



Exploring the World of Science

Event Logistics Manual Division B/C 2018

Division B (Gr. 6-9)

Division C (Gr. 9-12)

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SCIENCE OLYMPIAD EVENT LOGISTICS MANUAL

Table of Contents

Introduction	2	Herpetology	11
Guidelines for Events with Written Tests	3	Hovercraft	12
Guidelines for Events with Labs	3-4	Materials Science	12
Guidelines for Building Events	4	Meteorology	12-13
Key Terms.....	4-5	Microbe Mission	13
Notes on Scheduling Events.....	5	Mission Possible.....	13
Notes on Resources & Supplies	5	Mousetrap Vehicle.....	13-14
Anatomy & Physiology.....	6	Mystery Architecture	14
Astronomy.....	6	Optics	14-15
Battery Buggy.....	6-7	Potions and Poisons	15
Chemistry Lab	7	Remote Sensing	15
Crime Busters.....	7-8	Road Scholar	15-16
Disease Detectives	8	Rocks & Minerals	16
Dynamic Planet	8	Roller Coaster.....	16
Ecology	8-9	Solar System.....	16-17
Experimental Design	9	Thermodynamics	17
Fast Facts.....	9	Towers.....	17 -18
Fermi Questions	10	Wright Stuff.....	18
Forensics	10	Write It Do It	18
Game On	10-11	Appendix A: General Rules	19
Helicopters	11		

A special thank you goes out to Angela Davis, Ohio State Director, and her Ohio Science Olympiad team for sharing some of the content used in this manual.

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Introduction

So, you are going to be a Science Olympiad Event Supervisor or an Event Volunteer. Thank You and Congratulations! You are stepping into the role that has the most impact on participants' Science Olympiad experience while at the same time offering some of the best opportunities to share your STEM knowledge and passion with students.

To help you in this role there are several key sources of information that Science Olympiad produces you need to be aware of and review. First, are the event rules. If you haven't done so already you can access a digital copy of the rules for your Division [here](#) for free. All Event Supervisors are encouraged to review both the General Rules, found in the Rules Manuals and Appendix A of this book, and specific event rules found in the manual as both rule sets apply to your event. Second, make sure to visit the official Science Olympiad web site (www.soinc.org) often for Clarifications/Rules Changes and Frequently Asked Questions that may apply to the event that you are to supervise. Also on the web you can find additional information such as checklists, scoresheets, and guidelines about your event on its Event Page. Third, you have this Logistics Manual which provides highlights of key information concerning your event as well as some general pieces of advice and guidance that will help make your experience as an event supervisor easier and more enjoyable.

As an event supervisor, you are responsible for **all aspects** of the event including but not limited to:

- familiarity with event rules, General Rules, [Rules Clarifications](#) and [FAQ's](#) on the National website;
- working with the tournament director and host site to ensure all equipment, test, and materials needed to run the event are in hand;
- approving and setting up event space;
- printing scoresheets and any additional paperwork required for the event;
- if necessary, developing and printing copies of test and answer sheets for students and answer keys for volunteer graders;
- starting and ending the event on time; and,
- coordinating roles and activities of any volunteers assigned to your event.

If you have any questions about expenses and materials, volunteers, meals, tournament shirts or submitting materials (e.g.; tests, answer sheets) for copying or archiving you should contact your tournament director in advance of the tournament.

When it comes to the day of the tournament, we would advise you to:

- Check all equipment ahead of time. All equipment should be the same for teams and in working order.
- Make sure the event is run so ALL participants have the same conditions for competition.
- **Be Flexible-** participants are young, excited, and unfamiliar with campus. Whenever possible, let students compete even if they're late.
- Read over the rules and make sure you understand them. The students will know them very well!
- Familiarize yourself with the [Rules Clarifications](#) and [FAQ's](#), they apply to all states and all tournaments and originate at the national level.
- Make sure you understand how the scoring criteria works.
- Remember that the RULES, INCLUDING THE GENERAL RULES, ALWAYS TAKE PRECEDENT.

Guidelines for Events with Written Tests

If your event should happen to feature a written test please consider the following suggestions to facilitate better testing experience and easier scoring.

