Stanislaus County Regional Science Olympiad

Event Supervisor Orientation

SCIENCE OLYMPIAD™

Exploring the World of Science

Stanislaus County Regional Science Olympiad
Hosted by Modesto Junior College, West Campus

NorCal Science Olympiad
State Finals
Hosted by
CSU, Stanislaus

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1. Follow Individual Event Rules

2. Be Fair to All Teams

3. Respect Host Site

Students are NOT allowed in a classroom without an adult present

4. No Coaching by Anyone on Event Day!

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Rules and Criteria

- RULES ARE ALWAYS PRECEDENT
- Read the rules carefully and make sure you understand them.
- Make sure you understand the scoring criteria.
- Check for rule clarifications on the Regional Sci Oly website at www.scoestudentevents.org and on the National website at www.soinc.org.
- Local rule clarifications take precedent over National rule clarifications.
- Students will know the rules well. However, rules are subject to interpretation.

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Rules:

Bolded items are changes from previous year.

ROCKS AND MINERALS

1. **DESCRIPTION**: Teams will demonstrate their knowledge of rocks and minerals.

A TEAM OF UP TO: 2 **APPROXIMATE TIME**: 40-50 Minutes

2. **EVENT PARAMETERS**: Each **team** may bring only one magnifying glass; one commercially published resource that may be tabbed and written in and one 3-ring binder (any size) containing pages of information in any form from any source. The pages must be 3-hole punched and inserted into the rings (sheet protectors are allowed).

3. **THE COMPETITION**:

a. Equal time intervals, as determined by the supervisor, will be allotted for each station. When the start signal is given, participants will begin work at their initial station.
b. Participants may not move to the next station until prompted to do so, may not skip stations, or return to any previously visited station.
c. Specimens and other materials placed at the various stations may not be taken to other stations.
d. HCl will not be provided, nor may it be brought to or be used during the competition. Written descriptions as to how a specimen might react were it to be tested with HCl may be provided.
e. Only those specimens appearing on the **Official NSO list (see www.soinc.org)** will be used in the competition with the following exception: Tournament Directors may include up to five additional specimens important to their own state. If additional specimens are to be included, all teams must be notified **no later than three weeks prior to the competition.**

Scoring

SCORING: Total scores will determine rankings in this event. Ties will be broken by the accuracy or quality of answers to selected questions.

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Designing Lab/Research Events

- Tests **must be newly developed** and not used in the last three years
- Be sure to align items, questions, or activities to the rules.
- **Answer sheet** should include a space for team name and team number, and each team members name.
- **Develop several levels of questions** . Create 1/3 of questions easy, 1/3 medium, and 1/3 at the difficult level. Include one or two questions (tie breakers?) that are very difficult.
- Be sure no one can get 100% or it will be difficult to determine first place.
- Check rules for breaking ties or choose items or questions in advance to be used to break ties.
- **Setting up stations**: 17 teams in one hour time slot with 5 minutes transition time and 5 minutes test explanation.

Essay Test Questions

- Write an **answer key** to the essay that you consider an ideal score
- Identify factors that make it ideal.
- Determine the number of points for ideal.
- Determine what constitutes awarding fewer points.
- If assistants are helping with scoring **be sure they score the SAME questions/pages** and they use your criteria. BE FAIR!

Calculations

When scoring for calculations, determine a range that will receive highest number of points.

Example: Measuring mass and acceleration to find force, student collects data and finds the force to equal 56.7 N

A scoring rubric might give: 5 points for 58 and 55
3 points for 61 and 52
0 points beyond 61 and 52

- Be clear and concise about what you want students to do.
- Stay away from tricky questions.
- Try to do as much hands on as possible.

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Engineering Events

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Boomilever

1. **DESCRIPTION:** A Boomilever is a cantilevered wood and **adhesive** structure, mounted to a vertical Testing Wall, carrying a load at a distance from the Wall. The objective of this event is to design and build the most efficient Boomilever meeting the requirements specified in these rules.

