3 Recognize or illustrate simple direct current series and parallel circuits composed of batteries, light bulbs (or other common loads), wire and on/off-switches.

Science Olympiad
Assessment Anchors
And

Eligible Content Connections

<u>Activity</u>	<u>Assessment Anchor</u>	<u>Eligible Content</u>
12. Coffee Can Racers	S4.A.1.3. Recognize and describe change in natural or human-made systems and the possible effects of those changes.	S4.A.1.3.2 Describe relative size, distance, or motion
13. Color My World	S4.B.2.1 Identify and explain how adaptations help organisms to survive	S4.B.2.1.2 Explain how specific adaptations can help a living organism survive (e.g., protective coloration, mimicry, leaf sizes and shapes)
14. Cool It!	S4.B.3.1. Identify and describe living and nonliving things in the environment and their interaction	S4.B.3.1.2 Describe interactions between living and nonliving components (e.g., plants-water, soil, sunlight, carbon dioxide, temperature; animals-food, water shelter oxygen, (temperature) of a local ecosystem
15. Estimania	S4.A.2.1 Apply skills necessary to conduct an experiment or design a solution to solve a problem	S4.A.2.1.1 Generate questions about objects, organisms, or events that can be answered through scientific investigations
	S4.A.2.2 Identify appropriate instruments for a specific task and describe the information the instruments can provide	S4.A.2.1.1 Generate questions about objects, organisms, or events that can be answered through scientific investigations
	S4.A.1.3 Recognize and describe change in natural or human-made systems and the possible effects of those changes	S4.A.1.3.1 Observe and record change by using time and measurement

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<u>Activity</u>	<u>Assessment Anchor</u>	<u>Eligible Content</u>
16. Grab-A-Gram	<p>S4.A.1.3 Recognize and describe change in natural or human-made systems and the possible effects of those changes</p> <p>S4.A.2.2 Identify appropriate instruments for a specific task and describe the information the instruments can provide</p>	<p>S4.A.1.3.1 Observe and record change by using time and measurement</p> <p>S4.A.2.2.1 Identify appropriate tools or instruments for specific tasks and describe the information they can provide (e.g.; measuring; length-ruler, mass-balance scale, volume-beaker; temperature-thermometer; making observations: hand lens, binoculars, telescope)</p>
17. Jeopardy	<p>Questions are based on Curriculum and the Standards</p>	
18. Manipulations	<p>S4.C.1.1 Describe observable physical properties of matter</p> <p>S4.A.3.2 Use models to illustrate simple concepts and compare the models to what it represents</p>	<p>S4.C.1.1.2 Categorize/group objects using physical characteristics</p> <p>S4.A.3.2.1 Identify what different models represent (e.g., maps show physical features, directions, distances; globes represent Earth; drawings of watersheds depict terrain; concept maps show relationship of ideas</p>
19. Map Reading		

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<u>Activity</u>	<u>Assessment Anchor</u>	<u>Eligible Content</u>
20. Measurement	S4.A.2.2 Identify appropriate instruments for a specific task and describe the information the instruments can provide	S4.A.2.2.1 Identify appropriate tools or instruments for specific tasks and describe the information they can provide (e.g.; measuring; length-ruler, mass-balance scale, volume-beaker, temperature-thermometer; making observations: hand lens, binoculars, telescope)
21. Mystery Boxes	S4.A.2.1 Apply skill necessary to conduct an experiment or design a solution to solve a problem	S4.A.2.1.1 Generate questions about objects, organisms, or events that can be answered through scientific investigations
22. Mystery Powders	S4.A.1.3 Recognize and describe change in natural or human-made systems and the possible effects of those changes	S4.A.1.3.3 Observe and describe the change to objects caused by heat, cold, or light
23. Naked Egg Drop	S4.A.2.1 Apply skill necessary to conduct an experiment or design a solution to solve a problem	S4.A.2.1.2 Design and describe an investigation (a fair test) to test one variable
24. Name That Scientist	S4.A.1.3 Recognize and describe change in natural or human-made systems and the possible effects of those changes	S4.A.1.3.2 Describe relative size, distance, and motion
	S4.D.1.2 Identify the types and uses of Earth' resources	S4.D.1.2.3 Recognize the ways that humans benefit from the use of resources

