

Science Olympiad – 2014 Event Logistics Chart

This table is to be considered suggestive of things to keep in mind; site specific situations will need variations

EVENT Bold are new for 2014	DIV	ROOM TYPE	EST. HRS. PREP TIME (incl. setup)	MINIMUM SUGGESTED SUPPLIES	HELPERS	COMMENTS
Anatomy - B	B	Biology lab/room with flat tables	8-12	Microscopes and slides; models, pictures of organs or diseased person	1-2	Stations; be sure to include some actual data in graph or table form; overheads and internet pictures may be used in a pinch. If using probes, students may need directions of how to use.
Anatomy & Physiology - C	C	Biology lab/room with flat tables	8-12	Microscopes and slides; models, pictures of organs or diseased person. FOR ALL BIO EVENTS SEE SUPERVISOR TIPS on www.soinc.org	1-2	Stations; be sure to include some actual data in graph or table form; overheads and internet pictures may be used in a pinch. If using probes, students may need directions of how to use.
Astronomy - C	C	Large classroom with projection capabilities;	8-12	Web/LCD projection capabilities	1-2	Need large projection screen; many different images; try to have >1 question/image
Booilever - B/C	B/C	Gym, auditorium, or room with tables	2-4	Testing wall; Loading block & chain; clean, dry sand; 2 buckets and scoop for sand; or sand hopper device; gram and kilogram scales; tape measure; stop watch; Protective eye wear for judges	2-4	Consider doing as a sign up and/or with multiple testing. Need to use sand or similar free flowing material. Sand must be dry!
Bungee Drop C	C	An open area at least a 5 meter drop height.	2-4	Measuring tape, balance to determine mass of devices - 50-300 gram mass	1-2	The higher the drop the better to separate timing for devices. Be sure students are able to be safe at the height from which they will drop their devices.
Can't Judge a Powder - B	B	Chemistry lab	10-15	Appropriate chem lab supplies; thermometers, cylinders, balances, reagents, usually at each station. FOR ALL CHEM EVENTS SEE SUPERVISOR TIPS on soinc.org	1-2	Long prep; need many sets of reagents; Uses a lot of the same reagents as Crime Busters and Forensics. ONLY 1 powder provided to students. Event supervisor needs to provide two different kinds/colors of writing instruments per team. Be sure students come with proper safety equipment. Be sure the event supervisors and helpers have proper safety equipment
Chemistry Lab - C	C	Chemistry lab	10-15	Appropriate chemicals for all; various types of glassware; proper disposal containers. FOR ALL CHEM EVENTS SEE SUPERVISOR TIPS on soinc.org	1-2	Long set up and prep; need many sets of reagents, ideally one for each for group; be sure students and supervisors come with proper safety equipment; If using probes, students may need directions of how to use. Students may have note sheet now.
Circuit Lab C	C	Classroom with flat tables	8-10	Multimeters, prototyping breadboards, power supplies, jumper wires, resistors	1-2	Recommend providing identical lab setups for each team consisting of a multimeter, breadboard, power supply, jumper wires, and resistors. Have them complete the theoretical written test at the same time they work on the hands-on practical portion.
Compound Machines -C	C	Physics lab or room with flat tables	2-4	Stop watches, masses as specified in the rules, meter stick to check device size, copies of test	1-2	Consider multiple identical masses to allow for simultaneous running of the device testing portion
Crime Busters - B	B	Chem lab	10-20	Appropriate chem. 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 soinc.org	2-4	Long prep time; need many sets of reagents; there are no heating tasks in this event! 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 perp; 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.
Designer Genes - C	C	Bio Lab or room with flat tables	8-12	Pictures/slides, various problems, graphs	1-2	Best run as stations; be sure questions are age appropriate; try to include some measurements and calculation
Disease Detectives - B/C	B/C	Classroom	10-15	1 copy of test/team, Answer sheet for quick grading	2-4	Long time to grade; should be scheduled as first event; some graphs may be projected, but not a good idea for students who may need to return to them often; be sure to visit the CDC web site for help and info
Dynamic Planet - B/C	B/C	Large room with flat tables	10-15	Enough copies of tests; actual maps/photos/images; rulers	1-2	Consider including High quality maps—satellite, topos, etc. May be projected on large screen; be sure to include scale with photos; always ask some questions about causes and predictions

