Bay Area Regional

Judges/Coaches Training Session

SCIENCE OLYMPIAD

Bay Area Regional

The Science Olympiad was created in 1983 by Dr. Gerard J. Putz and Jack Cairns to increase interest in science and as an alternative to traditional science fairs and single-discipline tournaments. After successful trial Olympiads were held in their respective states of Michigan and Delaware, the Science Olympiad began to grow. Now, the Olympiad has members in almost all of the 50 states, totaling more than 15,000 actively participating K-12 schools.

SCIENCE OLYMPIAD

History of Event

Bay Area Regional

The Science Olympiad is devoted to improving the quality of science education, increasing student interest in science and providing recognition for outstanding achievement in science education by both students and teachers. We hope to achieve these goals through participation in Science Olympiad tournaments, classroom activities, and summer training institutes for teachers. We also hope that our efforts can bring academic competition to the same level of recognition and praise normally reserved for athletic competitions.

SCIENCE OLYMPIAD

Olympiad Goals

Bay Area Regional

Background and Requirements:

- Teams of 15 students, lead by one coach.
- Each school can have more than one team.
- Two divisions: B (middle), C (high)
- 23 different events
- Registration fee of $270 (early) $300 (late)

SCIENCE OLYMPIAD

Olympiad Criteria

Bay Area Regional

- State competition April 2012 in Fresno
- National competition in University of Central Florida, Orlando– May 2012

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Olympiad Criteria

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Middle School, Division B Events

- Anatomy
- *Awesome Aquifers*
- Bottle Rocket
- *Crime Busters*
- Disease Detectives
- Dynamic Planet
- *Experimental Design*
- Fermi Questions
- *Food Science*
- Forestry
- *Keep the Heat*
- Meteorology
- Microbe Mission
- Mission Possible
- Mousetrap Vehicle
- *Optics*
- Reach for the Stars
- Road Scholar
- Rocks and Minerals
- Storm the Castle
- Tower Building
- *Water Quality*
- *Write It, Do It*

SCIENCE OLYMPIAD

The Events

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High School, Division C Events

- Anatomy & Physiology
- Astronomy
- *Chemistry Lab*
- Disease Detectives
- Dynamic Planet
- *Experimental Design*
- Fermi Questions
- *Forensics*
- Forestry
- Gravity Vehicle
- Helicopters
- *Microbe Mission*
- *Optics*
- *Protein Modeling*
- Remote Sensing
- Robot Arm
- Rocks and Minerals
- Sounds of Music
- *Technical Problem Solving*
- *Thermodynamics*
- Tower Building
- *Water Quality*
- *Write It, Do It*

The Events

Bay Area Regional

Rules and Criteria

- RULES ARE ALWAYS PRECEDENT
- Read over the rules and make sure you understand them.
- The rules are complex.
- Make sure you understand how the scoring criteria works.
- Check for clarifications at www.soinc.org and www.barso.org and click on Events
- The students will know them very well!

Rules

Bay Area Regional

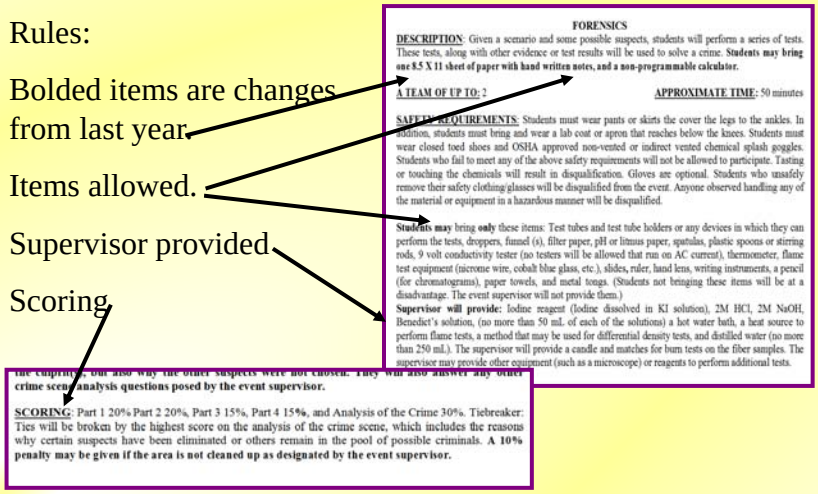
Rules:

Bolded items are changes from last year.

