Florida SCIENCE OLYMPIAD™

Exploring the World of Science

2021

ELEMENTARY SCIENCE OLYMPIAD RULES

SUPPLEMENTAL VERSION FOR SOUTHEASTERN REGIONAL HOSTED VIRTUALLY BY FAU MAY 4, 5, AND 6, 2021

GENERAL INFORMATION

Thank you for registering for a 2020/2021 Elementary Florida Science Olympiad Tournament. Science Olympiad's goal is to provide students with a quality competition that links collaboration, inquiry, content understanding, and assessment. Science Olympiad has been highlighted in the 2007 National Governors Report as a national model to learning science and mathematics. Each year, we ensure that we select events that correlate well with Florida's current State Standards.

In the tradition of sporting events, Science Olympiad awards medals/ribbons to the top performing students in each event and trophies to the top performing teams. Students take pride not only in their performance but also to their contribution to the team's performance. Often, students depart the competition with a strong sense of accomplishment, looking forward to next year, yet their ranking may indicate a quite different response would have been expected! Science Olympiad builds a love of science and learning that goes beyond all other academic programs.

This rich experience provides students with something that no other competition does: It encourages teamwork, problem solving, and critical thinking.

TEAM SPIRIT:

Although some events in the Science Olympiad are based on individual achievement, all events involve teamwork, group planning and cooperation. That is the real essence of the Science Olympiad. Our emphasis is on advanced learning in science through active, hands-on, group participation. Through the Olympiad, students, teachers, coaches, principals, business leaders, and parents are all bonded together as a team working toward a goal.

We would like to provide an alternative to the "isolated scientist" stereotype and remind students that science can be fun, exciting and challenging all at the same time. In college and beyond, students will find that the team spirit and good sportsmanship they develop during Science Olympiad will be deciding factors in their success.

COACH PREPARATION:

The most important thing to remember is that this competition is for the students. It is strongly encouraged that the coach take a facilitation role and accept the fact that s/he cannot know everything about every event- put the onus on the student to do research and critically read the rules. The events change slightly annually so even long-term coaches will be faced with new challenges every year, which keeps the level of competition high. Many events require students to explain their design choices and/or complete lab work on their own. Teams who have a coach who takes a student-focused approach will have a stronger competitive team.

AREA TOURNAMENTS:

Each elementary level team of 15 will prepare throughout the school year to compete in a Science Olympiad tournament. These inter-scholastic competitions consist of a series of approximately 15 team events that encourage learning in biology, earth science, chemistry, physics, problem solving and technology.

Events in the Science Olympiad have been designed to recognize the wide variety of skills that students possess.

While some events require knowledge of scientific facts and concepts, others rely on science processes, skills or applications. This ensures that everyone can participate, including students from technology classes or advanced science classes.

Teams are welcome to compete in as many tournaments across the state as desired. However, the team must register and pay the $165 ($195) fee for each tournament.

Once you have registered your team, communication for that event will come from the tournament director. Information such as team number may vary from tournament to tournament.

Individual tournaments reserve the right to make rules clarifications or to set their schedule as needed. While most tournaments will run all the events listed in the rules manual, please be sure to see your specific tournament's schedule to confirm.

IMPORTANT NOTE for 2021: Tournaments will be virtual this year. The rules have been adapted for this purpose and those adaptations are shown in red throughout the manual. These rules will revert when we go back to face-to-face tournaments.

STATE TOURNAMENT: Due to ongoing precautions related to the COVID-19 pandemic, there will be No State Tournament for Elementary Science Olympiad in 2021. We hope to host a state tournament in 2022, at the conclusion of the 2021-2022 season.

GENERAL EVENT INFORMATION:

The following apply to all events, even if not noted in the specific rules. Please read carefully:

1. Events are designed to allow for a range of results- some teams will find the event very difficult and some might find it easier. Since this is a competition, events are written for a wide range of final scores and to avoid ties in scores.
2. Because this event is virtual, teams must have internet access and computer access.
3. For the non-build events, teams will be required to complete the test on the Scilympiad platform. Teams will not be asked to complete an experiment due to potential limitations on material access.
4. For the build events (Mission Possible, Tennis Ball Catapult, Trajeggtory), teams will be required to record and upload videos of them "using" their device.
5. Also for the build events, teams will be asked to upload scale design plans of their engineering device and a log of trials for testing. These elements will weigh heavier in the total score than the actual device run, due to an inability to control outside variables.

DIFFICULTY OF EVENTS: This is a competition, so expect that there will be questions on tests and tasks on labs that students may be unable to answer- competitors will be ranked and, therefore, we need a wide range of scores. Work with your students to understand that this is not a situation where they will know everything, and they should do their best. Tests/Labs are generally written at a 4th/5th grade level with a few questions below that level and a few questions above that level.

PARENT/CHAPERONE ROLE DURING COMPETITION:

1. Parents and chaperones may feel free to be present, but may not interfere with the activities or give advice to competitors
2. If a judge believes a parent has interfered or helped a student in any way, this will be ground for immediate disqualification of the entire team.

COACH ROLE DURING COMPETITION:

1. In the virtual environment, it is the responsibility of the coach and the parents/chaperones to ensure that there is no adult assistance during the event. Outside assistance will be determined by the event supervisor and will result in disqualification from that event.

CODE OF CONDUCT:

As part of the paperwork that coaches need to bring to competition, there is a Code of Conduct form to complete by students and the coach. Student participants are expected to compete in tournament events with an honest effort to follow the rules and spirit of the competition. The goal of the competition is to give one's best effort while displaying honesty, integrity, and sportsmanship.

Failure to show honesty and/or courtesy by a participant, coach, or guest of the team may result in disqualification of the team from that event and/or from the entire competition.

ARBITRATION/APPEALS:

At times, events might be run in a way that students feel violate the rules. While every effort is made to ensure high correlation with the published rules, there are times when errors by the event supervisor or other issues may arise. In an effort to ensure that all student competitors have an outlet to share their concerns with rules violates, students may complete the arbitration process during the competition. Here are a few notes:

- Appeals will be done VIRTUALLY on Scilympiad- they can be found in the Head Coach Dashboard
- Appeals MUST be completed within ONE HOUR of the end of the event block time where the issue occurred. If necessary, another team member may complete the arbitration process for their team mate if their schedule prohibits this.
- Students may not arbitrate against another team- ex. “The other team did not do ….”. Arbitrations are related to the event’s alignment with the rules.
- There will be times when the tournament logistics or limitations of a supervisor will make the event unable to be run in alignment with the rules- we attempt to run all the events even if there may need to be adaptations. In this case, every team will be subject to the same parameters of the event to ensure consistency. Part of Science Olympiad is problem solving and adapting to situations. In these cases, arbitrations will likely end in no change to the procedure.

A MATTER OF MATTER

DESCRIPTION: Teams will be asked questions as they relate to the properties of matter. Safety googles are required.

COMPETITORS BRING/NEED:

- 3-ring binder of any size with any research/reference material. The binder may contain any item, such as a book, computer generated printout, or student created paperwork. No electronic materials are allowed, such as a computer, calculator or smartphone. All materials must be securely bound inside the binder, so that when it is opened vertically (upside down) and given a light shake test no materials will fall out.
- For virtual tournaments, students will need computer and internet access.