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Elastic Launch Glider -C	C	Gym, cafeteria, high "clean" smooth ceiling (preferably with no rafters)	1-2	Balance; stop watches; rulers or gauge; plastic lip balm cap with an inner depth of ~ 15.7 mm and inside diameter of ~13.7 mm	1 supervisor, 2-3 timers per glider flying at same time	Try to keep HVAC off; no entry or exit during official flights. Consider having long expandable pole to get gliders if stuck; separate area for spectators, Flight performance benefits from taller ceilings, consider smooth ceilings.
Entomology –B/C	B/C	Biology lab or large classroom	10-15	Pictures or actual specimens; microscopes if in lab; models may be helpful; possibly rulers. Something with bird sounds. May be done as Power point.	1-2	Better run as stations with actual specimens; 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; consider some questions of the form: "Which of the following birds does not belong with the others. Why?" and some sounds for identification.
Experimental Design - B/C	B/C	1-2 labs with tables	10-20	Many equal set ups, materials/problems can be anything; at minimum each station may need rulers or timers or beakers.	2-4	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.
Forensics - C	C	Chemistry lab with gas connections in the hoods	10-15	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 soinc.org	2-4	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
GeoLogic Mapping - C	C	Large room; good projection capabilities, flat tables	10-15	Very good images (do not photo copy), possibly rulers and protractors	1-2	If providing maps to students, be sure they are HIGH quality and resolution; if projecting things, allow ample time; be sure scale is included; new topic this year
Helicopters - B	B	Gym, racquetball court, or room with a tall smooth, flat ceiling	1-2	Balance, stop watches, rulers or gauge (a simple 25.0 cm diameter hole in foam board works better than a ruler)	1 supervisor, 2-3 timers per helicopter flying at same time	Try to keep HVAC off; no entry or exit during official flights. 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.
Heredity - B	B	Bio Lab or room with flat tables	8-12	Pictures/slides, various problems, graphs	1-2	Best run as stations; be sure questions are age appropriate; try to include some measurements and calculation
Magnetic Levitation - C (MagLev)	C	Wide, flat hallway or gym	8-12	MagLev track, stop watches	2-3	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.
Materials Science - C	C	Chem Lab	10-15	Molecular Models or materials such as marshmallows & toothpicks to make models, pictures of drops on surfaces, protractors, surface area cubes. Play Doh or silly putty, rulers, scales, or whatever equipment is needed for task chosen. FOR ALL CHEM EVENTS SEE SUPERVISOR TIPS on soinc.org	2-3	Only 1 task is required, but more may be done. Length of prep depends on the number of events done. Long prep, can easily be done as rotatable stations meaning only one of each prep.
Meteorology - B	B	Large classroom with table, possibly projection screen	10-15	Enough copies of exam for each team	1-2	Actual weather maps from NOAA, charts, etc. online are ideal; some images can be projected

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Metric Mastery - B	B	One or two rooms with tables.	2-4	Objects which will have a measurement estimated and then actually measured. Appropriate measuring devices. Pencils for all students. Blank answer sheets for all students for Part One, Part Two, and Part Three. (Part Three - 5 METRIC to METRIC conversion problems.)	1-2	Stations for Part One & Part Two to be approximately 2/3 Direct Estimation/Measurement and 1/3 Calculated Estimation/Measurement. Part Three consists of 5 fill in the blank problems requiring students to convert a number from one Metric unit to a different Metric unit. Create Answer Keys with variances/ranges of accepted values already calculated for each Part: Part One - Estimation (5%, 10%, 20 %), Part Two - Direct Measurement (+/- 3 of the estimated digit expressed to the instrument's resolution); Calculated Measurement (calculated values based on +/- 3 of the estimated digit expressed to the instrument's resolution); Part Three (exact answer required no variance/range) NOTE: All answers MUST have 3 things - Proper Resolution, Proper Estimated Digit for the Instrument, AND Proper Unit of Measurement.
Mission Possible - C	C	Large room with many flat tables and floor space for teams testing on the floor. Multiple tables for set up and testing.	2-4	Timers, Stopwatches, Protective eye wear for judges, tape measure	3-5	Impound for State & Nationals. Collect Energy Transfer List at Impound or designate a specified deadline to facilitate reviewing early. Consider a sign up schedule. Teams may come 30 minutes before test time to set up. Consider running closed circuit video to keep people away from devices. Note: transfers do not have to be in order, only specific start and end tasks per rules.
Road Scholar - B	B	Large classroom with flat tables	10-15	Identical highway and topo map for all teams; topo symbol chart; identical questions for all teams; LARGE FLAT TABLES ARE ESSENTIAL	1-2	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.
Robo Cross-B	B	Gym, auditorium, or room with floor space	3-4	Stopwatches, competition board with objects	2-3	Recommended to have sign up for time periods. Prior to each team's run, set up objects in the exact same position on the competition board.
Rocks and Minerals - B/C	B/C	Lab or large room with flat tables	6-10	Many different kinds of fossils, actual specimens better than pictures	1-2	Stations with actual specimens; actual specimens are better than images; local mineral society or museums are often good sources of help
Rotor Egg Drop - B	B	An open area at least a 5 meter drop height.	2-4	Measuring tape, balance to determine mass of devices. For each team one raw grade A chicken egg, one plastic sandwich bag, 3 oz. paper cup, approximately 1 meter of masking tape.	1-2	The higher the drop the better to separate timing for devices. Be sure students are able to be safe at the height from which they will drop their devices.
Scrambler - C	C	Wide, flat hallway or gym; area for impound	2-4	Raw grade A large chicken eggs (more than the number of teams competing); wall for target (in the room or brought by Event Supervisor; tape to mark course; measuring tapes, stop watches; large mass balance; unsharpened #2 wooden pencil with unused eraser	2-4	Rope of the area to keep spectators away; do not tell distance until all devices impounded; consider two identical courses if many teams. Specify ahead of time type of surface: vinyl, wood, etc. Smooth surface is paramount. Avoid tile floors with seams, uneven wooden floors, or concrete floors with wide cracks.
Shock Value - B	B	Classroom with flat tables	8-10	Multimeters, prototyping breadboards, power supplies, jumper wires, resistors	1-2	Recommend providing identical lab setups for each team consisting of a multimeter, breadboard, power supply, jumper wires, and resistors. Have them complete the theoretical written test at the same time they work on the hands-on practical portion.
Simple Machines - B	B	Physics lab or room with flat tables	2-4	stop watches, masses as specified in the rules, meter stick to check device size, copies of test	1-2	Consider multiple identical masses to allow for simultaneous running of the device testing portion
Solar System - B	B	Sky lab or Large classroom with projection capabilities. Power point will often suffice	6-10	Possibly sky lab; Various images of the solar system and moons	1-2	Equal time for each projection, etc.; probably best to run all teams at same time. Must be run as a station event with large flat tables. Use high quality images - NASA/JPL

