

**Science Olympiad – 2017 Event Logistics Chart – FINAL**

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

<b>EVENT</b> <b>Bold are new for 2017</b>	<b>DIV</b>	<b>ROOM TYPE</b>	<b>EST. HRS.</b> <b>PREP TIME</b> <b>(incl. setup)</b>	<b>MINIMUM SUGGESTED SUPPLIES</b>	<b>HELPERS</b>	<b>COMMENTS</b>
Anatomy & Physiology - B/C	B/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 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; large flat surfaces	8-12	Web/LCD projection capabilities	1-2	Need large projection screen; many different images; try to have >1 question/image
Bottle Rocket - B	B	Outside parking lot or large grassy area, avoid treed area	1-3	Balance, ruler/measuring device, bottle launcher, water, compressor, graduated cylinders, tables, twice as many eggs as teams plus <b>EXTRA for breakage and rejections.</b>	3-5	Can be a sign up or walk in
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; <b>be sure students and supervisors come with proper safety equipment</b> ; If using probes, students may need directions of how to use. Students may have 5 note sheets now.
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.
Disease Detectives - B/C	B/C	Classroom	10-15	1 copy of test/team, Answer sheet for quick grading	2-4	<b>Long time to grade; should be scheduled as first event</b> ; 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 <b>High quality</b> 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
<b>Ecology - B/C</b>	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
Electric Vehicle - C	C	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, 2 standard #303 size cans (7.0 - 8.0 cm diameter and > 10.5 cm high)	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.

**Science Olympiad – 2017 Event Logistics Chart – FINAL**

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

<b>EVENT</b> <b>Bold are new for 2017</b>	<b>DIV</b>	<b>ROOM TYPE</b>	<b>EST. HRS.</b> <b>PREP TIME</b> <b>(incl. setup)</b>	<b>MINIMUM SUGGESTED SUPPLIES</b>	<b>HELPERS</b>	<b>COMMENTS</b>
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; <b>Long time to grade; should be scheduled as early event;</b> 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.
<b>Fast Facts - B</b>	B	Large room with tables to accommodate teams	10-15	Writing implements, 3 scoresheets for each team and one timer- see rules	4	Event supervisor will direct the event, a timer will time each round and 2 helpers are needed to score each round.
Food Science - B	B	Chemistry Lab	10-15	Appropriate chem lab supplies. A food for burning in calorimeter such as Cheetos, corn curls, peanuts, etc., balances. This is best done in a hood. Labs can also be given on identifying reducing sugars, starches, proteins & lipids. Questions should focus on additives, GMO, gluten, role of carbohydrates, lipids, proteins in food and what happens in cooking & nutrition. FOR ALL CHEM EVENTS SEE SUPERVISOR TIPS on soinc.org	2-4	Long prep; need many sets of reagents. Be sure students come with proper safety equipment. Be sure the event supervisors and helpers have proper safety equipment. Students will bring calorimeter. Event supervisor must provide food stuff to burn and balances. This needs to be done in a hood or outside. Event supervisor should provide at least 1 additional lab experiment to do and test.
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. <b>Be sure students come with proper safety equipment. Be sure the event supervisors and helpers have proper safety equipment.</b>
Game On - C	C	Computer room	10-15	Computers with the Scratch program (Available for download from <a href="http://scratch.mit.edu">http://scratch.mit.edu</a> ) to create an original computer game based on the assigned theme		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 <a href="http://www.soinc.org">www.soinc.org</a> .

**Science Olympiad – 2017 Event Logistics Chart – FINAL**

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

<b>EVENT</b> <b>Bold are new for 2017</b>	<b>DIV</b>	<b>ROOM TYPE</b>	<b>EST. HRS.</b> <b>PREP TIME</b> <b>(incl. setup)</b>	<b>MINIMUM SUGGESTED SUPPLIES</b>	<b>HELPERS</b>	<b>COMMENTS</b>
<b>Helicopters - C</b>	C	Gym, racquetball court, or room with a tall ceiling	1-2	Balance, stop watches, rulers <b>or gauge (a simple 20 cm diameter hole in foam board works better than a ruler)</b> See rules.	1 supervisor, 2-3 timers per helicopter flying at same time	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.
<b>Hovercraft - B/C</b>	B/C	a classroom with tables and tables to do written test - impound area	8-12	Hovercraft track, stop watches or times, photogates(see rules)	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.
Hydrogeology - C	C	Computer room or classroom	10-15	Computers or tablets with access to the internet - a web-based event - no special software download (a paper version is available if computers are not available)	2-4	Generally a computer lab is preferred. Place 2 chairs per one computer. Pull up model URL on computer or tablet. If no computers, use the paper version. <a href="http://groundwater.beehere.net">http://groundwater.beehere.net</a> for model - additional resources at <a href="http://www.groundwater.org/so.html">www.groundwater.org/so.html</a>
Invasive Species - B/C	B/C	Biology lab or large room with flat tables	10-15	Pictures or actual specimens if allowed in your state. May be done as Power point.	1-2	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
<b>Materials Science - C</b>	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
<b>Microbe Mission - B/C</b>	B/C	Bio Lab or room with flat tables	8-12	Pictures/slides of microbes, microscopes, various problems, graphs	1-2	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
<b>Mission Possible - B</b>	B	Large room with many flat tables. Multiple tables for set up and testing. Sign up	2-4	Timers, Stopwatches, Clipboards, Protective eye wear for judges, metric tape measure	3-5	Impound for State & Nationals. 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: steps do not have to be in order, only specific start and end tasks per rules.
<b>Optics - B/C</b>	<b>B/C</b>	Physics lab or any room with flat tables	10-12	Laser Shoot Setup (LSS) with lasers and mirrors, stopwatches, written tests for Parts 1	3-5	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 for the LSS
Reach for the Stars - 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. May use sections of maps
<b>Remote Sensing - C</b>	C	Large classroom with flat tables - computer lab optional	10-15	Quality satellite images or areal photographs	2-4	May be run as workstations or stations events. If a projector is used, allow equal time for each projection
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; <b>LARGE FLAT TABLES ARE ESSENTIAL</b>	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.