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<u>Activity</u>	<u>Assessment Anchor</u>	<u>Eligible Content</u>
25. Out of This World	S4.D.3.1 Describe Earth's relationship to the sun and the moon	S4.D.3.1.1 Describe motions of the sun-Earth-moon system S4.D.3.1.2 Explain how the motion of the sun, Earth, moon system relates to time (e.g., days months, years)
26. Paper Rockets	S4.A.2.1 Apply skills necessary to conduct an experiment or design a solution to solve a problem	S4.A.2.1.2 Design and describe an investigation (a fair test) to test one variable
27. Pentathlon	Questions are based on Curriculum and the Standards	
28. Puffmobiles	S4.A.1.3 Recognize and describe change in natural or human-made systems and the possible effects of those changes. S4.A.2.1 Apply skills necessary to conduct an experiment or design a solution to solve a problem.	S4A.1.3.2 Describe relative size, distance, or motion S4A.2.1.1 Generate questions about objects, organisms, or events that can be answered through scientific investigations

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<u>Activity</u>	<u>Assessment Anchor</u>	<u>Eligible Content</u>
29. Reflection Relay	<p>S4.A.2.1. Apply skills necessary to conduct an experiment or design a solution to solve a problem</p> <p>S4.C.2.1 Recognize basic energy types and sources, or describe how energy can be changed from one to another</p> <p>S4.C.3.1 Identify and describe different types of force and motion, or the effect of the interaction between force and motion</p>	<p>S4.A.2.1.2 Design and describe an investigation (a fair test) to test one variable.</p> <p>S4.A.2.1.3 Observe natural phenomenon (e.g., weather changes, length of daylight/night, movement of shadows, animal migrations, growth of plants), record observation, and then make a prediction based on those observations</p> <p>S4.C.2.1.1 Identify energy forms and examples (e.g., light, heat, stored, motion, electrical).</p> <p>S4.C.3.1.3 Describe the position of an object by locating it relative to another object or the background (e.g., geographic direction, left, up).</p>
30. Rubber Band Catapult	<p>S4.C.3.1 Identify and describe different types of force and motion, or effect of the interaction between force and motion.</p>	<p>S4.C.3.1.1 Describe changes in motion caused by forces (e.g., magnetic, pushes or pulls, gravity, friction)</p> <p>S4.C.3.1.3 Describe the position of an object by locating it relative to another object or the background (e.g., geographic, direction, left, up).</p>
31. Science Bowl	<p>All questions are based on the curriculum and the standards</p>	

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<u>Activity</u>	<u>Assessment Anchor</u>	<u>Eligible Content</u>
32. Science Crossword	S4.B.2.1 Identify and explain how adaptations help organisms to survive	S4.B.2.1.1 Identify characteristics for plant and animal survival in different environments (e.g., wetland , tundra, desert, prairie, deep ocean, forest).
33. Science Haugman	Words are taken from the Science Curriculum and the Standards	
34. Spell Science	Words are taken from the Science Curriculum and the Standards	
35. Structures	S4.A.3.2 Use models to illustrate simple concepts and compare the models to what it represents	S4.A.3.2.3 Use appropriate, simple modeling tools and techniques to describe or illustrate a system (e.g., two cans and string to model a communications system, terrarium to model an ecosystem, etc.)
36. Treasure Hunt	S4.A.2.2 Identify appropriate instruments for a specific task and describe the information the instrument can provide	S4.A.2.2.1 Identify appropriate tools or instruments for specific tasks and describe the information they can provide (e.g., measuring: length-meter wheel, direction-compass)
37. What's the Matter?	S4.C.1.1 Describe the physical properties of matter	S4.C.1.1.1 Use physical properties (e.g., mass, shape, size, volume, color, texture, magnetic property, state (i.e., solid, liquid, gas), conductivity (i.e., electrical, heat) to describe matter

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<u>Activity</u>	<u>Assessment Anchor</u>	<u>Eligible Content</u>
38. Web of Life	S4.B.1.1 Identify and describe similarities and differences between living things and their life processes	<p>S4.B.1.1.1 Identify life processes of living things</p> <p>S4.B.1.1.2 Compare similar functions of external characteristics of organisms</p> <p>S4.B.1.1.3 Describe basic needs of plants and animals</p> <p>S4b.1.1.4 Describe how different parts of a living thing work together to provide what the organism needs</p> <p>S4.B.1.1.5 Describe the life cycles of different organisms</p>
39. What Went By?	S4.B.2.1 Identify and explain how adaptations help an organism survive	<p>S4B.2.1.1 Identify characteristics for plant and animal survival in different environments</p> <p>S4.B.2.1.2 Explain how specific adaptations can help a living organism survive</p>
40. Write It/Do It	S4.C.1.1 Describe observable physical properties of matter	<p>S4.C.1.1.1 Use physical properties to describe matter</p> <p>S4.C.1.1.2 Categorize/group objects using physical characteristics</p>