Items allowed.

Supervisor provided

Scoring



FORENSICS

DESCRIPTION: Given a scenario and some possible suspects, students will perform a series of tests. These tests, along with other evidence or test results will be used to solve a crime. **Students may bring one 8.5 X 11 sheet of paper with hand written notes, and a non-programmable calculator.**

A TEAM OF UP TO: 2 **APPROXIMATE TIME:** 50 minutes

SAFETY REQUIREMENTS: Students must wear pants or skirts the cover the legs to the ankles. In addition, students must bring and wear a lab coat or apron that reaches below the knees. Students must wear closed toed shoes and OSHA approved non-vented or indirect vented chemical splash goggles. Students who fail to meet any of the above safety requirements will not be allowed to participate. Tasting or touching the chemicals will result in disqualification. Gloves are optional. Students who unsafely remove their safety clothing/glasses will be disqualified from the event. Anyone observed handling any of the material or equipment in a hazardous manner will be disqualified.

Students may bring **only** these items: Test tubes and test tube holders or any devices in which they can perform the tests, droppers, funnel (s), filter paper, pH or litmus paper, spatulas, plastic spoons or stirring rods, 9 volt conductivity tester (no testers will be allowed that run on AC current), thermometer, flame test equipment (nicrome wire, cobalt blue glass, etc.), slides, ruler, hand lens, writing instruments, a pencil (for chromatograms), paper towels, and metal tongs. (Students not bringing these items will be at a disadvantage. The event supervisor will not provide them.)

Supervisor will provide: Iodine reagent (Iodine dissolved in KI solution), 2M HCl, 2M NaOH, Benedict's solution, (no more than 50 mL of each of the solutions) a hot water bath, a heat source to perform flame tests, a method that may be used for differential density tests, and distilled water (no more than 250 mL). The supervisor will provide a candle and matches for burn tests on the fiber samples. The supervisor may provide other equipment (such as a microscope) or reagents to perform additional tests.

crime scene analysis questions posed by the event supervisor.

SCORING: Part 1 20% Part 2 20%, Part 3 15%, Part 4 15%, and Analysis of the Crime 30%. Tiebreaker: Ties will be broken by the highest score on the analysis of the crime scene, which includes the reasons why certain suspects have been eliminated or others remain in the pool of possible criminals. **A 10% penalty may be given if the area is not cleaned up as designated by the event supervisor.**

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Rules

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Copies

- Resources can be found on the national website at www.soinc.org
- Send Mike all copies of tests and worksheets and answer sheets by Feb. 4, 2012

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Lab and Research Events

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Designing Lab/Research Events

- Make sure you write items, questions or activities that are aligned to the rules.
- Make several levels of items. Create 1/3 of each at an easy, medium, and difficult level.
- Make sure no one can get a 100%. If several teams get 100%, it is difficult to determine 1st place.
- Have a system for breaking all ties.

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Lab/Research Events

Bay Area Regional

Designing Lab/Research Events

- Know how ties will be broken. This could be as simple as posting the questions that will be tie breakers. (For example, Question 1, 3, 5 in that order will break ties.)

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Lab/Research Events

Bay Area Regional

Essays

- 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.

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Lab/Research Events

Bay Area Regional

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 the following data and finds the force to equal 56.7 N:

m = 10.5 kg

a = 5.4 m/s^2

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

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Lab/Research Events

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Designing Lab Events

- 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.
- Ensure that there is a space for NAMES and TEAM NUMBERS

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Lab/Research Events

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Engineering Events

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Bay Area Regional

Impounding

The following are Impound Events:

1. Keep the Heat – B
2. Mission Possible – B
3. Mousetrap Vehicle – B
4. Storm the Castle – B
5. Gravity Vehicle – C
6. Protein Modeling – C
7. Thermodynamics – C

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Impounding Engineering Event

- If you are judging at event that requires a device to be impounded, students will have until 10:00 am to turn in.
- No modifications are allowed to device after this time. But can suggest that something needs fixed.
- Give students a receipt.

Engineering Events

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Impounding

- Do not release times, distances, and other pertinent information prior to the impounding.
- Make sure students have their Team ID numbers and names on the devices.

Engineering Events

Bay Area Regional

Judging Procedures

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Team Numbers

- Students must have these before they compete.
- Make sure they have a wristband and check to be sure the team number is on it.
- Make sure they are in the correct hour.
- You also have them on the scoring summary sheet.