A TEAM OF UP TO: 2 **IMPOUND:** None **EYE PROTECTION:** #2 **MAXIMUM TIME:** 10 Minutes

2. **EVENT PARAMETERS:**

a. Each team is allowed to enter only one Boomilever built prior to the competition.

b. Team members must wear proper eye protection during the set-up and testing of the Boomilever. Teams without proper eye protection must be immediately informed and given a chance to obtain eye protection if time allows. Teams without eye protection must not test and must be ranked in Tier 4**.**

c. The Event Supervisor must provide all assessment devices, testing apparatus, hardware, **level, two bucket stabilization sticks (refer to www.soinc.org),** and clean, dry sand or similar dry, free-flowing material (hereafter "sand").

3. **CONSTRUCTION PARAMETERS:**

a. The Boomilever must be a single structure designed to attach to **one mounting hook (Div. C); one, two or three (Div. B) mounting hook(s)** in the Testing Wall (4.b.), support a Loading Block (4.a.) **with** a load up to 15.0 kg at a distance from the Wall **as specified (3.c.).**

b. **The Contact Depth of the Boomilever is the lowest distance that the Boomilever touches the Testing Wall, measured below the center of the holes for the hook(s). The Contact Depth must not be more than 20.0 cm (Div. B) or 15.0 cm (Div. C) prior to loading.**

c. The center of the Loading Block measured horizontally from the face of the Testing Wall must be between **45.0 cm - 50.0 cm (Div. B/C) and approximately centered horizontally on the Testing Wall.**

d. **The Loading Block must be supported at a height higher than 5.0 cm below the Contact Depth.**

e. **The Boomilever must be attached by means of the mounting hook(s) in the Testing Wall (4.b.iii.). The Boomilever must be able to be set up for testing without adjusting the mounting hook(s).**

f. The Boomilever must not be attached or hooked to any edge of the Testing Wall. All tensile and shear connection to the Testing Wall must be through the mounting **hook(s).**

g. All parts of the Boomilever must be constructed of wood and bonded by adhesive. No other materials are permitted (e.g., **no particle board, wood composites,** bamboo or grasses, **commercial plywood, structural members formed of sawdust and adhesive, paper price labels** or paper).

h. There are no limits on the cross section sizes or lengths of individual pieces of wood. Wood may be laminated by the team without restriction.

i. Any commercially available **adhesive** may be used. **Adhesive shall be defined as a substance used to join two or more materials together. Adhesives include but are not limited to glue, cement, cyanoacrylate, epoxy, hot melt, polyurethane and super glues. Adhesive tapes are not allowed.**

4. **TESTING APPARATUS: See Rules**

COMPETITION:

a. No alterations, substitutions, or repairs may be made to the Boomilever after check-in. Once teams enter the event area to compete, they must not leave or receive outside assistance, materials, or communication.
b. All Boomilevers must be assessed prior to testing for compliance with construction parameters.
c. Team members must place their Boomilever on the scale for the Event Supervisor to determine its mass in grams to the nearest 0.01 g.
d. Team members must have a maximum of ten minutes to set up and test their Boomilever either to the maximum load or **to** failure.
e. Team members must attach their Boomilever to the Testing Wall using the mounting **hook(s). Teams must not adjust the mounting hook(s).** Teams must assemble the Loading Block **assembly,** eyebolt, chain and/or S-hooks, and hang the bucket as required to load the Boomilever. Team members may disassemble the block and eyebolt if necessary to set up the test.
f. Teams must set the Loading Block on the Boomilever within the **specified range** from the Testing Wall.
g. **The Event Supervisor must measure and record the Boomilever's Contact Depth and verify that it does not exceed the limit before loading sand**.
h. Team members must be allowed to adjust the Boomilever until they start loading sand. No adjustment may be made after loading of sand has begun.
i. Team members must be allowed to safely and effectively stabilize the bucket from movement caused by loading of the sand. **Direct contact of the bucket by team members is not allowed. Teams choosing to stabilize the bucket must use the bucket stabilization sticks provided by the Event Supervisor.**
j. Boomilevers that fail before supporting 15.000 kg must be scored according to the actual load supported at time of failure, measured to the nearest gram or best precision available. Failure is defined as the inability of the Boomilever to carry any additional load, or any part of the load supported by anything other than the Boomilever. **Incidental contact between the chain and the device is not failure.** Loading must stop immediately when a failure occurs or when time expires. The Event Supervisor must remove any **parts of the Boomilever that fell into the bucket and** sand added after failure.
k. **Teams who wish to file an appeal must leave their Boomilever with the Event Supervisor.**

