

# **Kansas Science Olympiad**

## **Help for Coaches**

### **Working with your School Administration**

- Advise the appropriate persons that you will need transportation to a regional and possibly the State tournament so they can budget and plan.
- Advise them you will need several hundred dollars for supplies.
- Advise them that many schools provide a stipend or coaches supplement for coaching Science Olympiad.
- Make sure that the school mail sorters know to get Science Olympiad information to you as soon as possible.

### **Registration**

- Complete the state registration by the indicated deadline (usually early November, but check the Calendar link to the left for the exact date for the current year.) If you do not receive an e-mail confirmation of your registration, then there is a problem with it.
- Once you've registered, make sure you print your membership invoice and submit it for payment. Once the Kansas Science Olympiad Office has received your payment, you will receive the coaches manual which has the rules for all 23 events in your division.
- You must be registered before you can compete in any type of Science Olympiad Invitational or Regional Tournament.
- Visit the Kansas Science Olympiad Website ([webs.wichita.edu/ksscioly](http://webs.wichita.edu/ksscioly))
- Subscribe to the Kansas Science Olympiad ListServ. This will help you to stay informed regarding event rule clarifications. Information on subscribing to the ListServ can be found on the Kansas Science Olympiad Website.

### **Organizing Help from Teachers, Parents, and Others**

- With the exception of some high schools where students virtually run the team, you will benefit a great deal with help from others, especially your fellow teachers although there are many 'coach only' teams.
- Not all event coaches require a science background (e.g.: Road Scholar-social science, Write It/Do It-anyone , etc).
- Many teams have one or more assistant coaches.
- Recruit High School students to train Middle School students.
- Parents can free-up coaches by helping with fund raising (try local utility companies and service organizations such as Rotary, Optimists, etc. as well as PTA).
- Local colleges and universities will usually help students in specific disciplines (e.g.: a geology department helps in rocks, fossils and minerals).
- Consider local retirees, especially scientists, engineers, and teachers.
- Look to local nurses and physicians for health related events.
- Have a Science Olympiad display and/or demonstration at a PTA meeting to generate interest and support.
- Recruit a volunteer hobby videographer to develop a video of your team's road to the Science Olympiad.
- Never lose sight that Science Olympiad is a team effort for coaches as well as students.

## **Selecting the Team**

- Of course all students on a Science Olympiad team must attend the same school with the exception described below regarding 9th grade students.
- There are team limits of five 9th graders on a Division B team and seven 12th graders on a Division C team. (If you are a middle school, you can invite five 9th graders that were on your team the previous year to be on the team again.)
- Home school teams must meet the guidelines established by the National Science Olympiad Office.
- Advertise the possibility of being on the Science Olympiad team by using bulletin boards, daily announcements, school newspaper, etc. beginning several weeks prior to the organizational meeting.
- Have science teachers do Science Olympiad demonstrations in their classes.
- At the first meeting, describe or demonstrate some events to build student (and parent) interest and introduce the coaches.
- Borrow the short DVD that describes Science Olympiad and show it to perspective team members and/or parents. (You can receive a copy by contacting Greg Novacek. See the contact information on the Kansas Science Olympiad Website.)
- In some small schools or most first year schools you may need to take all comers in order to reach the limit of 15 students.
- Ask prospective team members to indicate, in priority order, which five or so events they would be most interested in to keep event staffing uniform.
- While ability is valuable, a student's commitment to come to practice and competitions is equally desirable.
- A mix of students is good; include some quick thinkers.
- It is okay to start small (fewer than 15 students) but, eventually, it is good to have 3 to 5 alternates in addition to a full team.
- Successful high school teams typically use a few Freshmen, several Sophomores, several Juniors, and (the maximum permitted) seven Seniors.
- Most students are in more than one event. The team usually cannot afford the "luxury" of a student specializing and participating in only one event.
- It always is a challenge to fit your students into the schedule. Your master student in one event may be just the helper in another event.
- Your best students probably will be in four or five events.

## **Coaching Materials**

- Attend the Coaches workshop held on the third Saturday of October at Wichita State University (follow the Coaches Workshop link on the Kansas Science Olympiad website).
- Try to attend one of the national training workshops (see <http://soinc.org/workshops>).
- Obtain test packets and other publications that are available through the National Science Olympiad store (<http://store.soinc.org/>).

## **Training the Team**

- Training regimens vary from school to school, but might involve before-school, after-school, during club periods and/or week-ends.