Wednesday Morning Events
8:55 - 9:25 / 9:30 - 10:00 / 10:05 - 10:35 / 10:40 - 11:10

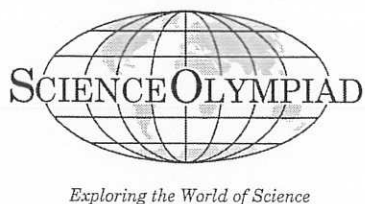
Event	Location	Instructor
Manipulations	Room 21	Mr Friske Ms Maytock Ms Gindlesperger
Map Reading	Room 22	Ms Ritchie Ms Hays Ms Morris
Mystery Powders	Room 23	T Mrs Mytinger (Miss Koble)
Name That Scientist	Room 24	Ms Dougal Ms Cummins Ms Eaton
Structures	Room 25	T Mrs Waite (Mrs Bumblis)
Reflection Relay	Room 26	T Mrs Harris Mrs Dolan
Naked Egg Drop	Loading Dock	T Mrs May (Mrs Herold)
Pentathlon	Gym Back	T Mr Desguin (Miss Jack)

Non Competitive Events

Lab Ratz	Room 13	Shawn Miller
Nutrition Zone	Room 1	PTO
Planetarium	Gym Front	Mr Antczak
Pictures with Light	Strings Room	Mr Nail
Bernoulli's Principle	Room 27	Mrs Petok
Ipad	Library	Mrs McMonigal

Guest Speakers

Ms Bacasa Fitness	Room 28
Dr Ibinson Ultrasound	Room 29
Dr Schelbert Cardiac MRI	Room 10



Wednesday Afternoon Events
 12:35-1:05/1:10-1:40/1:45-2:15

Event	Location	Instructor
Calculator Contest A	Room 21	Ms Kornish Mr Friske
Calculator Contest B	Room 22	Ms Twerdock
Categories A	Room 23	Ms Hughes Ms Dougal
Categories B	Room 24	Ms Henzler
Cerebrum Challenge A	Room 25	Ms Brienza Mrs Ritchie
Cerebrum Challenge B	Room 26	Ms Jenkins
Spell Science A	Cafeteria	Ms Moser Mrs Mytinger
Spell Science B	Cafeteria	Ms Sidhu
Science Crossword	Library	Mrs Waite Mrs May

Non Competitive Events

Lab Ratz	Room 13	Shawn Miller
Nutrition Zone	Room 1	PTO
Planetarium	Gym Front	Mr Antczak
Pictures with Light	Strings Room	Mr Nail
Bernoulli's Principle	Room 27	Mrs Petok
Ipad	Library	Mrs McMonigal

Guest Speakers

Dr Ibinson Ultrasound	Room 28 Room 29
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Exploring the World of Science

Scoring:
Mrs Harris/Mrs Shushnar

Thursday Morning Events
9:25 - 9:55 / 10:00 - 10:30 / 10:35 - 11:05

Event	Location	Instructor
Charts and Graphs	Room 21	Mrs Ritchie Ms Bucci Ms Santorello
Grab - A - Gram	Room 22	Mr Friske Mr Bianco
Science Hangman	Room 23	Ms Dougal Ms Belch Ms Copelin
Cool It!	Cafeteria T	Mrs May Mrs Waite (Mrs Bumblis)
Puffmobiles	Cafeteria Lobby T	Mr Desguin (Miss Jack)
Write It!	Room 30 T	Mrs Fitzpatrick
Science Bowl	Stage T	Mrs Mytinger Mrs Zaccari
Color My World	Art Room T	Ms Basista Ms Howard (Miss Koble)

Non Competitive Events

Lab Ratz	Room 13	Shawn Miller
Nutrition Zone	Room 1	PTO
Planetarium	Gym Front	Mr Antczak
Pictures with Light	Strings Room	Mr Nail
Bernoulli's Principle	Room 27	Mrs Petok
Ipad	Library	Mrs McMonigal

Guest Speakers

Mr Kramer Made of Steel	Room 28
Mr Chmura Food Awareness	Room 29



Exploring the World of Science

Scoring:
Mrs Shushnar/Mrs Zaccari

Thursday Afternoon Events
 12:35-1:05 / 1:10-1:40 / 1:45-2:15

Event	Location	Instructor
Circuit Wizardry	Room 21	T Miss McCarthy Ms Liberto
Estimania	Room 22	Ms Dougal Ms Bierker Ms Boyd
Science Hangman	Room 23	Mr Friske Ms Shook Ms Mikus
Out of this World	Room 24	Mrs Ritchie Ms Gorman Ms Wagner
What's the Matter?	Room 25	Ms Hurst Ms Craig Ms Ramasamy
Mystery Boxes	Room 26	Mrs May Mrs Morgan
Do It!	Room 30	T Mrs Fitzpatrick
Science Bowl	Stage	T Mr Desguin Mrs Zaccari
Predictions	Receiving	T Mrs Mytinger Mrs Waite

