NorCal State Tournament
General Rules (All Events)

Last Updated: 4/12/21

- National Science Olympiad rules for a Mini SO tournament only allows participants to **test at their own home, including the "Build" events.**
- Participants may use whatever they choose to use to communicate with one another (phone call, video calls, etc.). Other applications, if used, to communicate must be started before starting a test. Once the test has started, the students can continue to communicate with their partner through the audio but *it must NOT trigger the "Out of Browser" timer*. Events that allow notes should have them in HARD COPY format and *not electronic*. "**Out of Browser" time may cause a team to be DISQUALIFIED**.
- Participants must not be in the same room together for Mini tournaments. Partners living under the same roof are expected to be physically apart during the test, including building events, so that it is equitable for all teams.
- All written tests are 50 minutes long EXCEPT Sounds of Music and Detector Building
- SkyCiv for Digital Structures (Boomilever) requires the purchase of a license. Check with your Regional Director for purchase information.

  All event images were created by participants Gwennie L. and Conan L. and the stickers can be purchased at https://www.redbubble.com/people/stellarsticker/shop.

COVID-19 Pandemic Rules Modifications: If not already allowed, each individual participant can have a personal set of reference materials (e.g. binders, single sheets of paper), calculator, or other academic resources as specified in the specific event rule for use during the competition to facilitate social distancing, isolation, and to prevent resource sharing.

Note that all reference materials must still follow the guidelines in the rules. This means that events that allow written notes should be in hard copy form. The only exception is with Astronomy C which the rules allow for a computer.

Division B

Anatomy and Physiology B:
- No change

Circuit Lab B:
- No hands-on component

Crime Busters B:
- No hands-on component

Density Lab B:
- No hands-on component

Digital Structures B: Please see Digital Structures Rules
- Here is a short tutorial on SkyCiv
- Participants should log into scilympiad's Digital Structures event and start the test to see the unknown contact depth and contact width. Teams must submit their design on SkyCiv within 45 minutes of them starting the test. Details for submission will be provided on the day of the tournament via Scilympiad.
- Participants will need to turn on Competition Mode on tournament day in order to submit their structure. Once in Competition Mode, previously built structures cannot be imported, participants are locked into the mode for 48 hours and they can only test their structure 5 times.
- Teams must use area load instead of point load and members must be rectangular cross section made from one of the 3 presets balsa materials.
- Since only one partner can use the model in SkyCiv, the person making the model can share screen and/or video chat outside of scilympiad.com with their partner.

Disease Detectives B:
- No change

Dynamic Planet B:
- No change

Experiment and Data Analysis B: Please see Experiment and Data Analysis Rules
- Participants will not be physically doing any experiments in this event.

Food Science B:
- No hands-on component

Fossils B:
- No change

Game On B:
- Each team should create a single Scratch login for both partners so that they can both access a single file. Note that while both partners can be logged into the account at the same time, Scratch does not save the files properly if both partners are in the project at the same time. Participants should communicate with their partner (through Scilympiad, phone, or other means) to let each other know who is actively working on the file to avoid version conflicts.

Helicopters B: Please see [Helicopter Rules].
- An adult must be present with the participant(s) during the entire duration of the recording. The student participant must launch the device on their own, but the adult present can help hold the device while the student winds their motor.
- With coach or parent supervision, teams will follow the instructions in the rules and test their Helicopter in a typical room (ceiling ~ 2.5 m or 8 ft) **at home on tournament day.** Results must be submitted using the link below
- Tournament Day Directions:
    1) Open the test in Scilympiad to obtain the codeword; **record yourself doing so**. (0 minute mark)
    2) Competing your flights:
        a) If one participant is flying both official flights, they have 10 minutes to fly up to 2 official flights and any number of trimmed flights. After that, they have 30 minutes to upload their flight and submit the form. They may NOT fly during the submission period.
        b) If two participants are flying one official flight each, they each have 6 minutes to fly up to 1 official flight and any number of trimmed flights. After that, they have 30 minutes to upload their flight and submit the form. They may NOT fly during the submission period.
    3) Complete the [google link], with the following information:
        a) Duration of Flight 1 (in seconds)
        b) # of single-bladed rotors for the device used in Flight 1
        c) Duration of Flight 2 (in seconds)
        d) # of single-bladed rotors for the device used in Flight 2
        e) Flight Log
        f) Video of each flight, or one video of both flights