- It is best to train at school, but small groups will often work on specific events at their homes as this helps involve parents.
- The training schedule is somewhat determined by the number of helpers.
- Organize events into each discipline (biology, chemistry, earth sciences), process skills (nature quest, write it-do it, etc.) and building (trajectory, mission possible, etc) and have each group arrange their own training schedule.
- The students must learn to work as a member of a team and to be cross- trained in other than their prime events and flexible enough to work with anyone as a partner.
- Students should keep notebooks for all "academic/knowledge" events for handouts, etc. - this gives them an organized method to study independently.
- For many events, quick recall is important so if reference materials are allowed, organize them to be used quickly.
- For device building events, encourage divergent and numerous efforts.
- Remember that in the building events, the student(s) which build the device must be one of the 15 competing team members.
- Try to keep the training as much fun as possible (music, snacks, etc.).
- Set goals like "everyone getting a medal or ribbon" or "qualifying for the State Tournament".
- Plan activities to bring the entire team together periodically like field trips, pizza parties, swim parties, etc.
- BE FLEXIBLE - if you want a well-rounded team you will need to work around their other activities letting them help you set training schedules - don't set arbitrary times and expect them to be there.
- Try to attend an invitational tournament to give your team an idea as to what a tournament is like. Most invitationals do only some of the events and they may require you to run an event.

### **Before the Regional Tournament**

- Keep in mind that your first tournament is part of the learning process.
- You may not want to compete in every event, especially if you have a small team, but you are encouraged to participate in as many events as possible to learn for 'next year'.
- The dates of the tournaments and sites are on the Kansas web page.
- Publish competition date(s) early and get commitments from parents and students.
- Once you have been assigned to a regional tournament you will receive information about that regional tournament directly from the regional director.
- If your regional site has a coaches meeting (usually several weeks before the tournament), then make it a point to attend!
- If there is no coaches meeting, you may want to try and visit the site in advance anyway -- since competition day may not be the time to find buildings and rooms.
- Prepare a master schedule for your team - who is where and when, and put a map on the reverse side. Each student should have a copy and it would be good to brief him or her before arriving at the tournament.
- Organize materials for each event in bags so the required materials (pencils, goggles, etc.) are ready to take on tournament day.

## **Regional Tournament Day**

- Don't forget that the most important task is to get the students and their equipment to the correct room and on time.
- Arrive at the tournament in ample time to register, learn of any changes, impound devices, etc.
  - Teams that arrive late have a hard time "catching-up" and waste their valuable training.
- Assign students to impound devices so they will know where those events are held and may learn something about how the event is being run. Devices that are to be impounded must be impounded by the stated time.
- Many devices are fragile and do not travel well so consider having them ride in a parent's vehicle where they are less vulnerable to student damage.
- The most stressful part of the day may be the first hour as the coach checks in, locates rooms, unloads equipment, gets devices impounded, sets up base camp, etc. The more that can be done in advance, the easier the day. Adult assistants can be especially helpful then.
- You will want to set-up a 'base camp' where team members can come between events and where messages can be exchanged. (At the state tournament a room is assigned to be your base camp or homeroom.) Bring paper and markers, try to keep someone on duty at all times, perhaps with snacks. Also, have extra pencils.
- Students should not forget such fundamental skills as measuring, significant figures, setting up problems, neatness, calculators and courtesy.
- Expect some of your team to be no-shows (illness, etc.) and be prepared to juggle the remaining students to cover the schedule (having some alternates is valuable).
- Expect some events to start and/or run late and have replacement students in mind if the desired student is not available when an event starts.
- Coaches will want assistance throughout the day checking events, keeping track of the team, finding supplies, monitoring your homeroom, etc. Students and parents work well for this.
- Students do not need to be team members (one of the 15) to compete in trial events (where medals and ribbons are awarded but no credit given toward the team score).
- Some schools assign other students to assist the 15 team members. These student assistants will find the rooms, escort the team members, carry equipment, impound structures, deliver lunches, etc, so the 15 competing members can concentrate on just their events.
- Remember that in the building events, the student(s) which build the device must be one of the 15 competing team members.
- Whether prepared or not, try to be in every event to get credit for participating and learn for "next year." If you do this, make sure that your students do not become discouraged from doing poorly in an event they have not prepared for.
- Try to debrief students when they come out of an event or as soon thereafter to see what they can remember about it. A form can help accomplish this.
- Your team should be prepared for events that may not run exactly according to the rules in the Coaches Manual and do the best they can under the circumstances.
- Encourage students to thank event supervisors who are volunteering their time.
- At the end of the day, often an hour or so after the last event, an awards ceremony is held to award medals and ribbons to individuals in each event and trophies to the top three teams so going away empty-handed is unlikely. At the state tournament medals and trophies are award in both a small school and large school division.
- Some coaches collect all medals and certificates and award them at an in-school awards ceremony.

