

New Coach Handbook

Michigan Science Olympiad New Coach Handbook 2021

Introduction

Welcome to Science Olympiad. Whether you are starting a new team at your school or inheriting an already established program, you are probably concerned about all of the details that go along with the job. This document is intended to provide tools and guidelines for you as you enter into your first year as a coach. The following timeline is only a suggested timeline. Although this manual is for new coaches, each coach faces unique conditions. You will adapt and modify as you learn what works best for your students and school situation. Many new teams do not start Science Olympiad training until later in the school year. Also, they don't always compete in all of the events. So, this guide covers things from **basic level (in red)** to those things expected from an experienced team.

This document is set up with a glossary first to get a little of the vocabulary that is peculiar to SO to make it easier to read the subsequent sections.

Here are a few websites that are important starting points:

soinc.org – this is the national SO website and has important guidance, policies and information for all coaches. You can also download the rules electronically (pdf) from this site at no cost.

miscioly.org – the Michigan SO website. Where you sign up to register and get news about tournaments in the state, as well as guidance.

scioly.org – an unofficial site run by volunteers and students. Lots of good info but NOT official guidance. Be cautious about information you take from the site.

wikipedia.org – generally safe and usable site for scientific info. A good place to do initial research into various topics. The math tends to go straight to calculus, so sometimes confusing for middle schoolers.

Getting started can be pretty overwhelming at first. Your regional director or the state director (michigansodirector@gmail.com) should be able to put you in touch with an experienced coach to help mentor you.

Glossary of Science Olympiad Terms

1. **Alternate team members** – You may have more than 15 students wanting to compete. Students beyond the official 15 competing team members are called “alternates”. These students may be used as substitutes if an official team member becomes ill, injured or cannot compete at a tournament. You will need to clear this with the Regional director before substituting a student. In addition, alternate students are allowed to compete in trial events.

2. **Alternate team** – a team that can compete in invitational competitions and in *some* regions at the Regional Tournament, but not in State or National tournaments. (There is a small fee to register an alternate team.)

3. **Arbitration** – This is the process which allows a coach to file a complaint concerning the way his/her team has been scored, allowed to run their device, or any other concern that seems to violate the rules as stated in the rules manual. It is strongly suggested that the coach talk to the event supervisor before filing for arbitration. Often, things can be resolved at that point. Most regions have paperwork that must be filed within a specified time frame as well as a designated person(s) who will determine the outcome. Most tournaments require that only the head coach for the team can file for arbitration.

4. **Director** – This is the person in charge of the planning and implementation of the tournament. All questions you have about the tournament and competition process should be directed to this person. This person is also called the “regional director” or “site director” in Michigan.

5. **Division** – SO is divided into Division B (6-9th graders) and Division C (9-12th graders). There is a Division A for elementary schools that is in-school only.

5. **Event** – SO each year has 23 events. About 30% change each year and their rules typically change slightly from one year to the next. Tournaments are run with multiple events at the same time (like a track meet). There are three general categories of events: a pure test event; a lab event that combines a test and a hands-on portion that may require building a device beforehand; and a build event that requires building a device beforehand and running it at the tournament. Almost all events require 50 minutes each. Squeezing all those events into a six-hour period requires some careful scheduling. Directors should release their schedules as early as they can so coaches can plan their team schedules.

5. **Event Supervisor** – Event supervisors are dedicated volunteers who prepare, implement, and score each of the competition’s events. Regional, State, and National level tournaments recruit their own event supervisors. All event supervisors (no matter the level of competition) MUST follow the event rules. These are not paid workers. They are volunteers. Have your students thank them for their work.

A word of warning: invitationals normally require a team to provide an event supervisor for some event. If you have a primary team and an alternate team at an invitational, you will need two event supervisors. Tournament sign-up forms will normally have a place to volunteer for your preferred event(s). You will need to track down volunteers as soon as you know you want to sign up for a tournament. Even if you volunteer for an event, you may get stuck with a different one.

6. **Headquarters** – Most tournaments have a designated area where you can find the tournament organizers so that questions can be asked about the tournament. This may also include an area where event supervisors can turn in their tests, scores, and rankings. Many tournaments have scores reviewed to verify accuracy before they are recorded.

7. **Impound** – This is the process used to check in team-built devices before competition begins. Events that require advance impoundment are indicated in the events rulebook. Tournament schedules will indicate the time and location where impounding will take place.

8. **Invitational** – Practice tournaments organized by schools are called invitationals. They are useful to practice learned material, get copies of tests to use for study purposes, and compare team-built devices to those made by other teams. To find available invitational tournaments in our state, review the list on the MSO website. To participate, register with and pay the organizer. These events are not “by invitation” but are open generally to all registered teams, and may attract teams from beyond Michigan. The exact roster of students you register for these events is not required to match the roster you bring to other tournaments.