NUMBER OF PARTICIPANTS: 2

THE COMPETITION:

1. The topics that may be tested include:
    a. Compare and contrast the physical properties of matter (solids, liquids, and gases) such as mass, shape, volume, color, texture, density, and temperature
    b. Complete activities/experiments to collect data on physical properties of matter.
    c. Describe the changes water undergoes when it changes state through heating and cooling (such as melting, freezing, boiling, evaporation, and condensation).
    d. Describe the difference between mixtures, solutions, elements, and compounds
    e. Identify solutes, solvents, and solutions from given examples.
    f. Describe or be asked to separate a given set of mixtures, or solutions using materials provided by the supervisor.
    g. Determine what will affect the rate of a solid dissolving in a liquid, including temperature, concentration, agitation rate, particle size, that can be tested in the lab. Pressure will not be tested.
    h. Identify physical versus chemical changes or conduct an experiment to identify and measures these changes.

SCORING:

1. High score wins.
2. Each question will be assigned a predetermined set of points, assigned by the event supervisor and communicated to the teams (preferably- points are identified on the test/station paperwork).
3. Ties will be broken with pre-determined tie-breaker questions which are communicated to teams.

BACKYARD BIOLOGIST

DESCRIPTION: Teams will be assessed on their knowledge of living organisms that they may encounter in their own backyard. The focus for 2021 will be trees, plants, and birds.

COMPETITORS BRING/NEED:

- 3-ring binder of any size with any research/reference material. The binder may contain any item, such as a book, computer generated printout, or student created paperwork. No electronic materials are allowed, such as a computer, calculator or smartphone. All materials must be securely bound inside the binder, so that when it is opened vertically (upside down) and given a light shake test no materials will fall out.
- NOTE: For virtual tournaments, students will need computer and internet access.

NUMBER OF PARTICIPANTS: 2

THE COMPETITION:

1. Teams will be asked to identify organisms from the list based on images and/or descriptions. No more than 50% of the test will be identification.
2. In addition to identification questions, teams may be asked questions related to the following:
    a. Plants and trees, including:
        i The structure and function of roots, stems, leaves, seeds, and flower parts
        ii The distinct stages of the life cycle of seed plants
        iii Needs of plants, including nutrients received from the soil and air
        iv Classify flowering and nonflowering plants into major groups such as those that produce seeds or those like ferns and mosses that produce spores, according to their physical characteristics.
        v Compare and/or contrast the function of organs and/or other physical structures of plants and/or animals.
    b. The habitats, eating habits and life cycles of birds.
    c. Environmental status and conservation efforts related to the organisms on the list.

SCORING:

1. High score wins.
2. Each question or station will be assigned a predetermined set of points, assigned by the event supervisor and communicated to the teams.
3. Ties will be broken with pre-determined tie-breaker questions which are communicated to teams

2021 Backyard Biologist Organism List- Florida

Plants/Trees

The list of possible plants that may be asked in the competition is available at: http://floridayards.org/fyplants/index.php?error=1&region=C&category and only the plants with the following characteristics will be used: Native Plants, Any Light Range, Soil Moisture, Soil Texture and Salt Tolerance (see chart below.) There are approximately 190 plants on the list with those characteristics.

Birds

Anhinga	Black-bellied whistling duck	Black-crowned Night Heron
Brown pelican	Caracara	Cattle egret
Coot	Cormorant	Great Blue Heron
Great Egret	Green Heron	Limpkin
Little Blue Heron	Moorhen	Mottled duck
Osprey	Purple gallinule	Red-winged blackbird
Roseate spoonbill	Sandhill crane	Snowy egret
White Ibis	Wood Stork	

Resource: https://floridahikes.com/identifying-florida-species

CHEW THE FAT

DESCRIPTION: Teams will demonstrate knowledge of the human digestive system and proper nutrition.

COMPETITORS BRING:

- Pencil/writing utensil;
- Calculator;
- Food/Nutrition Log;
- 3-ring binder of any size with any research/reference material. The binder may contain any item, such as a book, computer generated printout, or student created paperwork. No electronic materials are allowed, such as a computer, calculator or smartphone. All materials must be securely bound inside the binder, so that when it is opened vertically (upside down) and given a light shake test no materials will fall out.
- NOTE: For virtual tournaments, students will need computer and internet access.

NUMBER OF PARTICIPANTS: 2

PRIOR TO THE COMPETITION: Competitors will prepare a log noting their food intake, calories consumed, and energy expended through physical activity for at least one-week.

THE COMPETITION:

1. The topics that may be tested include:
    a. Identification of the major organs and body parts involved in the digestive process and understand the important job each body part has. Parts are limited to the salivary glands, taste buds, esophagus, stomach, liver, small intestine, and the large intestine.
    b. Testing for the presence of fats and oils using the paper bag test and knowing which foods tend to contain high amounts of fats and oils.
    c. Knowing what foods are considered starches and the result of an iodine test on starch and non-starch foods. Students will not be required to perform this test but may be shown pictures of the results of this test and asked to draw conclusions about the results.
    d. Knowing how to use food labels to make better food choices, specifically identifying serving size, vitamin and mineral content, overall caloric content plus identifying where the calories are coming from (fat, protein, carbohydrate).
    e. Knowing common foods in the major food groups: fruits, vegetables, grains, protein, dairy and where they fit in the food pyramid and in the USDA My Food Plate.
    f. Understanding the relationship among the amount of food energy (calories) consumed, weight, and metabolism.

SCORING:

1. High score wins.
2. Each question will be assigned a predetermined set of points, assigned by the event supervisor and communicated to the teams (preferably- points are identified on the test/station paperwork).
3. Test will add up to at least 80 points.
4. The food/nutrition log will be assigned 20-points based on the following:
    a. Was a log provided to the supervisor at the beginning of the event? (5 points)
    b. Did the log have 5 days of food intake listed? (5 points)
    c. Did the log have calories consumed for 5 days? (5 points)
    d. Did the log have a list of physical activities that expended energy? (5 points)
5. Ties will be broken with the quality of the food/nutrition log.

CRIME BUSTERS

DESCRIPTION: A team of two contestants will be asked to solve a "crime" by identifying common white household powders, evaluating fingerprints, etc.

COMPETITORS BRING:

- Pencils/Pens,
- "Powder Properties Chart" (will be turned in to the supervisor),
- One 8.5 x 11" two-sided page of notes, in any form, from any source (will be turned in to supervisor)
- NOTE: For virtual tournaments, students will need computer and internet access

NUMBER OF PARTICIPANTS: 2 - 3

THE COMPETITION:

1. Students will be given a scenario and clues to solve a "crime."
2. There will be 4 - 5 suspects with associated evidence to analyze.
3. Virtual tournaments will involve data being provided to students for analysis

    a. Powder Identification: Teams may be asked to identify the following powders, based on a description of their properties, in order to solve a simulated crime. Powders will be limited to granulated sugar, flour, cornstarch, baking soda, calcium carbonate (chalk), powdered Alka-Seltzer ©, plaster of Paris, and sand.
    b. Fingerprint Identification – Students may be given a set of fingerprints from several suspects and from the crime scene. They will be asked to match the fingerprints found at the scene and identify types of fingerprint patterns such as loops, arches, and whorls.
    c. Case Report: Students will need to analyze data collected from the evidence and make a conclusion as to who committed the crime and the evidence that supports their conclusion.