SCORING: Score = Load Scored (g)/Mass of Boomilever (g)

Boomilevers must be scored in four tiers as follows:
i. Tier 1: Boomilevers meeting all the Construction Parameters and no Competition Violations.
ii. Tier 2: Boomilevers with one or more **Competition** Violations.
iii. Tier 3: Boomilevers with **Construction** Violations or both Competition and Construction Violations.
iv. Tier 4: Boomilevers unable to be loaded for any reason (e.g., cannot be mounted on testing Wall, cannot accommodate loading block, or failure to wear eye protection) must be ranked by lowest mass.
d. Ties are broken by this sequence: 1. **Lowest** Boomilever Mass; 2. **Least** Contact Depth prior to loading.

Event Boards – Boomilever, Division B

9:40	#19	11:05	#13	12:30	#14	1:55	#35
	#42		#40		#8		#25
9:55	#33	11:20	#2	12:45	#27	2:20	#31
	#41		#10	#Open			#18
10:10	#24	11:35	#6	1:10	#4	2:35	#5
	#28		#16		#26		#15
10:25	#23	12:00	#1	1:25	#30	2:50	#12
	#32		#9		#36		#3
10:50	#29	12:15	#21	1:40	#43	3:05	#34
	#20		#37		#44		#39

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On event day a PARTICIPANT may approach the Event Supervisor and ask to be moved to an “Open” time slot. Changes are at the discretion of the ES.

Boomilever Score Sheet and Team Checklist

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National Science Olympaid 2014

Boomilever B

Number of Teams ---------->			Tower Meas.			Final Score				
Team Number	Team Name (Enter below)	State	1. All Construction Parameters Met	2. All Competition Parameters Met	3. Participation Points Only	4. Disqualify (DQ)	5. Boomilever Mass (in g)	6. Load supported (in g)	7. Contact Depth (cm)	Score	Tier	Tiebreaker	Rank	Points
1	Enter # of Teams in Cell D1													
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

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Science Olympiad 2014 Boomilever B

Supervisors will record this information for each team & each team is encouraged to use this form as a **pre-tournament Checklist!**
Supervisors can also record team results on the excel Boomilever spreadsheet found at www.soinc.org

Team Number: B___ Team Name: _____ Rank: _____

Student Names: _____ Final Score: _____

Construction Parameters

3.a. The Boomilever is a single structure designed to attach to 1 to 3 mounting hook(s) in the Testing Wall, support a Loading Block with a load up to 15.0 kg at a distance from the Wall.	Y	N
3.b. The Boomilever does not touch the Testing Wall at any time more than 20.0 cm below the center of the holes for the hook(s).	Y	N
3.c. The center of the Loading Block, measured horizontally from the face of the Testing Wall, is between 45.0 cm and 50.0 cm and approximately centered horizontally on the Testing Wall.	Y	N
3.d. The Loading Block is supported at a height higher than 5.0 cm below the Contact Depth.	Y	N
3.e. The Boomilever is attached by means of the mounting hook(s) in the Testing Wall and is able to be set up for testing without adjusting the mounting hook(s).	Y	N
3.f. The Boomilever does not attach or hook to any edge of the Testing Wall. All tensile and shear connection to the Testing Wall is through the mounting hook(s).	Y	N
3.g. All parts of the Boomilever are constructed only of wood and bonded only by adhesive.	Y	N
3.i. Adhesive tapes are not used.	Y	N
ALL CONSTRUCTION PARAMETERS MET (IF N, TIER 3)	**1. Y**	**N**