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Sounds of Music - B	B	Three small rooms w/flat tables and a larger room for warming up and registration.	10-15	Pitch pipe or electronic equipment for determining pitch, possibly oscilloscope, stopwatches to time the individual grading sessions, clipboards for the three judges, music stands.	4-6	With several teams per hour have 3 teams of students in 3 separate rooms with the judges moving from one room to the next. Judges should each judge their own section, i.e. physics questions (physics teacher), construction and pitch (physics teacher or tech teacher), and performance (music teacher). Consider electronic testing devices for quality; it is very easy to go overtime, so keep good watch of time. A fourth person is often needed to keep everyone on time and organize teams moving in and out of rooms.
Technical Problem Solving - C	C	Lab	10-15	Different devices for making measurements—balance, stop watch, probes, etc.	2-4	Potentially long set up; When using probes, students may need directions of how to use; will need many multiple set up stations
Water Quality - B/C	B/C	Biology lab or large classroom	10-15	Enough copies of tests or questions at stations. Answer sheet for quick grading.	1-2	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
Wheeled Vehicle - B	B	Wide, flat hallway or gym; area for impound	2-4	Photogate timing system if possible; Tape to mark course; measuring tapes; stop watches; large mass balance; several #2 unsharpened pencils with unused erasers	2-4	Rope off the area to keep spectators away; do not tell distance until all devices impounded; consider two identical courses if many teams. Specify ahead of time type of surface: vinyl, wood, etc. Smooth surface is paramount. Avoid tile floors with seams, uneven wooden floors, or concrete floors with large cracks.
Write It Do It – B/C	B/C	2 adjacent large rooms with flat tables	12-20	Various identical supply bags: corks, beads, paper clips, index cards, stickers, toys (Lincoln Logs, Legos, K'Nex, blocks, etc.) Use your imagination.	2-4	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

TRY NOT TO SCHEDULE SAME TEAM AT SAME TIME FOR THESE EVENTS (may involve same students):

B EVENTS

Meteorology and Dynamic Planet
Write It Do It and Experimental Design
Crimebusters and Can't Judge a Powder
Entomology and Rocks & Minerals
Water Quality, Entomology, and Dynamic Planet
Anatomy, Heredity, and Disease Detectives
Simple Machines and Shock Value

C EVENTS

Write It Do It and Experimental Design
Forensics, Chemistry Lab, Materials Science
Water Quality, Entomology, and Dynamic Planet
Entomology and Rocks & Minerals
Compound Machines and Circuit Lab
GeoLogic Mapping, Dynamic Planet, and Astronomy
Anatomy & Physiology, Designer Genes, and Disease Detectives

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

Note: Disease, Experimental Design and WIDI are likely to use some of same kids. Try not schedule all at same time for one team.
DD can probably be a bit more flexible. But remember each of the above 3 events takes a long time to grade and should be scheduled early.

SHOULD BE SCHEDULED EARLY IN THE DAY

Experimental Design
Disease Detectives
Write It Do It

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_borrowtotechnology.html