

Northern California Science Olympiad

State Tournament

Sat, April 2, 2022 Written Tests

Or

Mon, April 4 – Wed, April 6, 2022 Written & Device Tests

Saturday, April 9, 2022 Device Tests

Event Modifications

In a virtual format, some events may be modified due to constraints with online testing and build events. As such, this document, made for coaches and competitors, will detail modifications that are integral for participating in the tournament.

- The tournament is run as a [Satellite](#) Tournament. **Participants are expected to compete from their own school or a school within their district.**
- [Link to Schedule](#)
- Participants may use any method of communication such as video call, voice chat, the built-in Scilympiad chat, or direct conversation that is appropriate for the competition condition at their school.
- Please note that all resources used must still follow the event rules (e.g. in the form of binders, note sheets, etc.). With the exception of Astronomy, which allows a computer/tablet as resources, notes cannot be in a digital format. We understand the cost and burden on teams to print a new binder, but we ask that teams follow this rule to be equitable to all teams.

If students are not required to practice social distancing, then only the allowed resources as described in each event's rules apply. If students are required to practice social distancing, then the COVID rules modifications in the rules manual will apply as summarized below: 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 resource as specified in the specific event rule for use during the competition to facilitate social distancing, isolation, and to prevent resource sharing. Personal sets of resource materials must meet all the criteria established in the specific event

rule. Teams can decide how they want to arrange their resources as they best understand the circumstances under which they are competing and what their overall strategy might be. Using Anatomy & Physiology as an example, each partner may choose to have two different sets of notes so Partner A tackles all the muscle questions and Partner B tackles all the skeleton questions.

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Event Modifications

Anatomy & Physiology B

No Change

Anatomy & Physiology C

No Change

Astronomy C

No Change

Bio-Process Lab B

This event will be run as a test only event, without any hands-on portion or stations.

Bridge B

- This event will be done through a live zoom call.
- Teams are expected to have the equipment (Test Base, Pass Thru Block, Loading Assembly, sand, and scale) to test their device.
- Please submit any required logs, drawings, etc. to <https://forms.gle/LDhVdxJRHfvQvmVK7> before the event
- Video Call Steps:
<https://docs.google.com/spreadsheets/d/1cYEK5IWjLrnwde0x28G8kvaUPRzurERmV4BO2t4nNrl/edit?usp=sharing>

Bridge C

- This event will be done through a live zoom call.
- Teams are expected to have the equipment (Test Base, Pass Thru Block, Loading Assembly, sand, and scale) to test their device.
- Please submit any required logs, drawings, etc. to <https://forms.gle/LDhVdxJRHfvQvmVK7> before the event
- Video Call Steps:
<https://docs.google.com/spreadsheets/d/1cYEK5IWjLrnwde0x28G8kvaUPRzurERmV4BO2t4nNrl/edit?usp=sharing>

Cell Biology C

No Change

Chemistry Lab C

- This event will be run as a test only event without a hands-on portion.

Codebusters B

- Participants should print the following reference sheet:
<https://scilympiad.com/Data/shared/testRefs/CodebustersRef2022.pdf>.
Participants are allowed to use this during the Codebusters event.

Codebusters C

- Participants should print the following reference sheet:
<https://scilympiad.com/Data/shared/testRefs/CodebustersRef2022.pdf>.
Participants are allowed to use this during the Codebusters event.

Crave the Wave B

- The practical portion in 3.a.i. will be included as part of the written test and not require any materials.

Crime Busters B

- This event will be run as a test-only event without a hands-on portion.

Detector Building C

- This event will be conducted as a written event only

Disease Detectives B

No Change

Disease Detectives C

No Change

Dynamic Planet B

No Change

Dynamic Planet C

No Change

Electric Wright Stuff B

- This event will be done through a live zoom call.
- The times of the flights will use the following modifications based on the local ceiling height:

Ceiling Height	Adjustment Multiplier	Ceiling Height	Adjustment Multiplier
< 19.0'	1.000	25.0' – 26' 11.99"	0.850
19.0' – 20' 11.99"	0.960	27.0' – 28' 11.99"	0.825
21.0' – 22' 11.99"	0.925	29.0' – 30' 11.99"	0.800
23.0' – 24' 11.99"	0.875	≥ 31.0'	0.775

- Teams are expected to measure the height of the venue they're in and they must provide the venue height on tournament day. Teams without the ceiling height will use a ceiling height of 31'.
- Please submit any required logs, drawings, etc. to <https://forms.gle/LDhVdxJRHfvQvmVK7>

Environmental Chemistry C

- This event will be run as a test only event without a hands-on portion.