Heredity B:
- No change

Machines B:
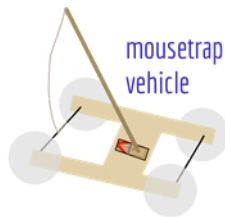- No hands-on component

Meteorology B:
- No change

Mission Possible B: The Mission Possible B rules in the 2020-2021 Rules will be used with the following changes:
- This event will be run using a video call with the Event Supervisors and participating teams. **Teams must test at their home separately.**
- There must be two or more adults from Science Olympiad on the video call with the team (consistent with the Science Olympiad never-alone policy).
- There must be an adult present with the participant(s) competing during the entire duration of the call. The adult from the team being in the same room as the participant(s) is strongly recommended. Otherwise, an adult with the team must be available during video call during the entire duration of the call. If safe and permitted by local laws and guidelines, the adult may be asked to answer questions about the device, help measure and verify operational features of the device, and should refrain from being an advocate for the team's performance. The student participant(s) must be prepared to explain their device on their own, but Event Supervisors may ask to speak to the adult if needed.
- Prior to the tournament at all tournament levels, teams must submit their ASL along with pictures of each action to the tournament officials in order to receive the 25 points for 5.b.i.
- 4.a. is modified as "The Target Operation Time is 45 to 75 seconds at Regionals/Invitationals, 61 to 90 seconds at State, and 91 to 120 seconds at Nationals. At the start of the assigned time, Event Supervisors will provide the participant(s) the Target Operation Time."
- Tournament officials will provide the participant(s) a video call link for the day of the tournament where participant(s) will demonstrate the running of their Mission Possible device. Participant(s) should have their mobile device with video call capability to demonstrate the running of their Mission Possible device along with a meter stick and ruler in order to verify dimensions in the Mission Possible device. The adult with the participant(s) may help hold the mobile device to allow the

participant(s) to operate the Mission Possible device.
- Participant(s) should let the Event Supervisors know when they are ready to run their device. The team must be ready within the 30 minutes of being told the Target Operation Time to receive the 50 points in 5.c.i.
- The participant(s) or adult is/are responsible for pointing their mobile device(s) so that the Event Supervisors are able to see the running of the Mission Possible device. Event Supervisors will use their discretion to determine the success of an action in the case that it is not visible through the call.
- This event will be using Zoom as the video call platform. Please have Zoom available on your phone with camera access. If Zoom is not possible, please let us know. The Zoom link to use the day of tournament will be in your scilympiad test.
- The ASL should be submitted by the Wednesday before the tournament at 11:59 PM local time in this google form

Mousetrap Vehicle B: We will be running Mousetrap Vehicle B in the 2020-2021 Rules with the following changes:
- This event will be run using a video call with the Event Supervisors and participating teams. **Teams must test at their home separately.**
- There must be two or more adults from Science Olympiad on the video call with the team (consistent with the Science Olympiad never-alone policy).
- There must be an adult present with the participant(s) competing during the entire duration of the call. The adult from the team being in the same room as the participant(s) is strongly recommended. Otherwise, an adult with the team must be available during video call during the entire duration of the call.
- 24-48 hours prior to the start of the event, tournament officials will announce the target distance to the participating teams. Participating teams are responsible for setting up the track to the correct distance.
- Tournament officials will provide the participant(s) a video call link for the day of the tournament where participant(s) will demonstrate the running of their Mousetrap Vehicle device. Participant(s) should have their mobile device with video call capability to demonstrate the running of their Mousetrap Vehicle device along with a meter stick and ruler in order to verify dimensions in the Mousetrap Vehicle device. The adult with the participant(s) may help hold the mobile device to allow the participant(s) to operate the Mousetrap Vehicle device.
- At the assigned time, Event Supervisors will go over the Mousetrap Vehicle device parameters and ask the participant(s) to begin their runs.
- Participant(s) will be responsible for measuring the distance of each run and showing it to the Event Supervisors. They are allowed to follow the vehicle as long as they do not touch the vehicle prior to it coming to a complete stop.
- This event will be using Zoom as the video call platform. Please

have Zoom available on your phone with camera access. If Zoom is not possible, please let us know. The Zoom link to use the day of the tournament will be in your scilympiad test. Additionally, please make an account as it is needed to enter the call.
- The practice log should be submitted by the Wednesday before the tournament, 11:59 PM local time here.
- The Target Distance is announced 24-48 hours before the tournament: **9.25 meters**