- Write the event so that the questions, or activities, align to the event rules. Make sure to include a mix of difficulty within your activities so that about 15% of them are easy, 60% of them are of medium difficulty, and 25% are difficult.
- Avoid questions that are overly tricky or delve into trivial topics.
- Arrange your test so that it has a cover sheet which identifies the Event Name, Division, and Tournament date.
- Follow the cover sheet with a page that contains instructions on how answers should be recorded, how much time the participants have to complete the test, if they may write on the test packet, and any resources they may or may not use.
- Questions should follow on subsequent pages. This arrangement will allow participants to look at the instructions and ask any questions they may have without seeing the test questions.
- Questions and pages all should be sequentially numbered so participants will notice if a page is missing.
- Evenly space out, align, and size answer boxes where participants should write their responses.
- Make sure each question's point value reflects the information that you expect the participants to provide as an answer. For example, a question asking the participants to name the 3 three bones found in the human ear should be worth 3 points with the correct name for each bone being worth a single point.
- Make sure to select questions so that no one can get every question correct. If several teams get every question correct, it is difficult to determine the final placement of a team.
- Have a header on each page which includes a space for the participants to write their team name and team number as well as their own names in case the pages separate.
- Have a footer that shows the page number.
- Have space in the footer of each question page to record the total score for that page. Try to alternate the position left to right to make it easier to record the information on double-sided documents.
- Include a page at the end that has a place to record the totals from each page. This will facilitate calculating the sum of page totals and make it easier to find errors.

Guidelines for Events with Labs

If your event is best suited to be an experimental activity, or a rotation through a variety of laboratory stations, consider these suggestions to make sure participants have the best experience possible.

- Periodically notify teams of the amount of time remaining in the event.
- Make sure to provide instructions on how to clean-up the laboratory space or laboratory stations.
- Model and enforce proper safety precautions and safety equipment usage.
- Prepare a rubric in advance to help you consistently score the participants' work
- Consider using an even number scale for your rubric (e.g.; 4 points, 6 points, or 8 points) to help avoid ties.
- Have a system for breaking all ties.
- Write an answer for essay questions that you consider ideal.
- Identify factors that make it ideal.
- Determine the number of points for an ideal score.
- Determine what constitutes awarding few points.

Guidelines for Events with Labs (continued)

- Include as much hands-on application as possible.
- Ensure there is a place for names and team numbers on all paper testing materials.
- Once judging begins, if a student leaves the testing room for any reason, he/she cannot return.
- All activities must begin and end on time. Do not give any extra time as this could make students late for their next event and this practice will not be consistent for all teams

Guidelines for Building Events

- Identify all materials and equipment needed to carry out activities or test/measure events.
- Any equipment or materials that are not specified in the rules for the students to bring **MUST** be supplied by the event supervisor.
- Let your tournament director know as soon as possible if there are items you need but are having difficulty sourcing on your own.
- Most building events specify tie breakers in their rules. If one is not specified, you will need to designate a tie breaker before the tournament.
- Make sure students have their team numbers and names on all devices. Handle the devices as little as possible to avoid accidental damage.
- Have a checklist of things to check for each team/device.
- Make sure you have sufficient time to judge devices and determine if there are any construction violations before teams compete.
- For devices that are required to fit in a 3-D box, having a physical box of the desired dimensions is a quick way of making this judgement.
- Do not release times, distances, or other pertinent information prior to impounding.
- Begin as close as possible to the time indicated on the event schedule.
- Read and follow the event rules carefully.
- If a device is judged to have a construction violation, the team should be notified immediately as to the exact nature of the violation.
- Decide if as the Event Supervisor you will allow teams to make minor adjustments to devices to eliminate construction violations. Whatever you decide please be consistent.
- Students may not confer with spectators or be coached in any way.
- Do not allow students to compete without proper safety equipment.
- Check that only materials allowed by the rules are brought in by students.
- Once judging begins, if a student leaves the testing room for any reason, he/she cannot return.
- If a team fails to show up for its sign-up time for a legitimate reason, the Event Supervisor can (but does not have to) make arrangements to judge them during a different time slot.

Key Terms

Event Name: Indicates how the event should appear in programs, schedules, and awards ceremonies. It is followed by the Division or Divisions in which the event is currently being run.

Impound: Indicates if any items associated with the event need to be collected and sequestered prior to any events starting on tournament day. If Impound is required, this will require additional space to securely hold the impounded items. It will also require additional volunteers to manage and supervise Impound throughout the tournament.

Room Type: Describes the types of classroom spaces in which the event can be successfully run.

Estimated Hours of Prep Time (including set-up): This is an estimate of the amount of time required of an event supervisor to prepare the needed event materials and set up the event space prior to the arrival of participants at the tournament.