Experimental Design B

- A list of materials will be provided 1 week prior to the tournament and teams should collect these items prior to the day of the tournament. At the beginning of the event, a subset of the materials list will be listed and only those items may be used for the experiment.
- Materials List:
 - 1 cup of orange juice
 - 1 cup of coffee

- 1 cup of water
 - 5 extra cups
 - 1 rubber bouncy ball
 - 1 pair of scissors
 - 1 pencil
 - 1 flashlight (phone flashlight is acceptable)
 - 1 sheet of 8.5"x11" paper
 - 1 coffee filter
 - 1 deck of playing cards
 - 1 string of yarn (~2 feet)
- Please submit your modified report form or handwritten portions to the following google doc within 15 minutes AFTER completing your test.
<https://forms.gle/LDhVdxJRHfvQvmVK7>

Experimental Design C

- A list of materials will be provided 1 week prior to the tournament and teams should collect these items prior to the day of the tournament. At the beginning of the event, a subset of the materials list will be listed and only those items may be used for the experiment.
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 - 1 coffee filter
 - 1 deck of playing cards
 - 1 string of yarn (~2 feet)

- Please submit your modified report form or handwritten portions to the following google doc within 15 minutes AFTER completing your test.

<https://forms.gle/LDhVdxJRHfvQvmVK7>

Food Science B

- This event will be run as a test only event without a hands-on portion.

Forensics C

- This event will be run as a test only event without a hands-on portion.

Gravity Vehicle C

- This event will be done through a live zoom call.
- Target Distance will be announced when the participants enter the zoom call.
- Please submit any required logs, drawings, etc. to

<https://forms.gle/LDhVdxJRHfvQvmVK7>

Green Generation B

No Change

Green Generation C

No Change

It's About Time C

- This event will be run in two parts: 1) a written test part in Scilympiad on tournament day and 2) a live zoom call of the device testing part.
- The target times will be announced when participants enter the zoom call.
- Please submit any required logs, drawings, etc. to

<https://forms.gle/LDhVdxJRHfvQvmVK7>

Meteorology B

No Change

Mission Possible B

- This event will be done through a live zoom call.
- The target time will be announced when participants enter the zoom call.
- Please submit any required logs, drawings, etc. to <https://forms.gle/LDhVdxJRHfvQvmVK7>

Mousetrap Vehicle B

- This event will be done through a live zoom call.
- The Target Distance will be announced when participants enter the zoom call.
- Please submit any required logs, drawings, etc. to <https://forms.gle/LDhVdxJRHfvQvmVK7>

Ornithology B

- This event will be run as a single test without stations.
- The Official National List of birds will be used.

Ornithology C

- This event will be run as a single test without stations.
- The Official National List of birds will be used.

Ping Pong Parachute B

- This event will be done through a live zoom call.
- The times of the flights will use the following modifications based on the local ceiling height.

Ceiling Height	Adjustment Multiplier	Ceiling Height	Adjustment Multiplier
< 19.0'	1.000	25.0' – 26' 11.99"	0.693
19.0' – 20' 11.99"	0.900	27.0' – 28' 11.99"	0.643
21.0' – 22' 11.99"	0.818	29.0' – 30' 11.99"	0.600
23.0' – 24' 11.99"	0.750	≥ 31.0'	0.565

- Teams are expected to measure and report the height of the venue they're in. Teams without the ceiling height will use a ceiling height of 31'.

- Please submit any required logs, drawings, etc. to <https://forms.gle/LDhVdxJRHfvQvmVK7>

Ping Pong Parachute C

- This event will be done through a live zoom call.
- The times of the flights will use the following modifications based on the local ceiling height.

Ceiling Height	Adjustment Multiplier	Ceiling Height	Adjustment Multiplier
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23.0' – 24' 11.99"	0.750	≥ 31.0'	0.565

- Teams are expected to measure and report the height of the venue they're in. Teams without the ceiling height will use a ceiling height of 31'.
- Please submit any required logs, drawings, etc. to <https://forms.gle/LDhVdxJRHfvQvmVK7>

Remote Sensing C

No Change

Road Scholar B

- Map scans will be provided as images during the exam. Physical maps will not be used.