9. **Regional** – In Michigan, there are 15 geographic regions. A “regional” tournament is the competition between teams from that local area, and qualifies a portion of them to participate in the State tournament. There is a map of these regions at the MSO website along with Regional Director contact information and competition locations and dates.

10. **Registration** – Team registration opens in early June for the following year’s competitions. Registration takes place at the MSO website (www.miscioly.org). If your school has previously been registered with MSO, you can locate the listing for your school in our “inventory” of available registrations. Or you can enter your school if new to SO. Select the “primary” team level and click the red Register button to place it in the shopping cart. You may also register an “alternate” team at this time or later by repeating that process. When you are satisfied that the items in your shopping cart are correct, you may check out. Your payment options include paying immediately by Paypal, or by Credit Card. An additional fee will be charged if you choose one of those methods. You may also indicate that you are paying by check, and follow up by sending that to the listed address. If you pay by check, your account status will be on-hold until we receive that payment. Once your payment is received, and your registration is complete, you will receive an email with this notification. ***Teams that have not registered and paid the membership fee are not allowed to compete.***

11. **Self-schedule** – Some events will be “self-scheduled”. This means that individual time slots are available for teams to choose from rather than be placed in a block of time assigned by the tournament director. If your regional director has self-scheduled events, they will inform you of the time slots along with directions for the selection process. A highly competitive team will want to complete the self-scheduling process right away to secure times that work best for them. Most often, tournaments will do self-scheduling online using a Google doc or equivalent. Sometimes, they will specify a specific start date and time to allow a more fair opportunity to get good times.

12. **State** – The State competition is typically held in late April each year at Michigan State University in Lansing, MI. Invitations to the State tournament from each region are allocated proportionately based on the percentage of teams from region compared to all teams in the State. The top two division B and division C teams are invited to compete at the National tournament held in May. Questions – contact the Michigan State Director at michigansodirector@gmail.com.

Things to do

August – In August, teams typically begin planning the year. Coaching Workshop and Invitational Tournament announcements will start to appear at the MSO web site, www.miscioly.org. The event rules are being completed at the national level but a list of events becomes available in September on the National web site, www.soinc.org. It will be worth your time to spend about a half-hour learning what is on the soinc.org website and learning to navigate it. Pay particular attention to Policies, Events and FAQs and Rules Changes areas. A more complete list of choices is at the Menu button at the top left of the homepage.

August tasks include:

Seek school approval for a team (if necessary). There are YouTube clips available for help convincing administration of the value of Science Olympiad. If you can manage to convince the administration, Schedule B stipends for staff could be available and will help recruiting staff to be coaches.

Review the membership rules for organizing a team at <https://www.soinc.org/team-qualification-and-home-school-policy>.

Register your team at the MSO web site (www.miscioly.org). Directions for using the MSO website registration are included in the glossary of this document under “registration.” This also registers you with the national organization. You do not have to separately register with the national office.

Outline the current year: Plan for a team organizational meeting (you might want to first meet with returning team members if you are inheriting an established program.)

Plan for a parent meeting later in the fall after you’ve established your team.

Find the contact information for your regional directors and the date of your region’s spring tournament. This is found on the “regional map” at www.miscioly.org

Set up a database of information for your reference. Record names, student ID numbers, current grade levels, phone numbers, and parents’ names. A mentor coach may be able to give you copies of theirs as a starting point. As with most educational and scientific activities, paperwork comes with the territory. Take advantage of anything you can to avoid re-inventing things that already exist.

Promote the team. Hallway posters, signs, and banners are a good idea to recruit team members.

Promotional brochures about Michigan Science Olympiad are available from the State membership director upon request.

September In September, registration is underway. Event rules are available at the www.soinc.org website. Regional Tournament and Coach Workshop dates with registration information are posted on the MSO web site. (Michigan Science Olympiad sponsors coaches workshops during Nov & Dec.)

Tasks to start your season:

Register and pay your primary team registration fee to MSO. (Alternate teams can be registered for a small additional fee.) **If you are paying by check and your registration status has not been updated, check first with your school business office to see if your registration check has been mailed.** Some districts only cut checks once a month. This might delay your registration. Your payment must reach MSO by **10 Dec** or a late fee of \$50 is assessed.

Read the rules for each event carefully. The rules are very specific and must be strictly followed by your students and their coaches at all times. Questions about rules are often addressed at the National web site in the Events Clarification section.