Competition Parameters

5.a. No alterations, substitutions, or repairs are made to the Boomilever after check-in. Team does not leave or receive outside assistance, materials, or communication once teams enter the event area to compete.	Y	N
5.e. Team attaches their Boomilever to the Testing Wall using the mounting hook(s) and does not adjust the mounting hook(s). Team assembles the Loading Block assembly, eyebolt, chain and/or S-hook, and hangs the bucket to load the Boomilever.	Y	N
5.f. The Loading Block is within the specified range from the Testing Wall.	Y	N
5.h. Team does not make any adjustments after sand loading has begun.	Y	N
5.i. Teams do not directly contact the bucket; they only stabilize the bucket with the bucket stabilization sticks.	Y	N
ALL COMPETITION PARAMETERS MET (IF N, TIER 2 OR LOWER)	**2. Y**	**N**

Other

6.c.iv. Participation Points Only (Boomilever unable to be loaded for any reasons)	3. Y	N
General Rule 9. Disqualified (notify the team and their coach as soon as possible)	4. Y	N

Boomilever Measurements

6.a. Boomilever mass (in grams to the closest 0.01g)	5. _____
6.a. Load supported (in grams to the closest 1g; 15,000 g max)	6. _____
6.d. Contact Depth prior to loading (in cm to the closest 0.1cm)	7. _____

Score = Load / Mass

1st tie breaker = Lowest Boomilever Mass, 2nd tie breaker = Least Contact Depth prior to loading

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Impound Events

- Check the Event Schedule or rules for Events with an impound
- The Event Supervisor is responsible for being at the event site for impound at times indicated on schedule
- If a device **does not meet specifications** or is in violation the team can make adjustments allowing enough time to impound on time

- A team can be told their violation, but **do NOT tell them how to fix the violation.**
- If a team misses the impound deadline, they can test their device but will be ranked behind all other teams.
- After impound **no modifications** are allowed.
- Team name and team number must be clearly marked on the device
- Unless otherwise noted in the rules, **do not release times, distances, or how a team has placed**

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Event Supervisor Procedures

- Event Supervisors (ES) and Assistants Register at Science Conference Room 138
- Breakfast snack & coffee for all volunteers at Science Room 115
- If possible, attend Coach/Event Supe/Assistant meeting (see event schedule)
- **ES is responsible for obtaining and setting up all event equipment and supplies on event day**
- Allow time for event setup and impound setup **prior to event start time**
- Begin and end events on time!! (see event schedule)
- Closed events mean **no one allowed in testing room** except competitors, ES, and Assistants for the event
- A team **arriving late** to a test time is allowed to test in the time remaining only
- Once testing begins participants **cannot leave the room** unless they are finished testing or time is up

- Check teams in as they enter the test room, using the **Team Check-in Sheet** included in registration packet.
- As teams enter the test room each team presents an **Event Ticket** – be sure it is legible and includes team name and participants names as it will be used at Awards
- One test per team, one team per event
- While providing test directions ask an assistant to **check the check-in sheet** to be sure the team numbers match the time slot on the event schedule
- Teams can **only test in their time slot as indicated on the schedule** or risk being disqualified from the event