Rocks & Minerals B

- This event will be run as a single test without stations.

Rocks & Minerals C

- This event will be run as a single test without stations.

Solar System B

No Change

Sounds of Music B

- This event will be run in two parts: 1) a written test part and 2) a live zoom call for the device testing part.
 - In preparation for the device testing, please have a meter stick ready to measure the instrument's dimensions. Additionally, please have <https://www.pascioly.org/sounds/> open and ready to help expedite the testing process.
- Please submit any required logs, drawings, etc. to <https://forms.gle/LDhVdxJRHfvQvmVK7>

Storm the Castle B

- This event will be done through a live zoom call.
- Rule 2.c: **Participants**, instead of event supervisors, will provide the projectiles, counterweight, and target.
- Rule 3.c: "...to accommodate the **participant** provided counterweights..."
- Rule 3.d: "...from the **participant** provided falling counterweights..."
- The masses of the two counterweights will be unknown prior to device testing. Students will receive the exact values of the masses during the video call. With this in mind, students must prepare two counterweights that can easily have their masses adjusted, e.g. a bottle filled with metal washers that has a hook bolt through its cap.
- One mass must be adjustable in the range 0.5–1.5 kg and the other must be adjustable in the range 1.5–2.5 kg. These must be two distinct masses, i.e. it cannot be a single mass adjustable from 0.5–2.5 kg.
- The counterweights must be prepared to within 20 g of the specified masses. After preparing their counterweights on video, students must verify their masses by showing their measurements.
- Once the masses of the counterweights have been verified, students cannot further adjust them (e.g. they cannot adjust the mass of the counterweight as a way to improve the accuracy of their device). Teams must construct their

counterweights so that they do not change in mass or fall apart during device testing.

- Please submit any required logs, drawings, etc. to <https://forms.gle/LDhVdxJRHfvQvmVK7>

Trajectory C

- This event will be done through a live zoom call.
- Participants will set up the competition area with the targets, sand/cat litter, similar substance, and, if desired, a bucket.
- Target Distances will be announced when the participants join the zoom call.
- Please submit any required logs, drawings, etc. to <https://forms.gle/LDhVdxJRHfvQvmVK7>
- **Updated 4/1:** Please review [these instructions](#) prior to joining the Zoom call.

WiFi Lab C

- **No hands on portion**

Wright Stuff C

- This event will be done through a live zoom call.
- The times of the flights will use the following modifications based on the local ceiling height.

Ceiling Height	Adjustment Multiplier	Ceiling Height	Adjustment Multiplier
< 19.0'	1.000	25.0' – 26' 11.99"	0.850
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- Teams are expected to measure and report the height of the venue they're in. Teams without the ceiling height will use a ceiling height of 31'.
- Please submit any required logs, drawings, etc. to <https://forms.gle/LDhVdxJRHfvQvmVK7>

Write It Do It B

- The students will be required to describe and recreate a two-dimensional object (“drawing”) created with no more than four different colors. The Doer must be prepared with these four preselected markers, crayons, or colored pencils, and will need to submit a picture of the image that they have recreated provided by the event supervisor.
- **Writer:** Once the Writer starts the test in Scilympiad, they will see a picture of the two-dimensional object. They will have 25 minutes to type instructions into the free response box. The Writer’s instructions are saved every time the Writer clicks outside of the free response box. Moreover, when the 25 minutes elapse, the instructions will be automatically turned in. The Writer must not communicate with the Doer at any point.
- **Doer:** At the 30 minute mark after the start of the session, the Doer may start the test on Scilympiad. In the test, the instructions of the Writer will be displayed. The two-dimensional object should be drawn with markers; pens, crayons, colored pencils, or alternative writing utensils will not be penalized. Digital drawings will not be accepted
- The Doer must be prepared with the following materials:
 - A piece of printer paper with a 15cm x 15cm square drawn in the middle of it
 - One writing utensil in each of the following colors (total **four**):
 - **Red**
 - **Yellow**
 - **Green**
 - **Blue**
 - **One** 12 inch/30-centimeter ruler
 - **Smartphone/computer** that can take clear images and upload to the provided online form
- Submit your drawing at <https://forms.gle/LDhVdxJRHfvQvmVK7>

Write It Do It C

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