



STEM-H CENTER

PROMOTING SCIENCE, TECHNOLOGY, ENGINEERING, MATH & HEALTH EDUCATION

Central New Mexico Science Olympiad Information for Event Supervisors

What is Science Olympiad?

- SO is a national competition that brings together middle school (B division) and high school (C division) students to compete in science-oriented events.
- **OBJECTIVE:** The objective of a Regional Science Olympiad Tournament is to provide fair and representative challenges based on the current rules for the events. The result of the tournament is that a certain number of the teams based on their total placing in all events are invited to the State Tournament. Every event counts equally in the overall team score.
- Some events are written tests, some are lab practicals, some involve pre-construction of devices prior to competition, and some involve construction of devices during the event. Each event has its own rule sheet by which the event is run. These are published ahead of time to the teams and supervisors so that everyone can enter the competition with equal expectations.
- The result is a variety of challenging and fun activities for all involved. The competition is broken into individual events, each of which last anywhere from 50 minutes to several hours for drop-in events.
- Teams consist of a school group of up to 15 students (per school). The team is broken into smaller groups of 2-3 for each event.
- Placing in an event is recognized for the group and scores points for the entire team. In the end, medals are awarded for top scores in each event and schools are ranked by the number of total points accumulated by participating in and placing well in events.
- Be aware that teams, especially those smaller than 15 members, may not have been able to prepare or prepare well for a particular event, but do get a point for participation; so, should not be criticized for coming unprepared.
- The top few teams at the regional competition qualify to compete at the state competition held a few weeks later at New Mexico Tech. The top team from state

carries on to the national competition held in a different location each year.

What is an Event Supervisor?

- ***AS AN EVENT SUPERVISOR (ES), YOU ARE ENTIRELY RESPONSIBLE FOR ALL ASPECTS OF YOUR EVENT!***
- An event supervisor is a volunteer with relevant expertise who manages an individual event of the competition. It can be a teacher, student (college or above), industry professional, past or present. Nearly anyone with a background in the event's topic is welcome!
- The event supervisor is responsible for understanding the rules and creating an event based on the rules.
- The ES identifies everything necessary to run the event. This includes any paper tests, construction materials or supplies, equipment, test apparatus, measurement devices, etc. It is helpful if the ES can also provide needed supplies, however, the STEM-H Center can locate and provide the materials IF the ES provides a list well in advance of the competition (no more than three weeks before the event). For written tests, the ES is responsible for writing the test, however, the STEM-H Center can make copies if provided the test no more than one week before the event. The STEM-H Center will also provide scantron sheets if needed. The rules for each event specify what materials must be provided by the ES, and/or outlines the kinds of things the ES would need to bring, create, develop, etc.
- Many event supervisors work in a facility that can help them provide necessary supplies and/or equipment. Others know someone in a position to help them acquire what they need. The STEM-H Center will purchase the supplies you need within reason. Please let us know by early January.
- There are typically approximately 15 teams per division, so each event supervisor should be prepared for 30 students who work together in teams of 2.
- Being an ES requires preparation and foresight. It requires some logistical planning and organization. Most of all, it requires excitement and interest in sharing the subject matter with young budding scientists and engineers. It is in that spirit that event supervisors provide great service to the SO mission, and to the young people in their community. It is a highly rewarding way to contribute your time and energy.

What Support is Available to an Event Supervisor?

- Advice, insight, and other support are available from the competition coordinator. Please get in touch if you have any questions or need any help: scifair@unm.edu
- Find your event's pages on the National Science Olympiad home page: <https://soinc.org> Here you will find essential information that you need to be familiar with, including FAQ guides to the event, advice on preparing the necessary apparatus and supplies, rule clarifications (and you can request clarifications of your own there too), etc.