SCORING:

1. High score wins.

DATA CRUNCHERS

DESCRIPTION: Teams should be able to create and interpret data tables, bar graphs, line graphs, pie charts, and pictographs and perform simple experiments to collect data, graph their results and make predictions.

COMPETITORS BRING:

- Pencil/writing utensil;
- Non-programmable calculators;
- NOTE: For virtual tournaments, students will need computer and internet access

NUMBER OF PARTICIPANTS: 2

THE COMPETITION: *Virtual tournaments may have a slightly different format with the same content

1. Students will need to answer questions related to data. Tasks may relate to the following content:
    a. Analyze data from data tables, bar graphs, pie charts, and pictographs
    b. Collect data from simple experiments and graph results
    c. Understand relative scale of metric units and which is appropriate for measurement in different scenarios.
    d. units may include mg, g, kg, mm, cm, m, km, mL, L, kL, ^{o}C, ^{o}K, cm^2, cm^3
    e. Make estimates of data between or beyond the data points given.

SCORING:

1. High score wins.
2. Tiebreakers will be a predetermined and announced set of questions as defined by the event supervisor.

DEEP BLUE SEA

DESCRIPTION: This event will test students' knowledge about oceanography and aquatic animal life cycles.

COMPETITORS BRING:

- 3-ring binder of any size with any research/reference material. The binder may contain any item, such as a book, computer generated printout, or student created paperwork. No electronic materials are allowed, such as a computer, calculator or smartphone. All materials must be securely bound inside the binder, so that when it is opened vertically (upside down) and given a light shake test no materials will fall out.
- NOTE: For virtual tournaments, students will need computer and internet access

NUMBER OF PARTICIPANTS: 2

THE COMPETITION:

1. Contestants will identify Atlantic flora and fauna from pictures and answer questions relating to the organisms.
2. Questions may relate to any of the following topics, to include the organism's….
   a. physical/behavioral adaptations
   b. habitat;
   c. reproduction strategies;
   d. role in the food web and food chain of their habitat;
   e. life cycle

   Questions may ask for students to compare/contrast different organism's characteristics.
3. Contestants may also be asked questions about conservation efforts related to the organism.
4. The list of flora and fauna will come from the following list:

FLORA:	Algae	turtle-grass	
	Kelp	sea oats	
	Johnson's seagrass	pennyworts	
FAUNA:	Bottlenose Dolphin	Green Sea Turtle	Atlantic Sturgeon
	Blue Mussel	Leatherback Sea Turtle	Acadian Red Fish
	Longfin Squid	Hawksbill Sea Turtle	Atlantic Cod
	Atlantic surf clam	Loggerhead Sea Turtle	Red Hake
	Grooved carpet shell clam	Atlantic Spiny Dogfish	North Atlantic Swordfish
	Black Sea Bass	Atlantic Shortfin Mako Shark	Atlantic Blue Fin Tuna
	Starfish	Right Whales	Atlantic Hairy Triton
	Sand Dollars	Beluga Whale	Atlantic Triton's Trumpet
	Blue Sea Slug	Blue Whale	Summer Flounder
	Commerson's dolphin	Bowhead Whale	Winter Skate
	Manatee	Humpback Whale	Atlantic Salmon

SCORING:

1. High score wins.
2. Each question or station will be assigned a predetermined set of points, assigned by the event supervisor and communicated to the teams (preferably- points are identified on the test/station paperwork).
3. Ties will be broken with pre-determined tie-breaker questions which are communicated to teams.

ENERGY MATTERS

DESCRIPTION: Teams will be asked questions as they relate to the properties of energy.

COMPETITORS BRING/NEED:

- 3-ring binder of any size with any research/reference material. The binder may contain any item, such as a book, computer generated printout, or student created paperwork. No electronic materials are allowed, such as a computer, calculator or smartphone. All materials must be securely bound inside the binder, so that when it is opened vertically (upside down) and given a light shake test no materials will fall out.
- NOTE: For virtual tournaments, students will need computer and internet access.

NUMBER OF PARTICIPANTS: 2

THE COMPETITION:

1. Teams will be asked questions as they relate to forms of energy such as light, heat, sound, electrical, and mechanical.

SCORING:

1. High score wins.
2. Each question or station will be assigned a predetermined set of points, assigned by the event supervisor and communicated to the teams (preferably- points are identified on the test/station paperwork).
3. Ties will be broken with pre-determined tie-breaker questions which are communicated to teams.

ESTIMANIA

DESCRIPTION: Students will be asked to estimate answers to questions or complete task related to estimation.

COMPETITORS BRING:

- Pencil/writing utensil;
- Non-programmable calculators;
- Various types of unlabeled equipment that will help them with estimations such as rulers, cups of various sizes, spoons, etc. Each piece of equipment must not contain written numbers or words indicating sizes or dimensions.)
- NOTE: For virtual tournaments, students will need computer and internet access

NUMBER OF PARTICIPANTS: 2

THE COMPETITION:

1. Students will be asked to answer questions requiring an estimation between 10 and one million. Some examples of questions include, but are not limited to the following:
    a. How many pennies are in the jar?
    b. How many two-centimeter paper clips could be laid end to end across a standard football playing field?

2. Concepts tested may include any of the following:
    a. Estimate numbers of items in a group
    b. Estimate angle degree, mass, volume, length, area, density, or temperature of various objects or situations in metric units to the precision requested.
    c. Predict whether an object will sink or float based on its density.
    d. Understand relative scale of metric units and which is appropriate for measurement (mg, g, kg, mm, cm, m, km, mL, L, kL, ^{o}C, ^{o}K, cm^2, cm^3) in different scenarios.
    e. Make estimates of data between or beyond the data points given.

SCORING:

1. High score wins.
2. Questions will be given preassigned value amounts by the event supervisor and teams will be given on the handouts the point value assigned to each question or activity.
    a. Partial points may be assigned based on how close the estimation is to the actual
    b. The partial point breakdown may not be provided to competitors, only the overall points per question
    c. See scoring example below. This is just an example and does not represent any actual scoring on upcoming events.
3. Activities will total at least 100 possible points.
4. Tiebreakers will be a predetermined and announced set of questions as defined by the event supervisor.

SCORING EXAMPLE

Station 1	ANS: 753 beads 5 pts: Answers within 20 beads from actual with the unit of “beads” 4 pts: Answers within 20 beads from actual without the unit 3 pts: Answers 21 – 40 beads from actual with the unit listed 2 pts: Answers 21 – 40 beads from actual without the unit listed 1 pt: Answers 41 – 60 beads from actual with the unit of “beads”
	ANS: 50% 5 pts: Exact answer with the unit of % 4 pts: Exact answer without the unit of % 3 pts: Answers within 5% from actual with the unit of % 2 pts: Answers within 5% from actual without the unit 1 pt: Answers within 10% from actual with the unit of %
	ANS: 91 mm 5 pts: Answers within 6 mm from actual with units 4 pts: Answers within 6 mm from actual without units listed 3 pts: Answers 7 - 15 mm from actual with units 2 pts: Answers 7 - 15 mm from actual without units listed 1 pt: Answer within 15 - 30 mm with units listed
	ANS: 3 grams 2 pts: Answer is correct and includes units 1 pts: Answer is correct and but has no units

EXPERIMENTAL DESIGN

DESCRIPTION: Teams will be asked to design, complete, and write up an experiment.