Minimum Suggested Supplies: This is a description of the minimal amount of materials that an event supervisor needs to have in order to successfully run the event at a tournament. It reflects the items listed in the Event Parameter, and other sections, of the Event Rules.

Helpers: Indicates how many adult volunteers in addition to the Event Supervisor are needed to successfully run the event. Depending upon the event, these Helpers do not necessarily need a specialized science background. Often times, a general science background and experience working with and supervising children will suffice. In some cases, when the event has two parts running simultaneously (e.g.; Hovercraft, Thermodynamics) additional event supervisors are needed and are called out here.

Additional Notes: This section shares special notes and tips from experienced Event Supervisors, Tournament Directors and Rules Committee Members. Often you can find ideas that will improve the event and offer some time savings for new supervisors.

Notes on Scheduling Events

Try to schedule the following events as early as possible in the day to give event supervisors as much time as possible to score all student work:

- Experimental Design
- Disease Detectives
- Write It, Do It (WIDI)

Disease Detectives, Experimental Design, and WIDI are likely to have the same students participating in each event. If possible try to not schedule all at same time for one team. Disease Detectives can probably be a bit more flexible.

Notes on Resources & Supplies

For More Information About Coaches and Supervisor Sets of Bulk Supplies for many events, see the official site for Science Olympiad-approved kits: Ward's Science -- <https://www.wardsci.com/scienceolympiad> and Search "Science Olympiad" for the latest products

For more information about obtaining probes, sensors, photogates, calculators and other tech, use the Texas Instruments Educator Loan Program:

http://education.ti.com/educationportal/sites/US/nonProductMulti/support_borrowtitechnology.html

Anatomy & Physiology (B & C)

Impound: No

Room Type: Biology lab/room with flat tables

Estimated Prep Time (including set-up): 8-12 hours

Helpers: 1-2

Event Conflicts: None

Minimum Suggested Supplies

Microscopes and slides; models, pictures of organs or diseased person. FOR ALL BIO EVENTS SEE SUPERVISOR TIPS at www.soinc.org

Additional Notes

This event is ideally done at stations; overheads and internet pictures may be used in a pinch. If using probeware, be sure to include directions for the participants on how to use the device. At least one station should include some actual data in graph or table form.

Astronomy (C)

Impound: No

Room Type: Large classroom with projection capabilities; large flat surfaces

Estimated Prep Time (including set-up): 8-12 hours

Helpers: 1-2

Event Conflicts: Dynamic Planet

Minimum Suggested Supplies

Web/LCD projection capabilities, large projection screen; many different astronomy images

Additional Notes

This event is ideally done as group test with images projected for all to see. There should be more than 1 question for every image.

Battery Buggy (B)

Impound: Yes

Room Type: Wide, flat hallway, gym, or other open indoor space; space for impound at all tournaments

Estimated Prep Time (including set-up): 2-4 hours

Helpers: 2-4

Event Conflicts: None

Minimum Suggested Supplies

Photogate timing system if possible; Tape to mark course; measuring tapes, stop watches; large mass balance; if not using a photogate system, have 2 lasers set up at the timing lines for ease of the timers to see when the dowel passes the timing lines.

Additional Notes

This event is best run in a big space where the impound area and participants can be kept separated from spectators. Rope, or some other queuing device, should be used to designate where spectators are allowed off the area to keep spectators away. If you have a large number of teams competing consider setting up additional but identical courses.

To be successful a smooth surface is paramount. Avoid tile floors with seams. Notify teams ahead of the tournament, via email or a tournament website, the type of surface (e.g., vinyl, wood, concrete) that will be used. Also, emphasize with coaches in ample time before the competition that manufacturer voltage must be clearly marked. Do not tell target distance until all devices impounded.

Chemistry Lab (C)

Impound: No

Room Type: Chemistry Lab

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 1-2

Event Conflicts: Forensics, Material Science

Minimum Suggested Supplies

Appropriate chemicals for all; various types of glassware; proper disposal containers. FOR ALL CHEM EVENTS SEE SUPERVISOR TIPS on www.soinc.org.

Additional Notes

Long set-up and prep; need many sets of reagents, ideally one for each group; **be sure students and supervisors come with proper safety equipment.** If using probes, students may need directions on how to use. Students may have 5 notes sheets.