Non Competitive Events

Lab Ratz	Room 13	Shawn Miller
Nutrition Zone	Room 1	PTO
Planetarium	Gym Front	Mr Antczak
Pictures with Light	Strings Room	Mr Nail
Bernoulli's Principle	Room 27	Mrs Petok
Ipad	Library	Mrs McMonigal

Guest Speakers

Room 28
 Room 29



Exploring the World of Science

Scoring:
 Mrs Harris

Friday Morning Events
 9:25 - 9:55 / 10:00 - 10:30 / 10:35 - 11:05

Event	Location	Instructor
Blood and Guts	Room 21	Ms Dougal Ms Holmes Ms Fiscus
Bottle Music	Room 22	T Mr Desguin (Mrs Bumblis)
Measurement	Room 23	Mr Friske Mr Oliver Mr Matthews
Web of Life	Room 24	Mrs Ritchie Mrs Cummins Ms Sutterlin
What Went By	Room 25	Mrs Oliveira Mrs Waite
Armor for an Egg	Loading Dock	T Mrs Mytinger (Miss Jack)
Coffee Can Racers	Cafeteria Lobby	T Mrs Petok Mrs McMonigal (Miss Koble)
Jeopardy	Gym Back	T Mrs Morgan Mrs Zaccari

Non Competitive Events

Lab Ratz	Room 13	Shawn Miller
Nutrition Zone	Room 1	PTO
Planetarium	Gym Front	Mr Antczak
Pictures with Light	Strings Room	Mr Nail
Bernoulli's Principle	Room 27	Mrs Evans
Ipad	Library	Mrs May

Guest Speakers

Ms Johnson HF Engineering	Room 28
Dr Bagley Vet Medicine	Room 29



Exploring the World of Science

Scoring:
Mrs Harris

Friday Afternoon Events
12:35-1:05 / 1:10-1:40

Event	Location	Instructor
Barge Building	Room 21	T Miss McCarthy Ms Griffith Ms Rodgers
Bottle Music	Room 22	T Mr Desguin Mrs Petok Mrs McMonigal
Bridge Building	Room 23	Ms Dougal Ms Interthal Ms Michael
Rubber Band catapult	Room 24	T Mrs Waite Mrs Mytinger
Aerodynamics	Cafeteria Lobby	Mr Friske Mr and Mrs Perkins
Paper Rockets	Cafeteria / Stage	Mrs Ritchie Ms Donnelly Ms Leyes
Jeopardy	Gym Back	T Mrs Morgan Mrs Zaccari

Non Competitive Events

Lab Ratz	Room 13	Shawn Miller
Nutrition Zone	Room 1	PTO
Planetarium	Gym Front	Mr Antczak
Pictures with Light	Strings Room	Mr Nail
Bernoulli's Principle	Room 27	Mrs Evans Mrs Fitzpatrick
Ipad	Library	Mrs May

Guest Speakers

Ms Bacasa Fitness	Room 28
Dr Bagley Vet Medicine	Room 29



Exploring the World of Science

Scoring:
Mrs Harris

Lab Ratz Science Inc.



Shawn R. Miller
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Science Olympiad Season

Very soon, Science Olympiad Season will be upon us! This is a great time of year for inquisitive, curious young minds and the Lab Ratz Science Club can make it even *better*. And, for all of the Science Teachers, Parent Volunteers and PTO Leaders that spend countless hours planning and scheduling these events, we can make it *easier*. The Lab Ratz Science Olympiad Experts offer a number of topics for 20 – 60 minute hands-on workshops that will add another level of excitement to your event with unrivaled educational quality. Choose from any of our prepared Olympiad themes or select your own topic and let us design workshops to fit your curriculum. And, best of all, we will handle all of the planning, setup and cleanup with no added stress or anxiety! Our pricing is extremely competitive and, simply stated, nobody else can match the quality – In fun, excitement and genuine educational value – That the Lab Ratz have made standard in all that they offer. Just ask any of the dozens of schools that have already booked their workshops for 2012. But, our schedule is filling up quickly. Call or Email us soon to reserve your dates and make your Science Olympiad this year something your students will remember for the rest of their lives! Visit the “Programs” page.