**Science Olympiad – 2017 Event Logistics Chart – FINAL**

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

<b>EVENT</b> <b>Bold are new for 2017</b>	<b>DIV</b>	<b>ROOM TYPE</b>	<b>EST. HRS.</b> <b>PREP TIME</b> <b>(incl. setup)</b>	<b>MINIMUM SUGGESTED SUPPLIES</b>	<b>HELPERS</b>	<b>COMMENTS</b>
Robot Arm- C	C	Flat tables or floor space	3-4	Stopwatches, clipboards, competition board or area marked with 2.5 cm wide tape for an inside dimension of 75.0 cm x 75.0 cm, , standard 40 cm archery target, 50 US pennies (plus extra targets & pennies) (see National SO website for layout)	2-3	Setup on smooth, flat surface – floor or table, block off area so spectators cannot enter, sign up for time periods.
<b>Rocks and Minerals - B/C</b>	B/C	Lab or large room with flat tables	6-10	Many different kinds of rocks and minerals, 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
Scrambler - B	B	Wide, flat hallway or gym; area for impound	2-4	Tape to mark course; metric measuring tapes, stop watches; large mass balance; unsharpened #2 wooden pencil with unused eraser, 1 grade A large egg per team plus extras, 30 cm measure stick, timer per course	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. <b>Smooth surface is paramount. Avoid tile floors with seams.</b>
<b>Towers - B/C</b>	B/C	Gym or room with tables	2-4	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; shape to fit over tower	2-4	Consider doing as a sign up and/or with multiple testing. Need to use sand and <b>not</b> cat litter. Sand must be dry!
Wind Power - B/C	B/C	room with tables for written test and testing stations	10-15	Event supervisors must provide: Multispeed box fan to be used as the wind source for testing the blade assemblies. Support stand which allows for vertical and horizontal adjustments of the mount which holds the blade assembly. Clamps to orient the mount so the blade assembly operates at any angle with reference to the fan. Motor/generator with a Spring-loaded CD clip mount or <b>an adapter to accommodate the 12 cm CD</b> attached to the shaft. Load resistance. A computer or recording multimeter and probes to measure voltage across the load resistor.	2-4	There may be one or two testing stations. If there are two testing stations: One will test the blade assembly at the higher speed. Other will test the blade assembly at the lower speed. The fans must be placed at a fixed position at least 15 cm above the table.

**Science Olympiad – 2017 Event Logistics Chart – FINAL**

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

<b>EVENT</b> <b>Bold are new for 2017</b>	<b>DIV</b>	<b>ROOM TYPE</b>	<b>EST. HRS.</b> <b>PREP TIME</b> <b>(incl. setup)</b>	<b>MINIMUM SUGGESTED SUPPLIES</b>	<b>HELPERS</b>	<b>COMMENTS</b>
<b>Wright Stuff - B</b>	B	Gym, cafeteria, high "clean" ceiling (with no rafters)	2-4	Balance-gram to 0.01g, stop watches, metric rulers-1 meter, 30 cm, timer	3-5	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	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	<b>Will need at least 1 model for every 4-5 teams. Make sure supply bags are uniform.</b> Setting up bags and building structures requires much time; No spectators. Glass doors and windows to hallways should be covered. <b>Develop good rubric for scoring.</b> ; 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
<b>Trial Events:</b>						

**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  
Ecology, Invasive Species , and Dynamic Planet

**C EVENTS**

Write It Do It and Experimental Design  
Forensics, Chemistry Lab, Materials Science  
Ecology, Invasive Species, and Dynamic Planet  
Game On and Hydrogeology  
Dynamic Planet, and Astronomy

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>  
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 must 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\\_borrowtitechnology.html](http://education.ti.com/educationportal/sites/US/nonProductMulti/support_borrowtitechnology.html)