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Judging

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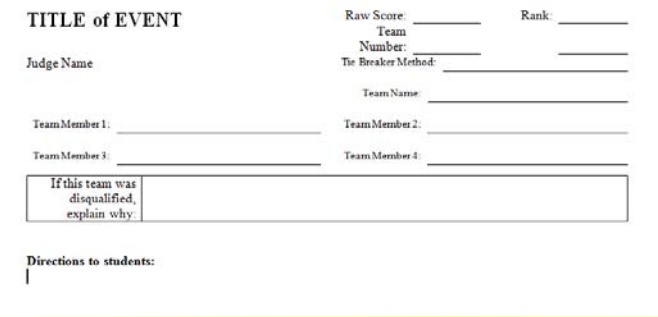
Event Templates

- To help with Scoring, make sure your test and lab sheets have a format like this one:



TITLE of EVENT

Raw Score: _____ Rank: _____

Team Number: _____

Judge Name

Tie Breaker Method: _____

Team Name: _____

Team Member 1: _____ Team Member 2: _____

Team Member 3: _____ Team Member 4: _____

If this team was disqualified, explain why:

Directions to students:

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Event Start Time

- Use Internet/Cell Phone Time
- Let teams in even if they are late, but don't give them extra time at the end.
- It is not a benefit if they are late.
- If they come in and disturb, then they can be disqualified.

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Judging

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Schedule

Event Impound? Teams Allowed Times

Division C Schedule 2011

ID	Event	Location	Number Required	Impound?	Open to Public?	9:00 to 9:50 am	10:50 am	11:50 am	12:00 to 12:50 pm	1:00 to 1:50 pm	2:00 to 2:50 pm	3:00 to 3:50 pm
24	Anatomy &		1 or 2			1-9	10-18	19-27	28-36	37-45	46-54	
25	Astronomy		1 or 2			1-9	10-18	19-27	28-36	37-45	46-54	
26	Chemistry Lab		1 or 2			46-54	1-9	10-18	19-27	28-36	37-45	
27	Disease Detectives		1 or 2				All					
28	Dynamic Planet		1 or 2			28-36	37-45	46-54	1-9	10-18	19-27	
29	Ecology		1 or 2			19-27	28-36	37-45	46-54	1-9	10-18	
30	Experimental Design		1, 2, or 3			10-18	19-27	28-36	37-45	46-54	1-9	
31	Forensics		1 or 2			37-45	46-54	1-9	10-18	19-27	28-36	
32	Fossils		1 or 2			10-18	19-27	28-36	37-45	46-54	1-9	
33	Helicopters		1 or 2	YES	YES	Impound	1-9	10-18	19-27	28-36	37-45	46-54
34	Microbe Mission		1 or 2			46-54	1-9	10-18	19-27	28-36	37-45	
35	Mission Possible		1 or 2	YES	YES	Impound	10-18	19-27	28-36	37-45	46-54	1-9
36	Mousetrap Vehicle		1 or 2		YES	37-45	46-54	1-9	10-18	19-27	28-36	
37	Optics		1 or 2			28-36	37-45	46-54	1-9	10-18	19-27	

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Judging

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Event Instructions

- Make sure before any student leaves your room that all materials have been returned, you have accounted for all handouts and that all supplies are clean.
- To help with cleanup at end of day, please gather supplies to one place in the room.

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Judging

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Disqualifications

- If a student is outright disrespectful, they can be disqualified. In addition, multiple problems or outright cheating can result in the disqualification of the entire team.
- Notify Tournament Director if there is a problem that could lead to this.

Judging

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Disqualifications

- If a student is disqualified, note the reason on the Event Card.
- There is a difference between legitimate mistakes and blatant disregard for the rules. Make a judgment about a which category the students may fall into when assigning points.

Judging

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Disqualifications

- DQ's for scoring purposes are not:
  - When students attempted but didn't follow the rules.
  - Built something incorrectly.
  - Didn't have safety equipment.
  - Anything other than behavior related.

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Judging

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Mistakes

- You are the judge, so you are empowered to make decisions.
- However, if you make a mistake interpreting the rules, and catch it AFTER the first school competes, continue the mistake throughout the day.