COMPETITORS BRING:

- Pencil/writing utensil;
- 3-ring binder of any size with any research/reference material. The binder may contain any item, such as a book, computer generated printout, or student created paperwork. No electronic materials are allowed, such as a computer, calculator or smartphone. All materials must be securely bound inside the binder, so that when it is opened vertically (upside down) and given a light shake test no materials will fall out.
- NOTE: For virtual tournaments, students will need computer and internet access

NUMBER OF PARTICIPANTS: 2

THE COMPETITION:

1. The event will be run as a test and is divided into two parts.

2. In PART I, students will be provided information (list of materials, etc.) and they design the experiment and will be provided with data to analyze. No actual experimentation will be required.
   The lab write up should include the following:
   a. Statement of problem
   b. Hypothesis
   c. Variables including the independent variable, dependent variable, controlled variables
   d. Experimental control (when appropriate)
   e. Materials
   f. Procedure and set up diagrams
   g. Qualitative observations
   h. Quantitative data (data table)
   i. Analysis of data
   j. Possible experimental errors
   k. Conclusion

3. In PART II, teams will be asked questions to scientific processes. Questions may relate to any of the following topics. Part II will count as no more than 25% of the total points
   a. Definition and difference between scientific laws and scientific theories
   b. Processes scientists use to answer questions including observation, experimentation, and investigation
   c. The importance of peer review and communication in science
   d. Controls needed for experimentation

SCORING:

1. High score wins.
2. Teams will be awarded points for correct answers based on a predetermined scoring method which is outlined on the answer sheet. Activities will total at least 100 possible points.
3. Part II will count as no more than 25% of the total points
4. Ties will be broken with predetermined tie-breaker questions.

MISSION POSSIBLE

DESCRIPTION: Participants will design, build, and test a Rube Goldberg-like device which incorporates up to 20 unique Action Transfers and uses up to five forms of energy in accomplishing a given task in one (1) minute. Devices will be constructed prior to the competition. This is a PRE-BUILT EVENT.

NUMBER OF PARTICIPANTS: 2 - 3

CONSTRUCTION:

1. GENERAL REQUIREMENTS:
    a. The device must fit inside an imaginary box 1 meter long, 1 meter wide, x 1.5 meters high and MUST fit through a single door opening.
    b. The device may use ambient room light but must not depend on direct sunlight to operate. All other sources of energy and actions must take place within the imaginary box before, during and after the device's operation.

2. SCORABLE ACTIONS:
    a. Start action: (20 points) - The device will be started by some action of the team such as switching a switch, pushing a button, dropping an object, etc. This should be identified on the ASL for points.
    b. Score-able actions: (10 points each)
        i. Score-able actions include:
            1. Use a 3:1 gear system to initiate an action
            2. Use a wheel and axle to raise an object at least 10 cm vertically, that object should then initiate the next action
            3. Transfer gravitational potential energy to kinetic energy to initiate an action
            4. Use chemical energy to initiate an action
            5. Knock over a series of at least 5 free-standing, commercial dominoes, the last of which initiates the next action
            6. Use a pulley system to raise an object at least 10 cm vertically, that object should then initiate the next action
            7. Push or pull an object up an inclined plane
            8. Use wind energy to initiate an action
            9. Use electrical energy to initiate an action
            10. Pull a wedge from underneath an object to initiate an action
            11. Blow up a balloon and use that to initiate an action
            12. Use a wheel and axle to move an object at least 10 cm horizontally, that object should then initiate the next action
        ii. Actions must be designed to contribute to the final action and should be consecutive. Actions that are parallel or that are dead-end actions will not count for points.

iii. Score-able actions cannot be combined and should be identified on the ASL. For example, if you use a funnel to transfer gravitational potential energy to kinetic energy, the team must identify which of those will be score-able. You may then use the other in another place for those points.
iv. Energy devices (i.e. springs, mousetraps) must be set prior to starting the device in the 5-minute maximum set up time.
v. Heat energy may be used but must not have a flame.
vi. No electric device may have or use an electric potential difference of more than 9 volts.
vii. If electric devices used for heat are re-chargeable, documentation must be submitted to confirm output is no more than 9 volts.

c. Final action: (50 points) Teams will design the device to complete a final task of raising a flag, at least 2 cm, at the end of 1 minute. There are no specific requirements on the flag but it needs to look like a flag.

3. ACTION SEQUENCE LIST (ASL):
   a. Teams must submit TWO Action Sequence Lists (ASL) to the Event Supervisor before the device is set up which:
      i. Describes the sequence in which the ACTION TRANSFERS will occur (this must include a brief description and not just a list),
      ii. Identification of the FORMS OF ENERGY used in each action,
      iii. Is no more than one page single-sided
      iv. Is easy to follow (well-organized, neatly done, contains diagrams and brief text)
   b. The ASL may be kept by the supervisor for use in scoring and/or score counseling.

THE COMPETITION:

1. COMPETITION:
   a. Students must have their goggles on to begin the run.
      i. Teams should not touch their device unless the device stops, jams, or fails. In that case, the participants are allowed to "touch/adjust" it to continue operation. Participants do not need to wait for event supervisor permission but they should notify the supervisor of the restart.
      ii. Teams will lose 10 points for each restart needed during the run with a maximum of 5 restarts allowed before time is called on the run.
      iii. Obvious stalling or adjusting only to impact run time will result in disqualification.
   b. Run time ends when:
      i. The final task is complete
      ii. The device has been restarted 5 times and stops.
      iii. Two minutes have passed.

VIRTUAL ADAPTATIONS FOR MISSION POSSIBLE:

All design parameters stay the same.

Teams will turn in the following by 4:00 pm on Tuesday, May 4:

1. Action Sequence List
2. Practice log showing testing. This log should include:
    * Data table
    * Photos and notes on the design process
    * Any notes on how you used to data to complete your final trial
3. Unedited video evidence of your BEST test. The video should include:
    * Students showing the measurements of the device to meet the requirements in the scoring rubric
    * Students wearing goggles
    * Students starting the device, stepping back, and stepping up to restart as needed
    * Once the device starts, the video should not be edited. The supervisor should be able to see every action happening and the time for the video should match the time for the run on the scoring rubric (see below)
4. Completed "Mission Possible Scoring Rubric" that matches the test from the video.

COACHES AND STUDENT PARTICIPANTS WILL HAVE TO SIGN A FORM CONFIRMING THAT THE INFORMATION PROVIDED IS ACCURATE AND VALID.

Scoring:

High Score Wins

1. Device testing score is calculated the same as in face-to-face tournaments, but the score will be based on the ranking of each drop compared to all the scores for that tournament with 50 being the highest.
2. Practice log scored out of 100.

MISSION POSSIBLE

Rank: _____

Final Score: _____

Team Number: A___ Team Name: _____ Student Names: _____

Tier: _____

TIER- DID STUDENTS FOLLOW ALL DIRECTIONS AND SAFETY REQUIREMENTS?