- Contact the competition coordinator by early January if you need to purchase supplies.
- Copying of paper tests and other documents can be done by the STEM-H Center if provided a minimum of one week prior to the event. Email your document to the competition coordinator with instructions of how many copies you need one week before the competition. Many event supervisors find that their employer is willing to provide this as a service to the competition, but we are happy to copy whatever you need with advance notice.
- WRITTEN TEST EVENTS - We may be utilizing the SciLympiad platform for some or all of the written test events. Please contact Erin Garcia at scifair@unm.edu to find out if your event can be offered via the platform.
- Volunteer help is available from the STEM-H Center on a limited basis. You are encouraged to use assistants and/or co-supervisors. It is ideal if you, as the ES, can recruit them from your own pool of friends/colleagues/associates, but if you need someone assigned to help you please let us know and we will try to find someone.
- The STEM-H Center has purchased resource DVDs for many (but not all) of the events. Please contact scifair@unm.edu if you are interested.
- Light breakfast, coffee, lunch, and bottled water are provided for Event Supervisors at the event site in the Scoring/Administration room. Other beverages and snacks are available from vending machines in campus buildings.
- **Note:** you are not required to stay all day, although some event supervisors enjoy watching events that are open to observations and being present for the excitement of the awards ceremony.

What are the Major Roles of an Event Supervisor?

- Responsible for conducting the event according to the Current Science Olympiad Rules exactly as printed in the current Rules Manual. Do not assume that they are the same as last year. Read them carefully. Note that some B and C Division events may be similar; but again, read the rules carefully, the events are normally not identical.
- Responsible for bringing/obtaining/requesting all material and questions necessary to conduct the event and coordinate with Co-Supervisor as applicable. If assistance is needed from STEM-H Center (copies and/or materials), please let them know as soon as possible and get materials list to the STEM-H Center no later than 3 weeks prior to the event.
- Answer Regional Director and/or Coach questions whenever possible. Don't give answers which would give any team an unfair advantage.
- Encourage and challenge students in a professional and friendly manner. Remain objective.
- Complete the Event Roster and Event Ranking Sheet and return them to Science Olympiad Office/Scoring Center with all student papers and calculations used to figure final scores as quickly as possible after your event has concluded. Leave a set

of questions and an answer key with your scores. These are filed in case there is a challenge to a placing. Please plan to remain after your scores have been turned in to answer questions of staff entering scores and arbitration team. Every effort must be made to eliminate ties.

- Communicate with Co-Supervisors to determine respective roles.
- Bring judging assistants, if possible, or make certain that you have communicated in writing with the tournament site coordinator your needs for officials. Communicate clearly with assistants who may be unfamiliar with your event.
- Be certain to avoid duplication of specimens or questions that you may have used at other tournaments or a Science Olympiad tournament from the past few years to avoid favoritism.
- Plan ahead and have a good time!

What is the Role of a Co-Supervisor?

- Become familiar with the event rules to assist the Event Supervisor with any clarifications.
- Assist the Event Supervisor in the conduct of the event
- Communicate with Supervisors to determine roles and responsibilities.
- Refer to numbers 1, 4, 6 and 9 in Event Supervisors list above.

How Should an Event Supervisor Prepare for an Event?

- **Read the rules thoroughly for your assigned event and understand them completely.** Check the National Science Olympiad website frequently for rules clarifications. It is easy to underestimate the degree to which the rules are bent and stretched to every possible extreme by the competitors, so it is essential that you know them absolutely. Interpret rules from a competitor's perspective, one who tries to exploit every possible liberty the rules could offer. Also, some teams may be unfamiliar with the rules if they have not prepared that event.
- Prepare your event with plenty of lead time to be sure you put together all necessary supplies and equipment. Be sure you don't leave this to the night (or even week) before!
- Some events require that the ES build something prior to competition (such as a test jig, measuring device, etc.)
- Many events require gathering supplies that are not necessarily found at home or around the office, or at the kind of stores that are open on Friday nights (scales, stopwatches, lab supplies, craft materials, etc.)
- Unless it has special space requirements (usually this is obvious), your event will likely take place in a classroom with a blackboard or whiteboard and table up front, and a

number of one-piece student desks. Plan accordingly, you'll need to bring everything else needed for the event.

- It is a good idea to have someone else read your rules and take your test and/or do a dry-run through the event to identify potential problems or reveal things you might not have considered in your preparations. You may need time to work on adaptations afterward.
- Make plenty of copies of your tests/documents (bring twice as many as you think you need) and bring extra supplies (including any craft/construction materials if needed, and batteries/refills/etc. for any necessary equipment)
- **Re-Read your rules, check and double check your event's requirements** and be sure you have everything ready.
- Come to the competition and have a great time! You'll be provided with the time and location of your event ahead of time. Arrive early enough to check in with event headquarters and get set up. After the event you will need to clean up and score the entries and report the event results to the competition headquarters. You will be asked to provide a contact number for the following few hours in case any questions arise. You may stay for the award ceremony if you wish, it tends to be highly spirited.