Ornithology B:
- No change

Reach for the Stars B:
- No change

Road Scholar B:
- No change

Water Quality B:
- No hands-on component

Write It CAD It B: Please see Write It CAD It Rules B.
- **For a comprehensive Write It CAD It student guide, click here.**
- The software used is **Onshape**. Educational licenses are available for free at https://www.onshape.com/en/education/ for educators and students. The CADer should create an account on this page prior to the tournament.
- For the competition, once the Writer starts the test, they will see screenshot images of the model from different angles. They have 25 minutes to type the instructions in the free response box. The instructions are autosaved every time they click outside of the box. While there is no advantage to finishing writing early, if the writer finishes early, they can click "Submit Test." The Writer should click outside of the textbox they're typing in before the end of the 25 minutes so that it's saved. The test will be automatically submitted when the 25 minutes is up.
- The CADer must start the test **AFTER** the writer has submitted their test. You may communicate between partners to ensure that the test submission has been achieved. If the CADer starts

before the writer has submitted, the instructions will not transfer, and **participation points will be given to the team**.

- The CADer should log into their Onshape account and should start their test on Scilympiad. In the Scilympiad test, they will see the instructions from their Writer as well as the name of the CAD file used for this tournament. Once logged into the Onshape account, the CADer should click on "Public" on the left and search for the name of the file provided in Scilympiad by typing it in the "Search in Public" bar in Onshape. Once the file has been found, double click on it and near the upper left, click on "Make a Copy." The CADer has 20 minutes to arrange the pieces in Onshape using the instruction from the Writer.
- Submission: The CADer should rename the CAD file to Team Number: School Name - Team Name.
  - Click on the "Share" button on the upper right and under "Individuals," type in email provided in scilympiad and click "Share".

- Event supervisor email: wici.scioly@gmail.com

Division C

All events will follow the 2020-2021 Event Rules with the following exceptions:

Anatomy and Physiology C:
-   No change

Astronomy C:
-   No change

Chem Lab C:
-   No hands-on component.

Circuit Lab C:
-   No hands-on component

Codebusters C:
-   Students should print the following reference sheet: https://scilympiad.com/Data/shared/testRefs/CodebustersReference.pdf. Participants are allowed to use this during the Codebusters event.

Designer Genes C:
-   No change

Detector Building C:
-   No hands-on component

Digital Structures C: Please see Digital Structures Rules
-   Here is a short tutorial on SkyCiv.
-   Participants should log into scilympiad's Digital Structure event and start the test to see the unknown contact depth and contact width. Teams must submit their design on SkyCiv within 45 minutes of them starting the test. **Details for submission will be provided on the day of the tournament via Scilympiad.**
-   Participants will need to turn on Competition Mode on tournament day in order to submit their structure. Once in Competition Mode, previously built structures cannot be imported, participants are locked into the mode for 48 hours and they can only test their structure 5 times.
-   Teams should use area load instead of point load and

members must be rectangular cross section made from one of the 3 presets balsa materials
- Since only one partner can use the model in SkyCiv, the person making the model can share screen and/or video chat outside of scilympiad.com with their partner.

Disease Detectives C:
- No change

Dynamic Planet C:
- No change

Experiment and Data Analysis C: Please see Experiment and Data Analysis Rules C
- Participants will not be physically doing any experiments in this event.

Forensics C:
- No hands-on component

Fossils C:
- No change

Geologic Mapping C:
- No change

Gravity Vehicle C: We will be running Gravity Vehicle C in the 2020-2021 Rules with the following changes:
- This event will be run using a video call with the Event Supervisors and participating teams. **Teams must test at their home separately.**
- There must be two or more adults from Science Olympiad on the video call with the team (consistent with the Science Olympiad never-alone policy).
- There must be an adult present with the participant(s) competing during the entire duration of the call. The adult from the team being in the same room as the participant(s) is strongly recommended. Otherwise, an adult with the team must be available during video call during the entire duration of the call.
- 24-48 hours prior to the start of the event, tournament

officials will announce the target distance to the participating teams. Participating teams are responsible for setting up the track to the correct distance.