Was the device impounded before the deadline?	N= Tier 3	Y	N
3.a. Were two copies of the ASL t provided to the Event Supervisor at impound?	N= Tier 3	Y	N
3.e. Was the flow chart "complete" as described in the rules?	N= Tier 2	Y	N
Dimensions of the device are no larger than 1 meter X 1 meter X 1.5 meters	N=Tier 3	Y	N
Device was inspected and determined to be safe	N= CANNOT RUN (Tier 3 and earn participation points only)	Y	N
Once students completed the start action; did they stand back as directed by the event supervisor? N= Potential end of run and either disqualification or participation points (and Tier 3) only awarded		Y	N

SCORING

ACTION SCORE		POINTS EARNED
2.a. Was the START ACTION successful?	Y= 20 pts; N= 0 points	
2.b. How many SCORABLE ACTIONS were there? (Check each action completed) _____Use a 3:1 gear system to initiate an action _____Use a wheel and axle to raise an object at least 10 cm vertically _____Transfer gravitational potential energy to kinetic energy to initiate an action _____Use chemical energy to initiate an action _____Knock over a series of at least 5 free-standing, commercial dominoes _____Use a pulley system to raise an object at least 10 cm vertically _____Push or pull an object up an inclined plane _____Use wind energy to initiate an action _____Use electrical energy to initiate an action _____Pull a wedge from underneath an object to initiate an action _____Blow up a balloon and use that to initiate an action _____Use a wheel and axle to move an object at least 10 cm horizontally	_____X 10 =	
2.c. Was the FINAL ACTION completed?	Y= 20 pts; N= 0 points	

TIME SCORE		POINTS
3.a. What was the run time? AVG TIME: _____ + 1 point for each second up to 60 seconds; -1 point for each second longer than 60 seconds and up to 2 min. TIMER 1:_____TIMER 2:_____ TIMER 3: _____		
3.c. Number of times device stops and had to be restarted	(MAX penalty of -50 points) _____X -10 =	_____
3.d. BONUS- Teams began run within 3 minutes of the set up time	Y= 20 pts; N= 0 points	

FINAL SCORE= ACTON SCORE (_____) + TIME SCORE (_____) = _____

PLEASE NOTE THAT THIS RUBRIC IS A SAMPLE AND GUIDE- IN CASES OF CONFLICT WITH THE RULES, THE RULES TAKE PRECIDENT.

NAME THE SCIENTIST

DESCRIPTION: Teams will identify prominent scientists, inventors, and/or mathematicians and their contributions to their fields as well as display an understanding of scientific processes.

COMPETITORS BRING:

- 3-ring binder of any size with any research/reference material. The binder may contain any item, such as a book, computer generated printout, or student created paperwork. No electronic materials are allowed, such as a computer, calculator or smartphone. All materials must be securely bound inside the binder, so that when it is opened vertically (upside down) and given a light shake test no materials will fall out.
- NOTE: For virtual tournaments, students will need computer and internet access

NUMBER OF PARTICIPANTS: 2

THE COMPETITION:

1. The event will be run as a test and is divided into two parts.
2. In PART I, teams will be asked to identify scientists, inventors, or mathematicians from images and answer questions related to those scientists on the following topics:
    a. Their contribution to science,
    b. Location of major discoveries/contributions,
    c. Scientific laws and theories they contributed to,
    d. Struggles and conflicts they overcame,
    e. Interesting facts about their life

    Questions will focus on the following people:

Ada Lovelace	Carl Sagan	Bill Gates	Richard Feynman
Paul Winchell	Edwin Hubble	Stephen Wozniac	Albert Einstein
Nikola Tesla	Clyde Tombaugh	Katie Bouman	Alan Turing
Charles Babbage	Neil DeGrass Tyson	Diane Fossey	Robert Oppenhiemer
Marconi	Marie Tharp	Dr. Jane Goodall	Sally Ride
Philo T. Farnsworth	Isaac Newton	Charles Darwin	Yuri Gagarin
Galileo Galilei	Buzz Aldren	Gregor Mendel	Neil Armstrong
Ben Franklin		Edward Osborne Wilson	Michael Collins

3. In PART II, teams will be asked questions to scientific processes. Questions may relate to any of the following topics.
    a. Definition and difference between scientific laws and scientific theories
    b. Processes scientists use to answer questions including observation, experimentation, and investigation
    c. The importance of peer review and communication in science
    d. Controls needed for experimentation
4. At the supervisor's discretion, students may be asked to explain or perform a scientific investigation for PART II.

SCORING:

1. High score wins.
2. Teams will be awarded points for correct answers based on a predetermined scoring method which is outlined on the answer sheet. Activities will total at least 100 possible points.
3. Both Part I and Part II will count for approximately the same amount toward the total score.
4. Ties will be broken with predetermined tie-breaker questions.

FUN ADDENDUM

HERE ARE SOME THINGS YOU MIGHT WANT TO RESEARCH ABOUT THE "SCIENTISTS":

Ada Lovelace – Invented blue tooth and was "the most beautiful actress in the world" during the 40's.

Paul Winchell – Was the original voice of Tigger and Gargamel, and the inventor of the first artificial heart and clicky-pen.

Nikola Tesla – Invented the death laser and earthquake machine (along with lots of other things). Was he really a robot?

Marconi - Made the radio worth using

Ben Franklin – Did a lot of things and made sure everyone knew how awesome he was!

Clyde Tombaugh and Neil DeGrass Tyson – Was there some conflict here?

Katie Bouman - Created the algorithm that allowed us to see the first ever picture of a black hole. Also completely adorable, I mean have you SEEN that picture!?

Albert Einstein - Theory of relativity, recently proven totally right, blah

Isaac Newton - Figured out how to break light AND hearts when he invented the prism and then never married. Also, the apple story is actually mostly true! How about that!?

Charles Darwin – Supposedly ate every animal he ever found and he found a LOT of animals.

Edward Osborne Wilson - the world's leading expert on ants, and if you don't think that's an important field of study then I implore you to look up 'ant super colonies' and get proper terrified.

Buzz Aldren - Watched Neil Armstrong litter on the moon once.

ROCK HOUND

DESCRIPTION: Teams will demonstrate knowledge of types and properties of rocks and minerals as well as natural resources.

COMPETITORS BRING:

- 3-ring binder of any size with any research/reference material. The binder may contain any item, such as a book, computer generated printout, or student created paperwork. No electronic materials are allowed, such as a computer, calculator or smartphone. All materials must be securely bound inside the binder, so that when it is opened vertically (upside down) and given a light shake test no materials will fall out.
- NOTE: For virtual tournaments, students will need computer and internet access

NUMBER OF PARTICIPANTS: 2

THE COMPETITION:

1. The event will be run as a test.
2. Teams will identify as many rocks and minerals as possible from a selected group (may be from images or samples). The list of rocks and minerals will come from the following list:

ROCKS:	basalt	bituminous coal	conglomerate	gneiss
	granite	limestone (fossil)	marble	obsidian
	pumice	quartzite	sandstone	schist (garnet)
	scoria	shale	slate	limestone (chemical)
MINERALS:	calcite	feldspar (pink)	fluorite	graphite
	gypsum-satin-spar		halite	hematite
	mica-biotite	pyrite	quartz(chert)	quartz (crystal) talc

3. No more than half of the questions on the exam will be identification questions.
4. Additional questions may be from any of the following topics:
    a Categories of rocks (igneous, metamorphic, sedimentary)
    b The rock cycle
    c Weathering and erosion
    d Characteristics of minerals (hardness, luster, color, cleavage, streak)
    e Natural resources (renewable vs. nonrenewable, conservation of resources, Florida resources such as phosphate and limestone)

SCORING:

1. High score wins.
2. Each question or station will be assigned a predetermined set of points, assigned by the event supervisor and communicated to the teams (preferably- points are identified on the test/station paperwork).
3. Ties will be broken with pre-determined tie-breaker questions which are communicated to teams.