Tips for Preparation and Smooth Running of Events

- You will receive an "Event Roster" from the tournament directors that serves as either a roll to check or a sign in sheet to see who is present and a score sheet that you will turn in with the Rankings (e.g. Teams listed in order of Highest to Lowest Score) and raw scores on it. Bring paper just in case for a sign in sheet and for your notes, scores, etc.
- After running your event, be sure to score it as quickly as possible and bring the tests or data used in scoring, your scoring key if applicable, and your Event Roster to the Scoring Room. NOTE: The tests and raw data are kept for a minimum of 30 days after the event in case someone challenges a placing.
- Make them easy/fast to grade. If you are running an event the last part of the day, be aware that scoring needs to be especially quick since the awards program usually takes place as soon as possible after the events end.
- DON'T MAKE THE event TOO long...it's okay if they finish before the time period ends. This is a common problem with first time event leaders....MAKE IT SHORTER than you think you should.
- Also, be sure to design your event so that it lends itself to being "placeable". By this we mean the event must have something that is gradeable and that will produce a unique score for each team (no ties).
- Be sure to have some place on the answer sheet or event materials for the students to write their team/school name and their names. NOTE: Remind students that if a school has more than one team, they must designate Team A or Team B, and they

should use their formal school name because shortened names may be the same for two schools.

- Prepare answer sheets that can be scored quickly. Do not hesitate to use multiple choice type questions or questions with simple answers that are one word or a few words as well as short answer questions. Some events lend themselves to identifying unknowns, etc.
- Be sure to read to see if the rules provide recommendations for breaking ties. **TIES MUST BE BROKEN.** The best way to break ties is to select parts of your event or certain questions to use. Score all parts of the event and then if ties exist, use the team's score on the part of the event you selected. It would be good to have more than one area selected in case a tie exists after the first tie breaker is used. TIME IS NOT A TIE BREAKER in content-based events.
- **WHATEVER you do, it is critical to be sure that all teams receive the same testing conditions.** *NOTE:* If you are doing both the middle school and high school levels for the same event at a tournament, consider using the same event for both levels with minor changes in a few questions to make the event more appropriate. However, be aware that teams should not be able to gain an advantage by the "B" and "C" teams communicating. So if there is a break between the two, the test should be considerably different. DO NOT be surprised if you used the exact same event and middle school students do better in some cases.

What are the Scheduling Formats of the Events?

Events are usually formatted in one of three ways:

- In a set time frame, usually 50 minutes
- Walk-In which means the participants have a period of time during which to come do their event, e.g., testing bridges, towers, running cars, etc., often the construction events
- Walk-In, but By Appointment – Sometimes, events are run by appointments where teams can sign up for a specific time. Often students are competing in more than one or two events and if they can sign up for a time slot (specific order, or by half hour, for example) it will help students to be able to compete when they are free. Students are generally respectful of team that need to get to another event if they do not need to do so and will allow them to precede them, etc. Good sportsmanship is encouraged!
- Impound: often the construction events are dropped off at the beginning of the day or event block so they can be inspected for rules compliance, e.g., maximum or minimum weight, length, types of construction materials, etc.

What are Four Possible Event Formats?

Method One – Station/Rotational Format

- This method is much easier in some ways since the teams involved would simply rotate

through the event answering 1 to maybe 4 questions or a task to perform per station. This type of set up works really well with an answer sheet per team being all that is required for grading.