Crime Busters (B)

Impound: No

Room Type: Chemistry Lab

Estimated Prep Time (including set-up): 10-20 hours

Helpers: 2-4

Event Conflicts: Potions & Poisons

Minimum Suggested Supplies

Appropriate Chemistry lab supplies: Iodine reagent (Iodine dissolved in KI solution), 1M HCl, a waste container, thermometers, balances, reagents, usually at each station; chromatography supplies, pens; shoe prints. Hair, fabric and candles, plastics and density determining supplies. Distilled or ROI water for each team in wash bottle, unknowns. FOR ALL CHEM EVENTS SEE SUPERVISOR TIPS on <http://www.soinc.org/>.

Additional Notes

You will need many sets of reagents & supplies; a long prep time is associated with this event. There should be the same setup for each station and team. There are no heating tasks in this event.

You should consider using many different pens with black ink rather than different colored pens; consider a scenario in which any or none could be the perp; same size shoe prints but worn differently creates a different scenario. Test template, recipes for reagents, and other helpful hints available.

At all times, the participants and supervisors need to use proper safety equipment. Participants will come with proper safety equipment.

Disease Detectives (B & C)

Impound: No

Room Type: Classroom

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 2-4

Event Conflicts: None

Minimum Suggested Supplies

1 copy of test/team, Answer sheet for quick grading

Additional Notes

The test associated with this event can take a long time to grade so consider scheduling this as the first event of the day; an alternative would be to recruit more volunteers than listed to serve as additional scorers. During the event, some graphs may be projected, but it is not a good idea for students who may need to return to them often. Many more resources, help, and information can be found at the [CDC website](http://www.cdc.gov).

Dynamic Planet (B & C)

Impound: No

Room Type: Large room with flat tables

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 1-2

Event Conflicts: Astronomy, Ecology, Herpetology, Meteorology

Minimum Suggested Supplies

Enough copies of tests; actual maps/photos/images; rulers.

Additional Notes

Consider including High quality maps—satellite, topographic, etc. May be projected on large screen; be sure to include scale with photos; always ask some questions about causes and predictions.

Ecology (B & C)

Impound: No

Room Type: Biology lab or large classroom

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 1-2

Event Conflicts: Dynamic Planet, Herpetology

Minimum Suggested Supplies

Enough copies of tests or questions at stations. Answer sheet for quick grading.

Additional Notes

Better run as stations; pictures of some areas should be included; questions should include graphs and tables; Graphs, food webs, ecological pyramids, life patterns, sampling and population density, data from ecological studies are good sources of process skill activities. Use strictly vocabulary questions sparingly

Experimental Design (B & C)

Impound: No

Room Type: 1-2 labs with tables

Estimated Prep Time (including set-up): 10-20 hours

Helpers: 2-4

Event Conflicts: Write It, Do It

Minimum Suggested Supplies

Many equal set ups, materials/problems can be anything; at minimum, each station may need rulers or timers or beakers.

Additional Notes

Long set up with one station per team; Long time to grade; should be scheduled as early event; be sure that each station has identical materials; requires good scoring rubric; problem can be anything, but try to give students some ideas such as “process X is influenced by 3 different factors a, b, c. Devise an experiment that shows effect of one of these. Vague instructions of the form “design and do an experiment” (with nothing else) should not be used.

Fast Facts (B)

Impound: No

Room Type: Large room with tables to accommodate teams and plenty of space to separate teams

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 4

Event Conflicts: None

Minimum Suggested Supplies

Writing implements, 3 scoresheets for each team and one timer- see rules

Additional Notes

Event supervisor will direct the event, a timer will time each round and 2 helpers are needed to score each round. When setting up the room make sure that teams are spaced apart sufficiently to allow teams to talk without disturbing or cluing each other. You may consider using a LCD projector and screen to show categories and event time.

Fermi Questions (C)

Impound: No

Room Type: Sign up. Large room or gym with FLAT tables or floor. A large room with tables or desks to accommodate teams

Estimated Prep Time (including set-up): 2-4 hours

Helpers: 3-5

Event Conflicts: None

Minimum Suggested Supplies

Test questions, scoresheets and scrap paper for each team and one timer

Additional Notes

Event supervisor will direct the event, a timer will help collect the tests and scoresheets and 1 helper may be to help score each round.