TENNIS BALL CATAPULT

DESCRIPTION: Students will build and calibrate their own free-standing (not hand held) trajectory device that must be capable of "lobbing" a tennis ball at a target placed between 2 and 5 meters. Students MUST wear impact-resistant safety goggles. This is a PRE-BUILT EVENT.

NUMBER OF PARTICIPANTS: 2 - 3

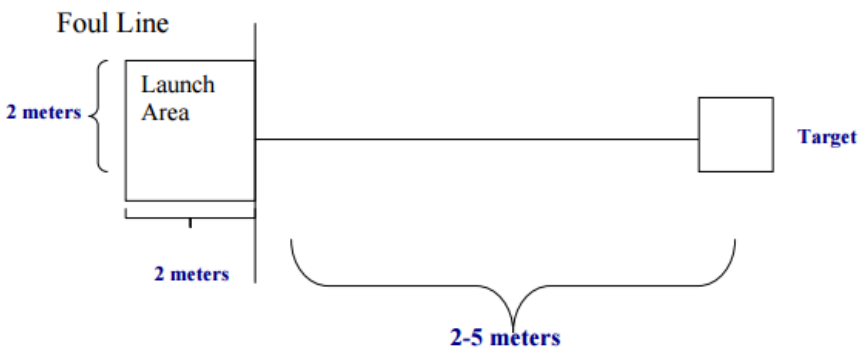
THE COMPETITION:

CONSTRUCTION/IMPOUND:

1. Prior to the competition, teams should prepare a graph or data chart, labeled x- and y- axes and graduated using appropriate units for usage of their device. This chart/graph should show the launching characteristics of the catapult using various settings.
2. Each team will build their own homemade catapult or trebuchet and use their own standard unaltered regulation tennis balls.
3. Launch force must be provided by gravity or elastic solids (such as springs, rubber bands, etc.). The last point on the device touched by the tennis ball may not be more than 50 cm above the ground before, during or after starting. Total weight of device must be under 50 pounds.
4. Each device should be designed and built by the students (adult construction assistance is OK). Each device should be designed to operate safely at all times. No points will be awarded for design.
5. The device will sit on a level area of ground and fire at the target area that will also be at ground level. The target area will be a freshly raked sand pile of at least 1 meter in diameter. The center of the sand pile will be identified in some manner by the supervisor and will be the target.

TESTING:

1. Impact-resistant safety goggles (or glasses) are required during launch time. If team members do not wear safety goggles while they are setting up and running their device, they will be given an initial warning and a penalty of +3 points. If a second warning is given, the team will not be allowed to compete and will receive participation points only.
2. The distance from the "foul line" to the center of the target will be 2.5 meters for virtual tournaments in 2021. Students may place their catapult at any point behind the foul line up to 2 meters. See image below.



3. Each team may take one practice shot after which they will shoot at the target two times. The two shots will count toward the score but the practice shot will not. It is critical in the virtual environment that students, coaches and parents exercise integrity on taking just one practice shot during the actual video shoot used for submission.

4. Only successful launches will be measured. Launches are successful when a Tennis Ball first bounce goes beyond the foul line. Only 2 shots fired are allowed, beyond the practice shot, regardless if they are successful or not.

5. The device may be moved by the participants within the 2-meter square launch area after each attempted launch. Teams may make adjustments to their device, between shots, but they may not change the device in any way that would change the design specifications.

6. The average distance of the two shots will be the base score prior to penalties. The practice shot will not count toward scoring.

7.

VIRTUAL ADAPTATIONS FOR TENNIS BALL CATAPULT:

All design parameters stay the same.

Teams will turn in the following by 4:00 pm on Tuesday, May 4:

1. Practice log showing testing. This log should include:
    * At least THREE data table with dates, independent variable, repeated tests, etc.
    * At least THREE graphs of the testing data
    * Photos of tests (at least THREE- one for each data table)
    * Any notes on how you used to data to complete your final trial

2. Unedited video evidence of your BEST test (you only need one) to include:
    * Students showing the measurements of the device to meet the requirements in the scoring rubric
    * Students measuring the competition area to show the target distance as 2.5 meters.
    * Students wearing goggles
    * Students safely launching the device
    * Once the launch starts, the video should not be edited. The supervisor should be able to see every action happening and the time for the video should match the time for the run on the scoring rubric (see below)
    * Once the launch is over, we should see students measure the distance (point to point in a straight line) from launch to landing- this should match the rubric mentioned below
    * Average of two shots will be the base score

3. Completed "Tennis Ball Catapult Scoring Rubric" from your best test (the one shown in the video). The distance for the test will be provided prior to the tournament.

COACHES AND STUDENT PARTICIPANTS WILL HAVE TO SIGN A FORM CONFIRMING THAT THE INFORMATION PROVIDED IS ACCURATE AND VALID.

Scoring:

High Score Wins

1. Device testing score is calculated the same as in face-to-face tournaments, but the score will be based on the ranking of each drop compared to all the scores for that tournament with 50 being the highest.
2. Practice log scored out of 100.

Tennis Ball Catapult Scoring Rubric

School_____Team Number _____

Rank: _____

Final Score:_____

Tier: _____

Tie? _____

Scoring:

1. Low score wins.
2. Score is the average of the distance from the target in meters, measured to a single centimeter precision for the first two trials. 1 meter is 1 point (i.e. 1.23 m) ***TARGET DISTANCE 2.5 meters for 2021 tournaments
3. Penalties may be assessed as listed in the rules.
4. Ties will be broken by quality of data chart

IMPOUND:		Does the Catapult meet the requirements? (Y/N)
5. Tennis Ball Catapult at any point does not exceed 50 cm?	N= Tier 2	
5. Weight does not exceed 50 lbs.?	N= Tier 2	
5. Launch force provided by gravity or elastic solids only?	N= Tier 2	
2. Data chart presented?	N= Tier 2	
Catapult determined to be safe?	N = CANNOT COMPETE; EARN PARTICIPATION POINTS ONLY	

***NOTE: Unless there is a safety issue, students should be allowed to launch but will be tiered below all legal catapults.

TEST:		Y/N?	Penalty Assessed
3. Team number on device?	N = + 3 point penalty		
2. Goggles warning given?	Y = + 3 point penalty		
3. Outside assistance penalty?	Y = + 3 point penalty for each violation		
6. Launch warning penalty?	Y = + 3 point penalty		
2. No goggles event after warning?	Y = CANNOT COMPETE; EARN PARTICIPATION POINTS ONLY		
	TOTAL PENALTY POINTS		

Shot 1 Distance (cm)	+	Shot 2 Distance (cm)	÷	2	=	Average Distance	FINAL SCORE AVERAGE DISTANCE + PENALTY POINTS=
	+		÷	2	=		

PLEASE NOTE THAT THIS RUBRIC IS A SAMPLE AND GUIDE-
IN CASES OF CONFLICT WITH THE RULES, THE RULES TAKE PRECIDENT OVER THE RUBRIC.