- Care should be taken to try to design each station to require about the same amount of time. Usually, 14 to 16 stations are quite sufficient which means about 2 to 3 minutes per station, or less depending on the complexity of the task.
- If more teams are present than stations, simply have either rest stations periodically in the room (recommended) or have some teams wait to enter the rotation.
- Number your locations and arrange them so that the students can quickly and easily move from one location to the next one. If your answer sheets are also arranged in the different station number order, it is easier for the students not to become confused.
- Make sure that everyone has writing utensils, extra paper, and any other required materials before they enter the room.
- You should call your roll or have them sign in outside the room since it is already set up with questions on the tables or desks. An alternative method is to have all of the questions covered until you are ready to begin. It is important that no one has seen the questions before you begin.
- They must take their answer sheet and writing materials with them as they move. Remind them to look only at their own answer sheet and to keep any conversations at a whisper so that they do not let others hear their answers.
- It is advisable to tape down the question sheets at each location.
- The event leader must choose the length of time between locations and make sure that it remains exactly the same throughout the entire contest. The number of teams present determines the length of time. Some regionals have as many as 20 teams. This may limit the time to 2 minutes per location. This will allow barely enough time for check-in and instructions in a 50-minute block. Try to choose a time that will give students the maximum time without causing you problems with instructions, sign in, etc.
- The event cannot run overtime. That would be a serious problem. Students must be able to attend their next event, and if the room is shared the next supervisor must have time to set up while the former cleans up.
- Tell them that anyone tampering with the materials to confuse or delay other teams will be disqualified from the event. It is very important that each team find the questions and materials in the same order as all other teams. Circulate around the room to be attentive to problems.
- Questions asked that you find are necessary to answer for clarification during the first round, may be written at the station so all teams have the same information. This should be minimized; you could decide to grade it later, or it may be a good tie-breaker.

Method Two - Stationary Format

- This method is very similar to the more typical test that students are accustomed to BUT should include applications and hands on as much as possible. The Science Olympiad discourages paper and pencil testing that resembles tests given in a classroom setting.
- This type of event preparation should also include graphs, diagrams to interpret or identify, observations to make about a set up of some type, interpret information presented in a video, questions about a demonstration that might be performed for the entire group, etc. This requires more preparation as far as copies of the event, etc. CAUTION: This type of event is usually slower to grade and this must be considered when preparing the event.
- A student or team of students will sit in one location for the duration of the contest. All of the questions and materials that they will use are at that location. They may be provided with an answer sheet so that they do not mark on the questions or other materials.
- The event leader should design enough questions for the event period, an answer sheet and key. Make sure that you know the number of teams in advance, so that there will be enough copies and locations for the teams to sit. Bring a few extra for emergencies.
- The event supervisors usually make the copies that they will need. If your Regional Director has agreed to make copies for you, make sure that he/she has received all materials that are to be copied well in-advance of the tournament date.
- Each team must have all of the questions, pictures, specimens, etc at their disposal. If the event period is 50 minutes, prepare questions that should take about 40 minutes to complete.
- There is a tendency for some event leaders to lean toward a written test with recall answers. Some events have one part that consists of test questions but it is the philosophy of the Science Olympiad to emphasize process skills and mental challenges. Events run this way may contain some recall-type questions, but most questions should emphasize critical thinking and reasoning. Questions that ask students to observe, describe, evaluate, analyze, apply, predict, interpret, classify, measure, infer, hypothesize, explain, and make judgments should be used.
- When these events are completed it is important to get a assistants to help you score the answer sheets as quickly as possible. A good key will be necessary to all are scored identically.

Method Three - Lab Practical Set Up

- This method is something of a combination of the first two methods where the team has its own set of materials or equipment they bring and/or the supervisor provides with which to perform an experiment, or whatever is required. While the team does NOT rotate through stations, this is like that method in that each team has a set of materials. Obviously, this requires more set up on the part of the event leader and

should be a factor that is strongly considered in terms of the room in which the event is held, number of teams competing, etc. The event leader could have 1 station for each team, or 3 sets of 6 or 8 identical stations, and the teams know they must complete one station in each set. If more than one lab station will be completed by students during the contest, it is important to have multiples of each station so that every team has the same amount of time at each station and no one has to wait on another team. Therefore, it is important to know the maximum number of teams that will participate well in advance of the tournament date.