Forensics (C)

Impound: No

Room Type: Chemistry lab with gas connections in the hoods

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 2-4

Event Conflicts: Chem Lab, Material Science

Minimum Suggested Supplies

Appropriate chem lab supplies: thermometers, cylinders, balances, reagents, usually at each station; chromatography supplies, pens; shoe prints, Iodine reagent (Iodine dissolved in KI solution), 2M HCl, 2M NaOH, Benedict's solution, (no more than 50 mL of each of the solutions) a hot water bath, a Bunsen burner or equivalent BTU heat source to perform flame tests a waste container, microscope, chromatography materials, unknowns, and a wash bottle with distilled water (no more than 250 mL). Hair, fabric and candles, plastics and density determining supplies. FOR ALL CHEM EVENTS SEE SUPERVISOR TIPS on www.soinc.org.

Additional Notes

Long prep; need many sets of reagents; better done with same setup for each station and team; consider using many different pens with black ink rather than different colored pens; consider a scenario in which any or none could be the prep; same size shoe prints but worn differently creates a different scenario. Test template, recipes for reagents, and other helpful hints available. Be sure students come with proper safety equipment. Be sure the event supervisors and helpers have proper safety equipment.

Game On (C)

Impound: No

Room Type: Computer room

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 2-3

Event Conflicts: None

Minimum Suggested Supplies

Computers with the Scratch program (Available for download from <http://scratch.mit.edu>) to create an original computer game based on the assigned theme Projector and screen to display time remaining and instructions to competitors

Additional Notes

Tournaments are encouraged to provide computer specifications and which Scratch version they will be running to the teams as early as possible. A broad theme to build their original computer game around. Scoring of the event will be done using the scoring rubric found on www.soinc.org.

Helicopters (C)

Impound: No

Room Type: Gym, racquetball court, or room with a tall ceiling

Estimated Prep Time (including set-up): 1-2 hours

Helpers: 1 supervisor, 2-3 timers per helicopter flying at same time

Event Conflicts: None

Minimum Suggested Supplies

Balance, stop watches, rulers or gauge (a simple 20 cm diameter hole in foam board works better than a ruler) See rules.

Additional Notes

Try to keep HVAC off; no entry or exit during flight. Consider having long expandable pole to get helicopters if stuck on rafters; separate area for spectators, Flight performance benefits from taller ceilings, less floor space needed than for Wright Stuff, consider smooth ceilings.

Herpetology (B & C)

Impound: No

Room Type: Biology lab or large room with flat tables

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 1-2

Event Conflicts: Dynamic Planet, Ecology

Minimum Suggested Supplies

Pictures or actual specimens; may be done as Power point.

Additional Notes

Better run as stations with pictures or specimens if allowed in your state; classroom will need large projection screen; when using pictures, be sure to include scale for size; be certain to include some questions on economic importance.

Hovercraft (B & C)

Impound: Yes

Room Type: a classroom with tables and tables to do written test - impound area

Estimated Prep Time (including set-up): 8-12 hours

Helpers: 2-3

Event Conflicts: None

Minimum Suggested Supplies

Impound: measuring stick, rulers, 3/8 inch dowel, volt meter, check sheet. Hovercraft track, stop watches or timers, photogates (see rules)

Written test for part 2

Additional Notes

Sign up for time periods, recommend using photogates to time vehicles. Have the teams all work on the written test while you call them up 1 at a time to run their vehicles. 1 supervisor good at writing & grading tests and another supervisor good at testing the vehicle. The finish of the track surface will affect operation of the hovercraft devices.

Material Science (C)

Impound: No

Room Type: Chemistry Lab

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 2-3

Event Conflicts: Chem Lab, Forensics

Minimum Suggested Supplies

Play Doh or silly putty, rulers, scales, or whatever equipment or reagents are needed for task chosen. FOR ALL CHEM EVENTS SEE SUPERVISOR TIPS on www.soinc.org.

Additional Notes

Length of prep depends on the number of hands-on task that are done as part of the event. There needs to be at least one hands-on task but more may be done. Prep time can be reduced somewhat by setting up the event as rotatable stations so you need only one of each prep for each team.

Meteorology (B)

Impound: No

Room Type: Large classroom with tables, possibly projection screen

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 1-2

Event Conflicts: Dynamic Planet

Minimum Suggested Supplies

Enough copies of exam for each team

Additional Notes

Actual weather maps from NOAA, charts, etc. online are ideal; some images can be projected

Microbe Mission (B & C)

Impound: No

Room Type: Biology Lab or room with flat tables

Estimated Prep Time (including set-up): 8 - 12 hours

Helpers: 1-2

Event Conflicts: None

Minimum Suggested Supplies

Pictures/slides of microbes, microscopes, various problems, graphs

Additional Notes

Best run as stations; be sure questions are age appropriate; try to include some measurements and calculation; If using probes, students may need directions of how to use. Live specimens are limited to: baker's yeast, ciliates, amoebae, and algae. Pictures and prepared slides are appropriate for all microbial types.