TRAJEGGTORY

DESCRIPTION: Teams will build a package designed to protect a raw egg from breaking when tossed horizontally over a bar or barrier and allowed to fall to the floor or pavement. The goal is to keep the egg from cracking or breaking during its impact with the floor or pavement and to hit a pre-identified target. This is an PRE-BUILT EVENT.

COMPETITORS BRING:

- Pre-built egg-packaging device;
- Safety goggles

NUMBER OF PARTICIPANTS: 2 - 3

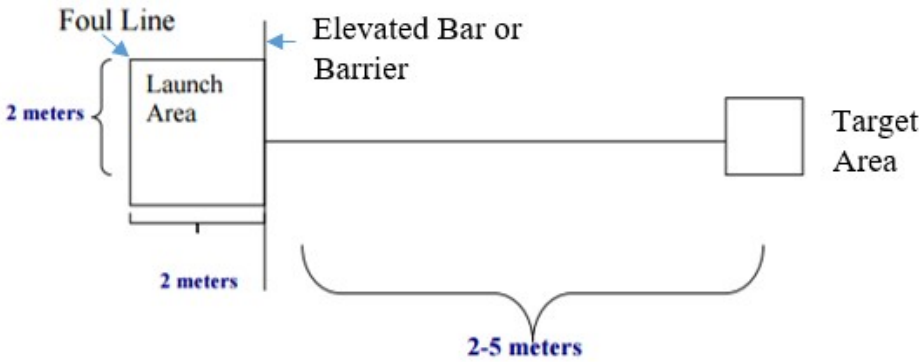
THE COMPETITION:

CONSTRUCTION/IMPOUND:

1. The package must be constructed by the competitors.
    a. No side of the package may exceed 30 cm.
    b. The mass of the package may not exceed 500 grams. The mass will be used as a tie-breaker.
    c. The package must be made out of materials that are safe and will not damage the floor of the drop location. Glass and metal may not be used. Anything that is highly flammable, corrosive, or sharp should not be used. Chemicals are not allowed.
    d. The package may not contain anything that would aid in the package adhering to the target.
    e. The package may not have anything that would aid in slowing the free fall. Examples include: parachutes, streamers, etc.

TESTING:

1. The target area should be approximately 60 cm x 60 cm and made of solid material (e.g., ½" plywood, tile floor, etc.) with a target in the center of the area. The target area will be adjacent to an elevated bar or barrier 3 meters high over which the teams will toss the egg.
2. One member of the team will toss the egg-containing package over an elevated bar or barrier that is 3 meters high.
3. The distance from the "foul line" to the center of the target will be 2.5 meters for virtual tournaments. Students may stand at any point behind the foul line up to 2 meters in preparation for throwing. See image below.



4. Teams will place an egg in a plastic baggie (optional) then place the baggie with the egg inside their package.
    a. It is the team's responsibility to handle the egg carefully while loading. Teams who break their egg during loading will be placed in Tier 2 but may still toss their package to get a score.

5. The package will be tossed horizontally, clear the barrier/bar, and land as close to the target as possible following these directions:
    a. Once teams have loaded their egg, they must stand in the "launch area".
    b. One member of the team will toss the egg-containing package over an elevated bar or barrier that is at/between 2-4 meters high. The height of the barrier must remain the same for all teams at the tournament.
    c. The package must go over the bar without touching it and land on the hard surface below (floor or ground.) If a team does not clear the bar, the team may try tossing again without repairing the device.

6. Once the package lands, the coach/adult will measure the distance (point to point) from the target to the package. If the package breaks apart, the distance will be measured to the farthest piece of the package.
    a. Score is the distance from the target in meters, measured to a single centimeter precision. 1 meter is 1 point (i.e. 1.23 m)

7. After the toss, a team member should pick up their package, remove the egg (still in the baggie), and present to the coach/adult for inspection. The egg will be inspected for breakage.
    a. Breakage is defined as being cracked or broken enough to leave a wet mark on a paper towel.
    b. If the egg is cracked or broken and all construction parameters were met, it will be ranked in Tier 2.
    c. If the egg does not break but there were construction violations, it will be ranked in Tier 2.

VIRTUAL ADAPTATIONS FOR TRAJEGGTORY:

All design parameters stay the same.

Teams will turn in the following by 4:00 pm on Tuesday, May 4:

1. Practice log showing testing. This log should include:
    * At least THREE data table with dates, independent variable, repeated tests, etc.
    * At least THREE graphs of the testing data
    * Any notes on how you used to data to complete your final trial

2. Unedited video evidence of your BEST test that includes:
    * Students showing the measurements of the device to meet the requirements in the scoring rubric
    * Students measuring the competition area to show the barrier height at 5 meters (approximate) and the target distance (to the center of the "bullseye" as 2.5 meters.
    * Students wearing goggles
    * Students safely launching the device
    * Once the launch starts, the video should not be edited. The supervisor should be able to see every action happening and the time for the video should match the information on the scoring rubric (see below)
    * Once the launch is over, we should see students measure the distance (point to point in a

straight line) from the center of the target to the edge of the device- this should match the rubric mentioned below

* Once the launch is over, we should see (still unedited video) the student open the package and show the egg

3. Completed “Trajeggtory Scoring Rubric” from that test. The height for the test will be provided prior to the tournament.

COACHES AND STUDENT PARTICIPANTS WILL HAVE TO SIGN A FORM CONFIRMING THAT THE INFORMATION PROVIDED IS ACCURATE AND VALID.

Scoring:

High Score Wins

1. Device testing score is calculated the same as in face-to-face tournaments but the score will be based on the ranking of each drop compared to all the scores for that tournament with 50 being the highest.
2. Practice log scored out of 100.

Trajeggtory Scoring Rubric

Rank: _____
Final Score:_____
Tier: _____
Tie? _____

School_____Team Number _____

Scoring:

1. Low score wins.
2. Score is the distance from the target in meters, measured to a single centimeter precision. 1 meter is 1 point (i.e. 1.23 m)
   ***BARRIER HEIGHT is 5 meters for the 2021 virtual tournaments
   ***TARGET DISTANCE is 2.5 meters for 2021 virtual tournaments.
3. Penalties may be assessed as listed in the rules.
4. Ties will be broken by mass of the package with lowest mass winning.

IMPOUND:		Does the Package meet the requirements? (Y/N)
1a. All sides of the package measures 30 cm or less	N= Tier 2 or 3**	
1b. Package mass is 500 grams or less	MASS=_____ N= Tier 2 or 3**	
1d. Package meets all construction requirements	N= Tier 2 or 3**	
1e. Package has no "parachute" type aid	N= Tier 2 or 3**	
Device determined to be safe?	N = CANNOT COMPETE; EARN PARTICIPATION POINTS ONLY	

*NOTE: Unless there is a safety issue, students should be allowed to compete but will be tiered below all legal packages.
**NOTE: Teams on-safety violations will be scored as Tier 2 if their egg does not break and Tier 3 if their egg breaks.