- Materials, tools, and supplies (such as water, pH paper, reagents, etc.) are placed at marked locations for their use during the labs. Check the rules to be clear what the supervisor is to provide, and the students may bring and check that they only brought allowed items. Students may challenge the scoring if equipment the team was to bring is provided to teams that did not follow bring items since it was their responsibility to read the rules carefully and come prepared.
- Safety is a critical issue and student must always wear the designated safety equipment in the lab. Again, teams usually are responsible for their own safety equipment.
- It is important that the event leader have everything ready-to-go.
- After the initial instructions, the leader should circulate throughout the lab to observe students, answer questions, and provide for their safety. It is a good idea to have an extra set for each station in the event of an accident.
- Be sure to warn students about safety and tell them that anyone tampering with the supplies to hinder the work of other teams will be disqualified immediately.
- Most lab events are usually scheduled earlier in the day to give you sufficient time to score the results, but it is still important to get the results to the scorers as soon as possible.

Method Four- Construction/Performance Format

- Some of these events require students to construct a device prior to the tournament and others have students build a device during the competition.
- It is very important for the event leader to be very familiar with the specifications for the device. There will be answers to frequently asked questions and clarification on the Science Olympiad Homepage. Be sure to check that link for your event. Make special note of the events that require impounding.
- Typically devices can fall apart or get slightly damaged while traveling on activity busses. If a team shows up with a device that does not meet all specs, we generally let them make minor corrections on the spot (if this does not give them an unfair advantage). Usually this is as simple as something sticking out of the device that can be tucked in or removed. If we can allow students to make simple corrections (quickly), we would rather do this and let them compete rather than send them away in a "cold-hearted" fashion.

- If a device is unsafe but could be made safe by the removal of some part or object, we usually allow the student to do this and continue. This must be done prior to operation. If a device becomes unsafe during the event, we must stop it at that point. We do not compromise safety.
- If the team cannot get their device to meet all specifications, then most events have a provision for them to continue to compete if the device will work. However, none of the devices that fail to meet specs are allowed to rank higher than any device that did meet the specs. Make sure that you are clear on this point for your event. If a device will not operate at all it is still important to record that the team did show up with a device and participated.
- The North Carolina Science Olympiad Homepage has a score sheet for all of the construction events. Please use the appropriate score sheet for your event. You will need to make copies unless your Regional Director has agreed to do this for you. You will also need to bring or make arrangements with the SO Coordinator for any measuring devices, stopwatches, and calculators that will be needed.
- Since each event is so different, read the following instructions for your event. Keep in mind that the event may vary greatly between the B (middle school) and C (high school) divisions

What Are the Most Common Problems with Events that the ES Can Prevent?

Generally, the events go quite smoothly, but there are sometimes problems that can be prevented, and these are the most common among them:

- Lacking the proper preparations and/or equipment. Inadequate supply of tests and/or materials.
- Assuming anything needed will already be there (aside from the space, contestants, and anything specified in the rules that the contestants must provide themselves).
- Make yourself a checklist to prepare to bring and to do at the event!
- ALWAYS be sure to have everything you need before you arrive at the competition because there will not be time in which to run out to get something you forgot! This includes the following:
 - Enough copies of any testing materials for all the teams
 - All equipment needed such as stop watches, balances, etc.
 - DO NOT assume the competition coordinator is supplying this type of equipment unless you ask ahead of time and then arranging to get these materials before the day of the tournament is recommended.
- Events that are not properly based on the published rules--they are typically quite specific and contestants expect that the event will be presented as described.
- If, due to the facility accommodations or other unavoidable problems a rule change

must be made for the local event, inform the Regional Coordinator so all teams may be made aware if necessary.

- Do not try to bend the rules to “be nice” to the teams that may be unprepared or that did not read their rules carefully. Those teams who were responsible will most likely challenge the rankings.
- Insufficient attention to detail during the judging/evaluation of the competition. Assistance in judging must be consistent.
- Make sure to remind students that all electronics must be turned off. If computers are allowed for the event, be sure to have a method of checking for no wireless connections if needed.
- **DO NOT discuss the performance or expected placing of ANY TEAM or student with any coach, student, or parent during or after your event.** This creates a lot of confusion at times when results are not what a team expects. Challenges go to through the mediator.
- **DO NOT** post scores, or device specifications, times, etc. for teams.
- Coaches and/or parents **MUST NOT** be allowed to communicate with team members during their competition when observers are allowed, usually for many of the drop-in events.