- Tournament officials will provide the participant(s) a video call link for the day of the tournament where participant(s) will demonstrate the running of their Gravity Vehicle device. Participant(s) should have their mobile device with video call capability to demonstrate the running of their Gravity Vehicle device along with a meter stick and ruler in order to verify dimensions in the GravityVehicle device. The adult with the participant(s) may help hold the mobile device to allow the participant(s) to operate the Gravity Vehicle device.
- At the assigned time, Event Supervisors will go over the Gravity Vehicle device parameters and ask the participant(s) to begin their runs.
- Participant(s) will be responsible for measuring the distance of each run and showing it to the Event Supervisors. They are allowed to follow the vehicle as long as they do not touch the vehicle prior to it coming to a complete stop.
- This event will be using Zoom as the video call platform. Please have Zoom available on your phone with camera access. If Zoom is not possible, please let us know. The Zoom link to use the day of tournament is https://ucsb.zoom.us/j/89300854650
- The log should be submitted by the Wednesday before the tournament, 11:59 PM local time here: https://forms.gle/JHhYFJnvxh1EBXAw9
- The Target Distance will be 10.75m

Helicopters C: Please see Helicopter Rules.
- An adult must be present with the participant(s) during the entire duration of the recording. The student participant must launch the device on their own, but the adult present can help hold the device while the student winds their motor.
- With coach or parent supervision, teams will follow the instructions in the rules and test their Helicopter in a typical room (ceiling ~ 2.5 m or 8 ft) **at home on tournament day**. Results must be submitted using the link below
- Tournament Day Directions:
    4) Open the test in Scilympiad to obtain the codeword; **record yourself doing so**. (0 minute mark)
    5) Competing your flights:
        a) If one participant is flying both official flights, they have 10 minutes to fly up to 2 official flights and any number of trimmed flights. After that, they have 30 minutes to upload their flight to a file hosting software (Google Drive, Google Photos, Dropbox, etc.) and submit the form. They may NOT fly during the submission period. (20 minute mark)

b) If two participants are flying one official flight each, they each have 6 minutes to fly up to 1 official flight and any number of trimmed flights. After that, they have 30 minutes to upload their flight to a file hosting software (Google Drive, Google Photos, Dropbox, etc.) and submit the form. They may NOT fly during the submission period. (20 minute mark)

6) Complete the Google Form with the following information:
   a) Duration of Flight 1 (in seconds)
   b) # of single-bladed rotors for the device used in Flight 1
   c) Duration of Flight 2 (in seconds)
   d) # of single-bladed rotors for the device used in Flight 2
   e) Flight Log
   f) Video of each flight

Machines C:
- No hands-on component

Ornithology C:
- No change

Protein Modeling C:
- Part I (Pre-build) will be skipped
- Part II, the Computer Exploration portion of the event, is only to be completed with the aid of a browser-based version of Jmol found at this website: https://cbm.msoe.edu/markMyweb/jmolDesignEnvironment/
- Participants are responsible to having read the following three Papers:
  - Anzalone2019
  - Kadam2017
  - Komor2016

Sounds of Music C:
- Please submit your log at https://docs.google.com/forms/d/e/1FAIpQLSccTapshRSADTYYFbgpIMgqeV1EdEpy0GzD7sQF7ih6GVn-Yw/closedform
- The Pitch test and the Song test will be performed through a video call. The Zoom link to use the day of tournament will be in your scilympiad test.

Water Quality C:
- No hands-on component

Write It CAD It C: Please see Write It CAD It Rules C.
- **For a comprehensive Write It CAD It student guide, click here.**
- The software used is **Onshape**. Educational licenses are available for free at https://www.onshape.com/en/education/ for educators and students. The CADer should create an account on this page prior to the tournament.
- For the competition, once the Writer starts the test, they will see screenshot images of the model from different angles. They have 25 minutes to type the instructions in the free response box. The instructions are autosaved every time they click outside of the box. While there is no advantage to finishing writing early, if the writer finishes early, they can click "Submit Test." The Writer should click outside of the textbox they're typing in before the end of the 25 minutes so that it's saved. The test will be automatically submitted when the 25 minutes is up.
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- Submission: The CADer should rename the CAD file to Team Number: School Name - Team Name.
    - Click on the "Share" button on the upper right and under "Individuals," type in email provided in scilympiad and click "Share".

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