Mission Possible (C)

Impound: Only at State & Nationals

Room Type: Large room with many flat tables. Multiple tables for set up and testing of devices as well as Sign up

Estimated Prep Time (including set-up): 2-4 hours

Helpers: 3-5

Event Conflicts: None

Minimum Suggested Supplies

Timers, Stopwatches, Clipboards, Protective eye wear for judges, metric tape measure

Additional Notes

Impound for State & Nationals. Consider a sign-up schedule. Teams may come 30 minutes before test time to set up. Note: steps do not have to be in order, only specific start and end tasks per rules.

Mousetrap Vehicle (C)

Impound: Yes

Room Type: Wide, flat hallway or gym; area for impound at all tournaments

Estimated Prep Time (including set-up): 2-4 hours

Helpers: 2-4

Event Conflicts: None

Minimum Suggested Supplies

Photogate timing system if possible; if not using a photogate system, have 2 lasers set up at the timing lines for ease of the timers to see when the dowel passes the timing lines; tape to mark course; measuring tapes; stop watches; Several 16-oz. identical plastic cups

Additional Notes

This event is best run in a big space where the impound area and participants can be kept separated from spectators. Rope, or some other queuing device, should be used to designate where spectators are allowed off the area to keep spectators away. If you have a large number of teams competing consider setting up additional but identical courses. Do not tell target distance until all devices impounded.

To be successful a smooth surface is paramount. Avoid tile floors with seams. Notify teams ahead of the tournament, via email or a tournament website, the type of surface (e.g., vinyl, wood, concrete) that will be used. Also, emphasize with coaches in ample time before the competition that manufacturer voltage must be clearly marked. Do not tell target distance until all devices impounded.

Mystery Architecture (B)

Impound: No

Room Type: Large room with limited windows and tables/floor space for each team

Estimated Prep Time (including set-up): 2-4 hours

Helpers: 3-5

Event Conflicts: None

Minimum Suggested Supplies

Various low-cost building materials in bags for each team. Each bag should contain the same type of materials in the same amounts for the given problem (e.g., bridge, tower, a cantilever for State and National tournaments).

Additional Notes

This event will require a lot of materials as each team will need the same material set-up. Please plan accordingly to have time to acquire the needed materials and prepare individual team kites. It is recommended that low-cost materials (i.e., craft sticks, pipe cleaners, straws, masking tape) be used. In order to maintain the mystery of the event, try to use a room without windows. If windows are present they should be covered.

Optics (B & C)

Impound: No

Room Type: Physics lab or any room with flat tables

Estimated Prep Time (including set-up): 10-12 hours

Helpers: 3-5

Event Conflicts: None

Minimum Suggested Supplies

Laser Shoot Setup (LSS) with lasers and mirrors, stopwatches, written tests for Parts 1, check sheet

Additional Notes

Have the teams all work on the written test while you call them up 1 at a time for the laser shoot. You will need at least one supervisor good at writing and grading tests and another supervisor good at the laser shoot.

Potions & Poisons (B)

Impound: No

Room Type: Chemistry Lab

Estimated Prep Time (including set-up): 10-20 hours

Helpers: 2-4

Event Conflicts: Crime Busters

Minimum Suggested Supplies

At least one hand's-on activity required. Appropriate chem. lab supplies: a waste container, thermometers, balances, reagents, as appropriate, pictures of the current year's toxic organisms, Distilled or ROI water for each team in wash bottle, unknowns. FOR ALL CHEM EVENTS SEE SUPERVISOR TIPS on www.soinc.org.

Additional Notes

Long prep time; may need many sets of reagents; May be done with same setup for each station and team or as stations. Be sure students come with proper safety equipment. Be sure the event supervisors and helpers have proper safety equipment.