Make contact with your regional director to introduce yourself as a coach, if you are new.

Hold first team organizational meeting. Introduce the events at this meeting to generate student interest. Students can sign up for events that they might be interested in doing. Remember you don’t have to participate in all of the events. Go with the ones that seem to be of most interest to your students. Also, because of tournament scheduling and preparation time, limit each of your students to the 3-5 events they are most interested in.

Distribute copies of event rules for students to use in studying for events.

Solicit parent help. Sometimes parents can be the best assets to help coach events.

Set up & maintain a team web site or Wiki site. This is a great way to promote the team.

Start gathering resources, study materials, supplies, and mentors. Build a SO library for future use. Take advantage of information on the web. Look to others to help mentor events. “Many hands lighten the load.”

Set up team practice schedules. Some teams practice after school. Other teams practice on Saturdays. Lunch and study hall time can be used. An elective course can also be established.

September through November ----- If you can organize in the fall, your students will be able to take advantage of holiday breaks to study and prepare for their events. It’s also a time when coach workshops will be offered. *(But if you are just getting started and can’t pull it all together in the fall, you can still plan on competing at your Regional Tournament. Many schools don’t start their teams until January.)*

Other suggestions for fall organization include:

Work with team members to determine which events best suit their interest and ability. Students should plan to participate in at least 3 different events if you plan to compete all of the events. This will provide team versatility. (Remember you do not have to compete in all events.)

Regions publish their tentative tournament schedules any time from November to February. They may be on their own website or sent to you as a registered team coach. Use the schedule to match students with events. **Once a schedule has been published, assign students to the events they should plan to compete.** Sometimes conflicts with the schedule happen. This is difficult for students who have spent a lot of time preparing for an event only to find they have 2 events in the set schedule at the same time. The tournament schedule cannot be amended for these conflicts. Team versatility helps. The State tournament schedule is published in October. Highly competitive teams will compare their Region's tournament schedule to the State schedule to avoid conflicts and make adjustments accordingly.

Make sure your yearbook supervisor takes a team photo of you and your team for your school yearbook.

Do some team fundraising to help with costs like team registration, supply purchase, and possible team travel costs. (Some districts make teams pay for school buses to transport teams to competition.)

Register for and attend a coach-training workshop. They are valuable information sources. Network with coaches from neighboring schools.

December --- January In December & January & February, some schools host invitational tournaments. Invitational tournaments are awesome ways to give your team members practice competing in their respective events. There are small fees assessed for participation in these invitationals. But the cost is well worth the experience that students gain from participating in them. Invitational information will be posted at the MSO web site as it becomes available to the State board.

Other suggestions for December & January include:

Attend the coaches' meeting at your regional tournament site. (This information will be sent to you by your regional director.)

Expand student study and project building time. Hold organized practices right up until your Regional tournament date. Create assignments for students to do over holiday break.

Test constructed devices as soon as possible. **Measure the devices carefully.** If there are dimensions published in the rules and you are slightly off from those dimensions, your device will be ranked lower than other devices in event scoring at tournaments.

Prepare paperwork for competition. (permission slips & paperwork required by your regional director). This can also include paperwork required early for self-scheduled events. Make sure you adhere to deadlines for paperwork submission. Submit request for self-scheduled events as soon as possible. Workable time slots often fill up quickly. Your region will send out information about this in January.

Organize transportation for the team to the regional tournament site. Include room for student devices, assorted notebooks and food.

February – March – This is the time period for Michigan regional tournaments. Each region hosts a tournament at a designated location on a designated day. These dates are available through the regional director (and are published at the Region Map at the MSO web site - www.miscioly.org . The regional tournaments are qualifying tournaments to the state tournament and only about 25% will qualify in a normal year.

This is "crunch time". It can be very intense time for students and for the coach. HANG IN THERE !!!

Suggested late winter tasks include:

Make sure you have all required regional tournament paperwork completed and submitted. Some regions will require teams to provide 2-3 volunteers to help run the tournament. Try to line up parents or other teachers to do this.

Finalize travel arrangements to get the team to the regional competition.

Collect signed permission slips.

Continue practicing and fine-tuning events.

Make sure ALL devices used in an event are clearly labeled with your team name and Regional tournament team number.

April - The State tournament is usually held the last Saturday in April at Michigan State University in Lansing. The top 2 teams in each division (B and C) are invited to compete in the National tournament. If your team qualifies for the State competition, congratulations!!

Things to plan include:

Your practice will need to continue. (Some teams even practice during spring break.)

Be sure you submit required paperwork for the State tournament on time. This might include self-scheduled events.