- If staying for the awards ceremony, develop a plan to entertain the team for the last two to three hours when fewer events are scheduled.
- For a tournament with  $n$  teams, scoring for team awards is typically 1 point for every first place, 2 points for second, etc. Therefore, the lowest point total wins. If a team does not participate in an event they will receive  $n+1$  points, while a team that is disqualified will receive  $n+2$  points.
- At each regional, the top two teams plus a percentage of those competing are invited to compete at the state tournament.
- If you cannot accept your invitation to State, please decline promptly so that another team can be invited in your place.
- Thank the tournament director for his or her efforts.

### **Before the State Tournament:**

- Accept your invitation to the state tournament. The Kansas tournament is held on the 1st Saturday in April
- The team you take to the state tournament DOES NOT have to be composed of the same students as the team that competed at the regional tournament. You are allowed to make changes remembering that there is a maximum of 5 ninth graders and seven 12th graders.
- Look at your state schedule. Remember for the state tournament you can request up to five schedule changes. Follow the procedures found on the state tournament part of the web site.
- As with the regional tournament, you do not need to compete in every event. However you are encouraged to participate in as many events as possible to continue the learning process for 'next year'.
- You may want to try and visit the site in advance anyway -- since competition day may not be the time to find buildings and rooms.
- Prepare a master schedule for your team - who is where and when, and put a map on the reverse side. Each student should have a copy and it would be good to brief him or her before arriving at the tournament.
- Organize materials for each event in bags so the required materials (pencils, goggles, etc.) are ready to take on tournament day.

### **State Tournament**

- Many first year teams have made it to the State Tournament.
- You will notice more people (teams are more likely to be at full strength).
- You will notice tighter scheduling (most teams enter every event).
- At the state tournament you will be assigned to a room that you can use for a home room. This is the place tournament officials will go looking for you if they need to speak to you.
- The top one or two teams in each division are invited to the National Tournament (the national office determines the number of invitations based upon the size of our program compared to other states).

The majority of these hints were taken from the Alabama Science Olympiad Website. Additional items came from the Wisconsin High School site.

**For additional information on Science Olympiad in Kansas contact:**

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**Science Olympiad Calendar**

September	<ul style="list-style-type: none"><li>• Complete the state of Kansas Science Olympiad Registration and pay your membership fee. You will then receive your Rules Manual</li><li>• Register for the Kansas Science Olympiad Coaches Workshop</li><li>• Begin to organize your team</li></ul>
October	<ul style="list-style-type: none"><li>• Attend the Kansas Science Olympiad’s Coaches Workshop that is held on the 3<sup>rd</sup> Saturday in October at Wichita State University</li><li>• The deadline to register for the Kansas Science Olympiad is in early November. If you haven’t registered don’t forget to do so.</li><li>• If you haven’t already started to organize your team, you should start now.</li></ul>
November	<ul style="list-style-type: none"><li>• Regional Assignments are usually made by November 15<sup>th</sup></li><li>• Continue working with your team</li></ul>
December	<ul style="list-style-type: none"><li>• Continue working with your team</li></ul>
January	<ul style="list-style-type: none"><li>• Continue working with your team</li><li>• Participant in an Invitational Tournament if there is one in your area</li><li>• Salina Regional Tournament</li></ul>
February	<ul style="list-style-type: none"><li>• Compete in your regional tournament</li></ul>
March	<ul style="list-style-type: none"><li>• Notification of teams that are invited to the state tournament</li><li>• State tournament registration due,</li></ul>
April	<ul style="list-style-type: none"><li>• State Tournament held on the first Saturday in April at Wichita State</li><li>• Teams receive notification of invitation to national tournament</li></ul>
May	<ul style="list-style-type: none"><li>• National Tournament occurs (normally held on the weekend before Memorial Day weekend)</li></ul>

**Science Olympiad Websites**

Kansas Science Olympiad: [webs.wichita.edu/scienceolympiad](http://webs.wichita.edu/scienceolympiad)  
National Science Olympiad: [www.soinc.org/](http://www.soinc.org/)