Remote Sensing (C)

Impound: No

Room Type: Large classroom with flat tables - computer lab optional

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 2-4

Event Conflicts: None

Minimum Suggested Supplies

Quality satellite images or aerial photographs

Additional Notes

May be run as workstations or stations events. If a projector is used, allow equal time for each projection

Road Scholar (B)

Impound: No

Room Type: Large classroom with flat tables

Estimated Prep Time (including set-up): 10-15 hours

Helpers: 1-2

Event Conflicts: None

Minimum Suggested Supplies

Identical highway and topo map for all teams; topo symbol chart; identical questions for all teams; LARGE FLAT TABLES ARE ESSENTIAL

Additional Notes

Consider laminating topo symbol charts; make sure all have same maps; try to ask a variety of different kinds of questions; do not photo copy the topo (obtain from USGS). May consider laminating topo and road maps also.

Rocks and Minerals (B & C)

Impound: No

Room Type: Lab or large classroom with flat tables

Estimated Prep Time (including set-up): 6-10 hours

Helpers: 1-2

Event Conflicts: None

Minimum Suggested Supplies

Many different kinds of rocks and minerals, actual specimens better than pictures

Additional Notes

Stations with actual specimens; actual specimens are better than images; local mineral society or museums are often good sources of help

Roller Coaster (B)

Impound: Yes

Room Type: Gym or large room with floor space, may be carpeted; Impound at all tournaments

Estimated Prep Time (including set-up): 2-3 hours

Helpers: 3-5

Event Conflicts: None

Minimum Suggested Supplies

Several #2 unsharpened pencils with an unused eraser; Timers, Stopwatches, Clipboards, Protective eye wear for judges, metric tape measure.

Additional Notes

Impound for all tournaments; Consider a sign-up schedule; Note: During the team's 8 minutes, they may do as many practice runs before and between their scorable runs.

Solar System (B)

Impound: No

Room Type: Gym or large room with floor space, may be carpeted; Impound at all tournaments

Estimated Prep Time (including set-up): 6-10 hours

Helpers: 1-2

Event Conflicts: None

Minimum Suggested Supplies

Large classroom with projection capabilities. Power point will often suffice

Additional Notes

Equal time for each projection, etc.; probably best to run all teams at same time. May use sections of maps

Thermodynamics (B & C)

Impound: Yes

Room Type: Large Lab with access to water and electricity. Also, space will be needed for Impound.

Estimated Prep Time (including set-up): 10-15 hours

Helpers: Impound 1; Event 2 -4

Event Conflicts: None

Minimum Suggested Supplies

Impound items: measuring stick or size gauge, hole size gauge, check sheet

Part I - Device test items: Temperature probe, insulated hot water container 1+ gallon, water heater, measured water dispensing (Possibly large plastic syringes), towels, 2 stop watches, ice cubes, and water.

Part 2 - Written test

Additional Notes

Event: Teams prepare device, hot water is added to the device by the supervisor, teams close the device, supervisor measures the temperature of the device after predetermined time. Teams take a written test the after device is setup. Precise timing is required for 20 to 30 devices in parallel.

Towers (B & C)

Impound: No

Room Type: Gym or room with tables

Estimated Prep Time (including set-up): 2-4 hours

Helpers: 2 -4

Event Conflicts: None

Minimum Suggested Supplies

Test Apparatus (may need more than 1 depending on number of teams per session), Sandhopper system or equivalent (rule 4a), 55cm x 32 cm minimum test base plate with 20x20 cm opening at center. sufficiently tall to suspend sand bucket, 5-gallon plastic bucket with handle. If not using sand hopper, a small (pint to quart size) scoop/cup to transfer sand to bucket, a second bucket to hang under the tower to load the sand into, 29 cm circle drawn on test base, Pair of bucket stabilizing sticks, 15.1 Kg Sand, Loading block assembly (loading block, eyebolt, wingnut), Chain, S hook (rule 4b), digital timer for 6 minute run time, another bucket or bag to hold excess sand to replenish competition sand if/when it spills, meter stick or other measuring tool/template for min tower height (Measure to 0.1 cm), Scale to mass the tower (accurate to 0.01 grams) (up to 50 or 100 grams), Scale to mass sand bucket/chain system (hold at least 15.2 Kg) accurate to at least .1 Kg Level, to make

sure the test base plate is level, usual sand device, gram and kilogram balance; a firm 8cm inner diameter circular ring gauge weighing less than 10g.

Additional Notes

Consider doing as a sign up and/or with multiple testing. Need to use sand and not cat litter. Sand must be dry!