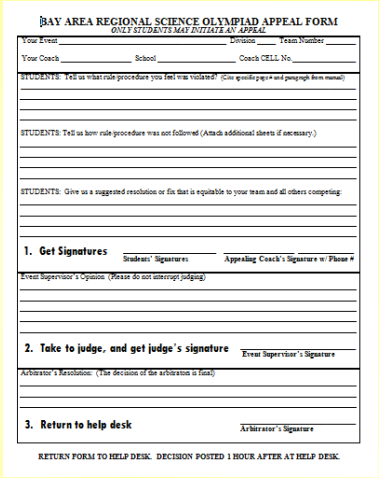
SCIENCE OLYMPIAD

Judging

Bay Area Regional

Arbitration

If a student has a problem with a ruling, they are instructed to pick up an Arbitration Form. These are at the help desk.
ONLY STUDENTS CAN FILE



BAY AREA REGIONAL SCIENCE OLYMPIAD APPEAL FORM

ONLY STUDENTS MAY INITIATE AN APPEAL

Your Event _____ Division ____ Team Number _____

Your Coach _____ School _____ Coach CELL No._____

STUDENTS: Tell us what rule/procedure you feel was violated? (Give specific page # and paragraph from manual)

STUDENTS: Tell us how rule/procedure was not followed (Attach additional sheets if necessary.)

STUDENTS: Give us a suggested resolution or fix that is equitable to your team and all others competing:

1. Get Signatures Students' Signatures _____ Appealing Coach's Signature w/ Phone #

Event Supervisor's Opinion: (Please do not interrupt judging)

2. Take to judge, and get judge's signature _____ Event Supervisor's Signature

Arbitrator's Resolution: (The decision of the arbitrators is final)

3. Return to help desk _____ Arbitrator's Signature

RETURN FORM TO HELP DESK. DECISION POSTED 1 HOUR AFTER AT HELP DESK.

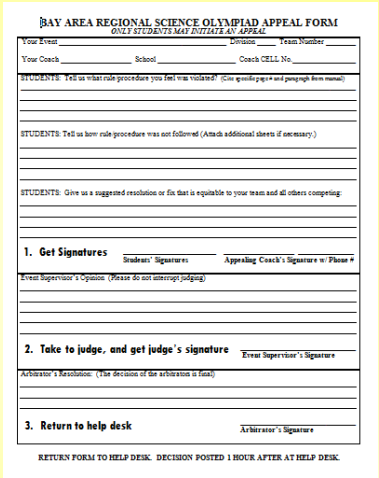
SCIENCE OLYMPIAD

Judging

Bay Area Regional

Arbitration

- They are NOT to engage you in a prolonged debate.
- The Arbitration Team will make the FINAL ruling.



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RETURN FORM TO HELP DESK. DECISION POSTED 1 HOUR AFTER AT HELP DESK.

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Judging

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Parents and Teachers

- Parents and teachers can WATCH the outside events, but they are not allowed in the door-closed rooms during events. (Except Sound of Music)
- They must remain a distance from the events, as you so choose. But, they are not to help the students, and they are not to engage in a debate about problems.

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Judging

Bay Area Regional

Scoring

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Bay Area Regional

Scoring

- All places will be scored
- 17 (n) teams = Div. B
- 24 (n) teams = Div. C
- Each team that competes will get the same number of points as their place.
- All ties must be broken. (Except last place and beyond.)

Scoring

Bay Area Regional

Scoring

- Teams that do not compete in the event receive n+1 points.
- Teams that are disqualified for unsportsmanlike conduct receive n+2 points (or more)
- Lowest combined score of all the events will determine the winner of middle and high school.

Scoring

Bay Area Regional

Division B Scores

- 18 Teams
- n = 18
- 1st place = 1
- 2nd place = 2

Ties allowed at last place and beyond

- Last place = 18
- DNS = 19
- DQ = 20 +

Division C Scores

- 25 Teams
- n = 25
- 1st place = 1
- 2nd place = 2

Ties allowed at last place and beyond

- Last place = 25
- DNS = 26
- DQ = 27 +

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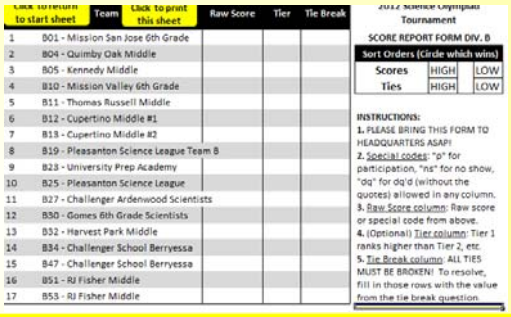
Scoring

Bay Area Regional

Scoring Summary Sheet

Fill out this sheet at the end of the event. Rank the schools from 1st to last place. All ties must be broken. All schools must receive a place.
Ties can occur at last place and beyond.