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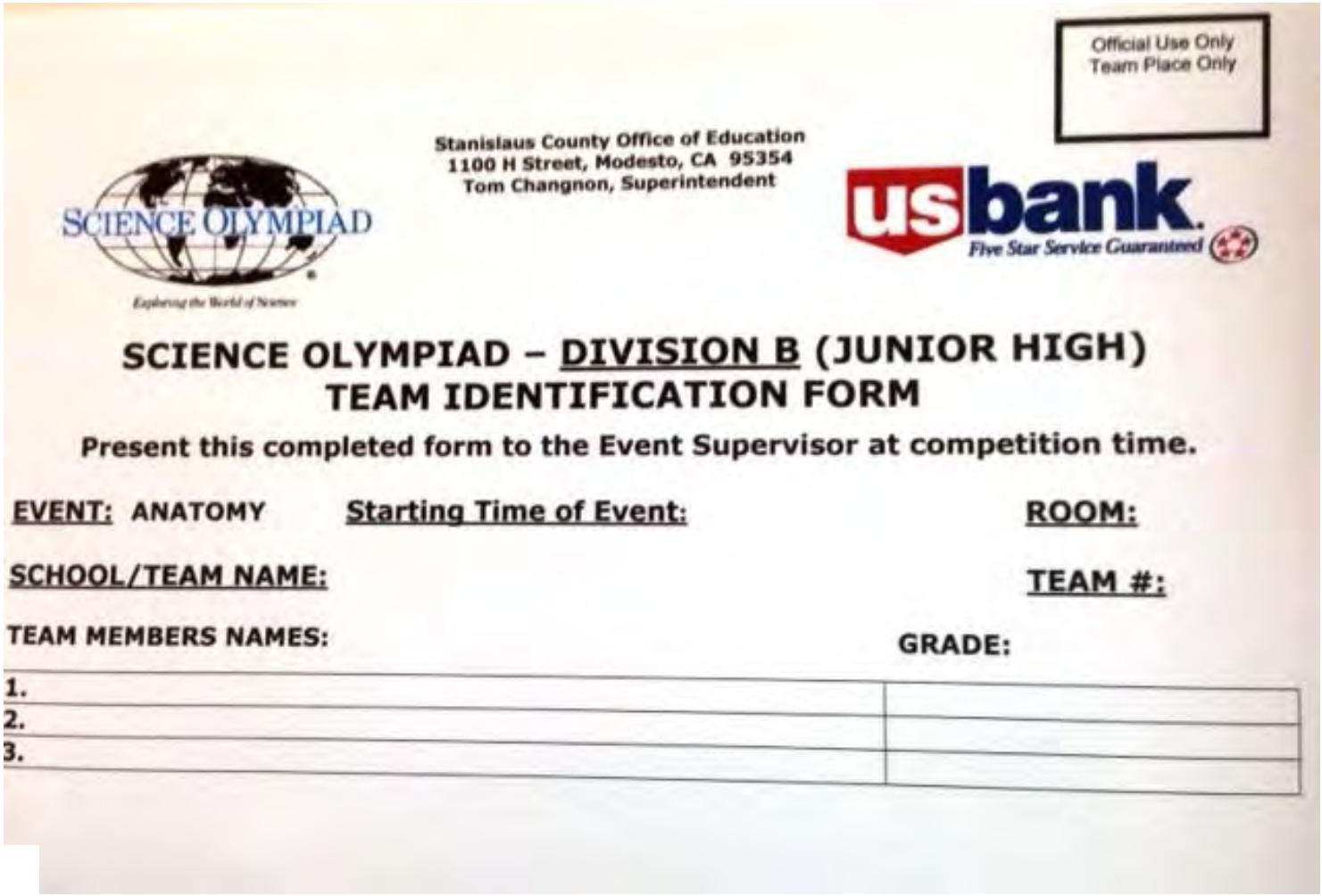
Event Ticket



Official Use Only
Team Place Only

Stanislaus County Office of Education
1100 H Street, Modesto, CA 95354
Tom Changnon, Superintendent

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usbank
Five Star Service Guaranteed

SCIENCE OLYMPIAD – DIVISION B (JUNIOR HIGH)
TEAM IDENTIFICATION FORM

Present this completed form to the Event Supervisor at competition time.

EVENT: ANATOMY **Starting Time of Event:** **ROOM:**

SCHOOL/TEAM NAME: **TEAM #:**

TEAM MEMBERS NAMES: **GRADE:**

1.
2.
3.

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- For Event Board scheduled events, a team **late to test** will be re-scheduled at the discretion of the ES, time permitting, or risks not participating in the event
- Two per time slot – whoever is **ready to test** will be first
- "Spectator Events" Be sure spectators are not in the way of testing
- **Anyone interfering with a test or anyone coaching can cause their team to be given extra points for that event**
- If a team is placed in a tier other than the first tier they **MUST be told and given the reason**
- Note the reason on the test or score sheet

- The room in which your event is scheduled **MUST be returned to the way you found it**
- Return any furniture that has been moved
- Be sure participants **clean their area** and return all items before leaving the room
- Be sure you have **collected all tests** from participants before they leave the room
- Remove any trash from the room

A box lunch is available beginning at 11:30 AM at Conference Room 138 for the coach of record and all volunteers!