Wright Stuff (B)

Impound: No

Room Type: Gym, cafeteria, high "clean" ceiling, if possible, with no rafters

Estimated Prep Time (including set-up): 2-4 hours

Helpers: 3-5

Event Conflicts: None

Minimum Suggested Supplies

Balance-gram to 0.01g, stop watches, metric rulers-1 meter, 30 cm, timer; gauges to measure the specific dimensions

Additional Notes

Try to keep HVAC off; no entry or exit during flight. Consider having long expandable pole to get planes if stuck on rafters; separate area for spectators

Write It, Do It (B & C)

Impound: No

Room Type: 2 adjacent large rooms with flat tables

Estimated Prep Time (including set-up): 12-20 hours

Helpers: 2-4

Event Conflicts: Experimental Design

Minimum Suggested Supplies

Various identical supply bags: corks, beads, paper clips, index cards, stickers, toys (Lincoln Logs, Legos, K'Nex, blocks, etc.) Use your imagination.

Additional Notes

Will need at least 1 model for every 4-5 teams. Make sure supply bags are uniform. Setting up bags and building structures requires much time; No spectators. Glass doors and windows to hallways should be covered. Develop good rubric for scoring.; 25-30 pieces should usually be maximum; do not make object too complicated for completion; experiment with different structures; office and craft stores are good source of supplies; long time to score so schedule early.

Appendix A

GENERAL RULES, CODE OF ETHICS AND SPIRIT OF THE PROBLEM

The goal of competition is to give one's best effort while displaying honesty, integrity, and good sportsmanship. Everyone is expected to display courtesy and respect - see Science Olympiad Pledges. Teams are expected to make an honest effort to follow the rules and the spirit of the problem (not interpret the rules so they have an unfair advantage). Failure by a participant, coach, or guest to abide by these codes, accepted safety procedures, or rules below, may result in an assessment of penalty points or, in rare cases, disqualification by the tournament director from the event, the tournament, or future tournaments.

1. Actions and items (e.g., tools, notes, resources, supplies, electronics, etc.) are permitted, unless they are explicitly excluded in the rules, are unsafe, or violate the spirit of the problem.
2. While competing in an event, students may not leave without the event supervisor's approval and must not receive any external assistance. All electronic devices capable of external communication (including cell phones) must be turned off, unless expressly permitted in the event rule and left in a designated spot if requested.
3. Students, coaches and other adults are responsible for ensuring that any applicable school or Science Olympiad policy, law, or regulation is not broken. All Science Olympiad content such as policies, requirements, clarifications/changes and FAQs on www.soinc.org must be treated as if it were included in the printed rules.
4. All pre-built devices presented for judging must be constructed, impounded, and operated by one or more of the 15 current team members unless stated otherwise in the rules. If a device has been removed from the event area, appeals related to that device will not be considered.
5. Officials are encouraged to apply the least restrictive penalty for rules infractions - see examples in the Scoring Guidelines. Event supervisors must provide prompt notification of any penalty, disqualification or tier ranking.
6. State and regional tournament directors must notify teams of any site-dependent rule or other rule modification with as much notice as possible, ideally at least 30 days prior to the tournament.



Exploring the World of Science

Science Olympiad wishes to acknowledge the following business, government and education leaders for partnering with our organization. Working together, we can increase global competitiveness, improve science and technology literacy and prepare the STEM workforce of the future. Thanks to: Colorado State University (2018 National Tournament Host), Wright State University (2017 National Tournament Host), ArcelorMittal, NASA's Universe of Learning Astrophysics STEM Learning and Literacy Network, Combined Federal Campaign, Lockheed Martin, DuPont Center for Collaborative Research and Education, DuPont Pioneer, NBC Universal Foundation, Ward's Science, Google, ACE Hardware, Centers for Disease Control and Prevention (CDC), CREOL, The College of Optics and Photonics, University of Central Florida, SPIE and the OSA Foundation, Discovery Education 3M Young Scientist Challenge, National Marine Sanctuary Foundation, National Oceanic and Atmospheric Administration (NOAA), Potbelly Sandwich Works, Texas Instruments, VWR Foundation, Academy of Model Aeronautics, Investing in Communities, MAKE Magazine, SkyCiv, Society for Neuroscience (SfN) and Yale Young Global Scholars. Strategic Partners: Code.org, Digital Manufacturing and Design Innovation Institute (DMDII), Hardware Science, Japan Science and Technology Agency and Million Women Mentors (MWM).

See the Science Olympiad website: www.soinc.org for current information regarding Policies, Standards, Summer Institutes, Official Kits from Ward's Science and print plus digital items in the Science Olympiad Store

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