Click to return to start sheet	Team	Click to print this sheet	Raw Score	Tier	Tie Break
1	B01 - Mission San Jose 6th Grade				
2	B04 - Quimby Oak Middle				
3	B05 - Kennedy Middle				
4	B10 - Mission Valley 6th Grade				
5	B11 - Thomas Russell Middle				
6	B12 - Cupertino Middle #1				
7	B13 - Cupertino Middle #2				
8	B19 - Pleasanton Science League Team B				
9	B23 - University Prep Academy				
10	B25 - Pleasanton Science League				
11	B27 - Challenger Ardenwood Scientists				
12	B30 - Gomes 6th Grade Scientists				
13	B32 - Harvest Park Middle				
14	B34 - Challenger School Berryessa				
15	B47 - Challenger School Berryessa				
16	B51 - RJ Fisher Middle				
17	B53 - RJ Fisher Middle				

Tournament

SCORE REPORT FORM DIV. B

Sort Orders (Circle which wins)		
Scores	HIGH	LOW
Ties	HIGH	LOW

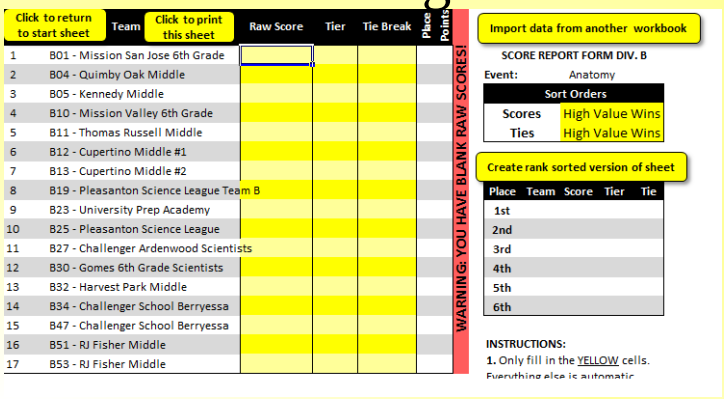
INSTRUCTIONS:
1. PLEASE BRING THIS FORM TO HEADQUARTERS ASAP!
2. Special codes: "p" for participation, "ns" for no show, "dq" for dq'd (without the quotes) allowed in any column.
3. Raw Score column: Raw score or special code from above.
4. (Optional) Tier column: Tier 1 ranks higher than Tier 2, etc.
5. Tie Break column: ALL TIES MUST BE BROKEN! To resolve, fill in those rows with the value from the tie break question.

SCIENCE OLYMPIAD

Scoring

Bay Area Regional

Excel Scoring Sheet



Click to return to start sheet	Team	Click to print this sheet	Raw Score	Tier	Tie Break	Place	Points
1	B01 - Mission San Jose 6th Grade						
2	B04 - Quimby Oak Middle						
3	B05 - Kennedy Middle						
4	B10 - Mission Valley 6th Grade						
5	B11 - Thomas Russell Middle						
6	B12 - Cupertino Middle #1						
7	B13 - Cupertino Middle #2						
8	B19 - Pleasanton Science League Team B						
9	B23 - University Prep Academy						
10	B25 - Pleasanton Science League						
11	B27 - Challenger Ardenwood Scientists						
12	B30 - Gomes 6th Grade Scientists						
13	B32 - Harvest Park Middle						
14	B34 - Challenger School Berryessa						
15	B47 - Challenger School Berryessa						
16	B51 - RJ Fisher Middle						
17	B53 - RJ Fisher Middle						

WARNING: YOU HAVE BLANK RAW SCORES!