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Disqualifications and Mistakes

- If a participant **leaves the room with a test**, then the team is disqualified from the event
- Any team **writing rude or inappropriate comments** on a test will be disqualified from the event
- If a student is **rude, disrespectful, or cheats** they will be disqualified from the event
- If a student/team is disqualified from an event please **note the reason on their test**

- Spectators are allowed at the “spectator” events only (see event schedule)
- Spectators must **keep their distance** and not interfere in any way with an event or coach teams
- Closed events are closed to all except participants, ES, and Assistants
- Interference with an event by parents, teachers, or spectators **will not be tolerated** and may cause the team points

- If the **ES follows the rules and is fair to all teams**, then there should not be an appeal
- If a mistake is made and you catch it **AFTER the first team competes,** continue the mistake throughout the day – Be Fair in spite of an error!
- If a participant indicates a problem, please listen to him/her and **try to mitigate the issue**
- If the participant is not in agreement with your decision, they can **ask their coach to file an appeal** with the arbitration committee
- They are **NOT** to engage you in a long debate.
- An appeal will be reviewed with the ES as well as with the participant and coach
- **The arbitration team makes the final decision**

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Appeals/Arbitration

- Only a **coach or an assistant coach** may file an appeal
- Appeal forms are available at the scoring room and must be turned in at the same location
- Once a decision has been made by the arbitration committee **all discussion will end**
- If the arbitration committee determines an event has been run unfairly, then the event will **not be counted for overall team points.** Individual awards will be given for the event

- Appeals/arbitrations are between ES, participant, and coach only

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Scoring

- All places will be scored
- 20 (n) teams for Division B
- 16 (n) teams for Division C
- Each team competing in an event will get the **same number as their place**
- **All ties must be broken**
- Teams that do not compete in an event will receive n+1 point
- Teams disqualified for conduct receive n+2 points
- Lowest combined score of all events will determine the winning team
- 1st place = 1 point, 2nd place = 2 points, etc
- Last place = 20 for Div B and 16 for Div C
- NS = 21/17 DQ = 22/18

- The Awards Ceremony **begins at 5:00 PM**
- Score tests at the Hospitality Room if possible
- Be sure you have **assistants to help with scoring**
- Have a clear scoring rubric or procedure that is easy to understand
- **Scores/Scorers must be consistent and fair to all teams**
- A long test will require a long time to score…plan accordingly or the Awards Ceremony will be held up
- Plan to score the first time slot tests during the second time slot if possible

- If an event has a **score sheet** it can be downloaded to your laptop (see www.soinc.org).
- All Event Supervisors will be provided with an electronic "Score Report Form". You may choose to complete this form manually or electronically (and saved on flash drive).
- A hard copy of the Score Report Form will be included inside the ES registration binder.
- If an event has a **team checklist** available, one per participating team will be included inside the ES registration packet (build-it events only)
- The ES must **sort the student test in rank order** from first place to last.
- The **Event Tickets** must be sorted by place, one through five, and will be used at the Awards Ceremony
- The ES **reads the raw score from the Score Report Form to a scoring official** who will input the scores into the scoring program
- As a double-check the scoring official will read the scores back in rank order to the ES who will verify the rank using the tests (ranked first to last).

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Awards

- The participant(s) with the five lowest scores in each event, in each Division receives a medal (46 events x 5 places)
- Individual scores in each event are totaled to find the overall score for each team
- The teams with the four lowest overall score in each Division receives a trophy and an invitation to participate in the NorCal Science Olympiad State Finals
- Only ONE TEAM PER SCHOOL can advance to the State Finals

Thank you for volunteering. There would not be a Science Olympiad program without you!!!!

Questions? Please contact:
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