Organize transportation for the team to and from the State tournament. Unless you are in reasonable commuting distance of Lansing, this could well be an overnight trip with a motel stay.

Submit names of parents who are willing to volunteer at the State tournament.

If you did not qualify for State, you may want to volunteer at the State tournament to see how it's organized. Your regional director can assist you in volunteering at State.

May - Unless you are competing at the national tournament, this is a time for closure for your team and planning ahead for next year.

Collect the resource materials that your team used and created this season. It is very helpful for creating year-to-year continuity and improving your team next year.

Hold a team party during this month to congratulate the students for all of their hard work. You might want to give awards (MVP, Rookie of the Year, Most Creative Team Member, etc.).

Write thank-you notes to people who helped your team along the way. Volunteers who helped you will be more likely to help again next year if you recognize and applaud their efforts.

June & July - This is the time to reflect upon the past season and plan ahead for next year. Keep looking at the MSO web page for updates over the summer. New event rules don't come out until after Labor Day however. Some events will stay the same. Some events will be retired for a few years, and some events will be brand new. It's still a good idea to keep a library of all of your reference materials. Typically, retired events come back again after 5 or 6 years. Registration for the next season opens in early June.

Other Useful Information Paperwork All must follow competition rules. Regional directors are required to collect the names and grade levels of the team members who will be competing. The principal or head of the school must sign this list. Some regions request more information such as which team member is competing in which event. It is important that you return all requested information carefully filled out before the deadline date. It's a good idea to keep copies with you at the tournament. You will be allowed to keep student medical forms but need to show that you have them available if asked at the tournament. You will be asked to do a new set of documents for the State tournament if you qualify for it.

Wrist Bands & Other Identification Most regions and the state tournament are using wristbands for students competing to wear to identify themselves as legitimate competitors. The wristband must be worn to enter an

event. It's a good idea to use a Sharpie marker to print the student's name, your team name, and team number on the band. Each region using a wristband will have a policy for replacing it should it become lost.

Competition Day Science Olympiad competition runs like a track meet. There will be a central team location or gathering place where students, coaches, and parents can congregate. Some teams set up a "team camp" complete with a school banner. There is a lot going on at a tournament and your efforts to help students be organized matter. Students will be competing in events at designated time periods. **Give them an individualized schedule of their events including times and locations for competition in each event. Student MUST be on time for an event.** Suggest they wear watches or have cell phones with time available to keep track of when they need to be at an event.

Some engineering devices will need to be impounded before competitions start. **Make sure you have your team name and number clearly displayed on everything you impound.** Make sure your students impound their devices on time before competitions begin.

Parents can provide coolers of snacks for students. Typically, these will be left at the designated team camp or team homeroom location. Keep an eye on belongings, however. Unfortunately, sometimes dishonest individuals steal things left unguarded. When not competing, your students can watch some build events. Test events are closed to spectators. It's always great fun to have your 7 comrades watching as you run your Mission Possible, Egg Drop, Helicopter, or other engineering event. And, encourage your team members to cheer each other on.

Encourage students to stay in their event for the full time. They should double-check work before turning in anything for grading. They should put their team name and team number on every single page they turn in just in case papers get separated by supervisors during the grading process.

Encourage your students to have fun. It's a busy day full of activity full of emotions. But it's a good kind of busy a fun kind of busy. Encourage students or parents to wait for competing team members to come out of closed events. It's nice to see a friendly face when you emerge from an intense round of testing.

Make sure you pick up impounded equipment and devices to take home. Learn from other teams. At spectator events, watch the other teams and their devices. Learn from their experience. Get ideas for improvement. But be respectful of their intellectual property. You should ask before taking a picture of another team's device.

Sit as a group at the awards ceremony. There is generally a designated place for the team and a different place for parents to sit. Take photos of students who go to the stands to claim a medal. This is great for the students, their parents, and for a team scrapbook. They make good yearbook moments, too. Take a team photo after the awards. This can be used the following year as a promotional tool. Cheer on the other teams. Stand and applaud the winning team. This shows good team sportsmanship.

Things for the coach to bring on competition day: Sharpie markers (for labeling if needed). Extra pencils with good erasers. Copies of paperwork you have submitted. Emergency phone contacts (as on medical forms). Extra nonprogrammable calculators. Extra safety goggles. Copies of graphs, energy transfer lists, or other documents needed to be turned in to Event Supervisors. Your own photo ID. Roll of duct tape (just in case), screwdriver, glue, etc for minor repairs to devices. Trash bags (to clean up your homeroom or camp space). Cell phone. Camera -TAKE LOTS AND LOTS OF PICTURES !!! (*Don't forget to put them at your web site.*)