Import data from another workbook

SCORE REPORT FORM DIV. B

Event: Anatomy

Sort Orders	
Scores	High Value Wins
Ties	High Value Wins

Create rank sorted version of sheet

Place	Team	Score	Tier	Tie
1st				
2nd				
3rd				
4th				
5th				
6th				

INSTRUCTIONS:

1. Only fill in the YELLOW cells.

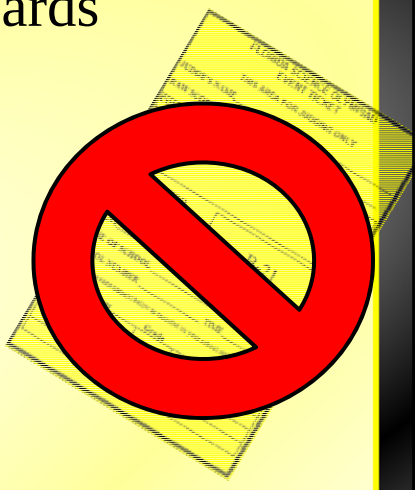
- File is online at www.barso.org and click on Competition Prep.

SCIENCE OLYMPIAD

Bay Area Regional

Event Cards

For the first year, we will not be using event cards. Students MUST have their wristbands for entry into an event and they MUST write their team number on all event materials.



SCIENCE OLYMPIAD

Scoring

Bay Area Regional

Scoring Summary Sheet

- Turn in the scoring summary sheet with ALL of the student work (labs, tests, scoring sheets) to the Scoring Room in the following order:

1. Fill out Scoring Checklist
2. Place student work in RANK order, 1st Place on Top
3. Print out Scoring Summary Sheet in J12
4. Be ready to go over results with Score Counselors

SCIENCE OLYMPIAD

Scoring

Bay Area Regional

Score Counseling

To ensure that all scores have been entered correctly, scores will be verified. Make sure you fill out this form before entering score counseling

Checklist for Science Olympiad Event Supervisors (ES)

ES Name: _____ ES's: Bring this to Scoring Room
Event Name: _____ DIVISION: _____

☑YES	☑ NO	Score Counselor Name_____	Score Counselor Verify (☑ if approved, bleak if not)
❑	❑	Did you verify that the room is clean and returned to its original condition and is ready for the teachers and classes on Monday?	❑
❑	❑	Did you use the ELECTRONIC version of EXCEL? (If you did the paper copy of the form select NO.)	❑
❑	❑	Did you EXPLAIN how raw score ranking is derived (as high score, low score, or shortest time)?	❑
❑	❑	ALL TIES are broken, when appropriate.	❑
❑	❑	Method for breaking ties is explained on **Scoring Summary Sheet** or answer key.	❑
❑	❑	Were there any DISQUALIFIED TEAMS?	❑
❑	❑	Does each disqualified team have a detailed explanation?	❑
❑	❑	Did you VERIFY scores for NO SHOWS – each should have appropriate rank?	❑
❑	❑	Are the EVENT RAW SCORES transferred properly onto **Score Summary Sheet**?	❑
❑	❑	Does the RANKING correspond to the raw scores?	❑
❑	❑	Did you collect all worksheets, answer sheets, tests, and student answer sheets and placed in Rank Order, with FIRST PLACE on top?	❑
❑	❑	Collect Student Assistant Checklist. Has the classroom been cleaned?	❑
❑	❑	Did you edit the rules for clarity?	❑
❑	❑	**VERIFY TEAM ID # AND TEAM NAME for 3rd, 2nd, & 1st places on all forms. Are they legible?**	❑
❑	❑	Did you SIGN the SCORE SUMMARY SHEET?	❑
❑	❑	Write your cell phone or contact number here:	❑

SCIENCE OLYMPIAD

Bay Area Regional

Scoring Summary Sheet

- The scoring room is J12.
- Do not leave campus until 1 hour after the close of your event. Arbitrations must be cleared for your event.

SCIENCE OLYMPIAD

Scoring

Bay Area Regional

Lunch!

- Lunch will be available at 11:30 am.
- In BatCave
- Send a student volunteer

SCIENCE OLYMPIAD

Judging

Bay Area Regional

Student Assistants

- You will have a student assigned to your room/judge for the day to run errands and get help if necessary.

SCIENCE OLYMPIAD

Judging

Bay Area Regional

When, Where, What

- Meeting at 8:10 a.m.
- Meeting in J12 to pick up packets.
- Head to the rooms to finalize the setup and figure out any last minute issues.
- Impounds begin at 9:00 am
- Lab setup will be from 7:30 to 9:00 am
- First event starts at 9:00 am
- Have a great day!

SCIENCE OLYMPIAD

Judging

Bay Area Regional

For More Information:

www.barso.org

Or

407-920-6453 (Cell)

Or

mckeem2@gmail.com

SCIENCE OLYMPIAD

Contact