TEST:		Score
1. Outside assistance penalty?	Y = + 3 point penalty per violation	
Was the toss successful?	N = Participation points only	
Did the egg break or crack?	Y= Tier 2 or 3**	
Distance (point to point) from target to package:_____cm		
FINAL SCORE	DISTANCE + PENALTY POINTS=	

PLEASE NOTE THAT THIS RUBRIC IS A SAMPLE AND GUIDE-
IN CASES OF CONFLICT WITH THE RULES, THE RULES TAKE PRECIDENT OVER THE RUBRIC.

FOR VIRTUAL TOURNAMENTS, COACHES AND STUDENT PARTICIPANTS WILL HAVE TO SIGN A FORM CONFIRMING THAT THE INFORMATION PROVIDED IS ACCURATE AND VALID.

WEATHER PERMITTING

DESCRIPTION: This event will test the team's knowledge of conducting investigations and using appropriate technology to build an understanding of weather.

COMPETITORS BRING:

- 3-ring binder of any size with any research material- ALL material MUST be attached to the rings and not fall out if the binder is turned on its side (One good resource is https://www.weatherwizkids.com)
- NOTE: For virtual tournaments, students will need computer and internet access

NUMBER OF PARTICIPANTS: 2

THE COMPETITION:

1. The event may be run as a test. Teams will answer questions that assess any of the following topics:
    a. Water cycle, including:
        i. Processes of evaporation, condensation, precipitation, and run-off
        ii. Types of precipitation
        iii. Location of major sources of water for the water cycle

    b. Clouds, including:
        i. Types of clouds- identification from images or descriptions. Cloud types are limited to cirrus, cirrostratus, cirrocumulus, altostratus, altocumulus, stratus, stratocumulus, nimbostratus, cumulus, cumulonimbus, mammatus, lenticular, fog, and contrails.
        ii. Processes of cloud formation
        iii. Cloud relationships to weather conditions.

    c. Identification and description of the function of weather instruments (thermometer, barometer, rain gauge, hygrometer, sling psychrometer, wind vane, anemometer, weather balloon, radar, satellite)

    d. Weather Forecasting- Using weather data to identify, describe, and/or predict weather conditions. To include:
        i. Description/definitions of weather-related terms (dew point, front, humidity, relative humidity, pressure, air mass, wind speed, etc.)
        ii. Identification of weather station and weather map symbols
        iii. Reading weather maps or weather station data
        iv. Using weather maps/weather station data to describe expected weather conditions
        v. Using weather maps/weather station data over time to predict weather

SCORING:

1. High score wins.
2. Points will be awarded for the accuracy of responses.
3. Ties will be broken by the accuracy or quality of responses to pre-selected questions chosen by the event supervisor.

COACH PAPERWORK

SUBMIT THE FOLLOWING FORMS BEFORE THE FIRST DAY OF COMPETITION

Paperwork Required:

1. Press and Website Release Form
2. Code of Conduct form (signed by the coach and all competitors)
3. Satellite SO and COVID Acknowledgement
4. Final Registration (MUST be signed by the school's principal/CEO) – you can also print a "Principal Certification" from the Scilympiad system as an alternate to this document.

PRESS AND WEBSITE RELEASE FORM

Date: _____

I_____(Talent)
(Print name)

do hereby grant Florida Science Olympiad, INC (Producer) their affiliations, associations, exhibitors and distributers the full unrestricted right to the use of my picture, voice and likeness in multimedia presentations.

Talent also agrees to hold Producer Florida Science Olympiad, INC., their affiliations, association, exhibitors, distributors, properties and assets harmless in all litigations regarding this agreement and participation in the above mentioned program and its content.

Talent: _____ Signature

Parent or Guardian, for students under age 18:_____
Signature

Producer: Florida Science Olympiad, INC

FLORIDA SCIENCE OLYMPIAD CODE OF CONDUCT

Dear Coaches:

Please direct students to read, to discuss, and to sign the following Code of Conduct. This document must be returned on the day of the competition.

Student participants are expected to compete in tournament events with an honest effort to follow the rules and spirit of the competition. The goal of the competition is to give one's best effort while displaying honesty, integrity, and sportsmanship.

Students, coaches, and parents are expected to display courtesy and respect toward Olympiad officials, other teams, and guests of the Olympiad. Please remember all officials are volunteer specialists in their field and should be extended every courtesy.

Failure to show honesty and/or courtesy by a participant, coach, or guest of the team may result in disqualification of the team from that event and/or from the entire competition.

STUDENT SIGNATURES

1.	7.
2.	8.
3.	9.
4.	10.
5.	11.
6.	12.

I have read and discussed the above document with my team_____.

Coach's Signature

Satellite SO Acknowledgement of School Use and Primary Coverage

Science Olympiad, Inc. has introduced a new model of participation for the 2021 school year that permits remote recording and reporting of results from registered Science Olympiad member teams to their sanctioned State Science Olympiad Chapters. There are stipulations that registered teams must follow in order to participate in Satellite Science Olympiad tournaments. This agreement applies to the activities performed while away from in-person, single-location Science Olympiad tournaments held on college campuses or other sites.

If my school is a public or private school, as the head coach of the Science Olympiad team I certify that:

1. Our school has paid state and national membership dues to the State Science Olympiad Chapter in the state our school is located and is a registered team.
2. Our Science Olympiad program is a school-sponsored activity.
3. Our Science Olympiad team has permission to use our school building, facilities and equipment for Science Olympiad practice.
4. All Science Olympiad team members are currently enrolled students of our school.
5. All Science Olympiad activities will be supervised by school faculty or those who have met the requirements of being a school volunteer or mentor.
6. All Science Olympiad safety policies found under Policies at www.soinc.org are followed, including the Code of Conduct.
7. That the school's insurance covering enrolled students while in the act of practicing for an extracurricular or school-sponsored event will be the primary coverage for the activities of Science Olympiad.
8. While participating in a Satellite Science Olympiad event, my school voluntarily assumes all risks and hereby releases, indemnifies and holds harmless the State Science Olympiad Chapter or Science Olympiad, Inc., or any of their respective employees, agents, successors, and assigns ("Released Parties") singularly and collectively, from and against any blame and liability for any injury, harm, loss, inconvenience, or any other damage of any kind connected to your participation in this Science Olympiad event.

COVID-19 Acknowledgement

"Florida Science Olympiad has put in place preventative measures to prevent and mitigate the spread of coronavirus (COVID-19), however, by attending this Science Olympiad event, you could increase your risk of contracting coronavirus (COVID-19). By entering the campus, you voluntarily assume all risks and hereby release, indemnify, and hold harmless Florida Science Olympiad or Science Olympiad, Inc., or any of their respective employees, agents, successors, and assigns ("Released Parties") singularly and collectively, from and against any blame and liability for any injury, harm, loss, inconvenience, or any other damage of any kind connected to your participation in this Science Olympiad event."

Principal Signature:_____ Principal Name:_____

Coach Signature:_____ Coach Name:_____

Coach email address:_____

School Name:_____ City: _____

Date: _____ Team #:_____

FINAL REGISTRATION: SUBMIT THIS FORM BEFORE THE FIRST DAY OF COMPETITION

Team Name _____ Coach _____ Team Number _____

	Student Name	Grade	Student Signature
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			

I certify that all the above students are active members of our school and the grade levels are appropriately indicated.

_____ Principal's Signature

_____ Coach's Signature