



BirdSO 2022 Events and Modifications (Div. C)

General Policies

- All notesheets (events that require 8.5 * 11 inch piece(s) of paper) must be printed out. For these events as well as events that do not require any external resources, event supervisors will keep track of "time out of browser". **Online binders are not allowed (besides Astronomy).**
- Participants may use any method of communication such as video call, voice chat, or the built-in Scilympiad chat, or may work together in-person at their school location.
- All events are 50 minutes long.
- No-shows will result in n+1 points. DQs as a result of cheating will result in n+2 points.
- Events follow **national** rules.
- All video submissions and practice logs will be properly disposed of two weeks (14 days) after competition. No build videos will be saved.

Build Events

As a general policy, build events will require video submission. A generalized set of directions is as follows:

1. Students set up general set-ups beforehand. This includes bringing out Bridge apparatuses, Trajectory sand pits, or Ping Pong Parachute launchers.
2. The student must be accompanied by an adult(s), who will act as the supervisor(s). The supervisor's job is to not only record the video, but to measure distances, sand loads, times, or act as the supervisor in any way possible.
3. The event supervisor **starts the video**. This video must be **one continuous, uncut video**.
4. Students open the test in Scilympiad, and will read a **Codeword** to the video. The student must state their team number, school name, and team name audibly to the camera.
5. Students will have **one try** for each of their builds, just like in-person competition.
6. With events with target distances or targets, such as Trajectory, Mousetrap Vehicle, Gravity Vehicle, participants will set up this distance.

7. Students verify **construction parameters** and may verify some competition parameters, where applicable. Comparable to in-person competition, this is the “impound” or “check-in”.
8. When the student is ready, the supervisor starts the timer to start the event. From here, the student cannot have external help from supervisors or teammates.
9. After the students finish competing, the event supervisor will **end the video**.
10. The video must be uploaded to a file hosting website, such as Google Drive or YouTube, with the proper sharing settings (e.g. Link sharing ON, unlisted video).

Events

Anatomy and Physiology No change

Astronomy No change

Bridge This event will be run through **video submission**.

Students will submit their log with their video/testing submission.

1. Students will demonstrate that their testing apparatus meets the desired rules in rule 6.
2. The student must be accompanied by an adult(s), who will act as the supervisor(s). The supervisor’s job is to not only record the video, but to measure the sand load as well.
3. The event supervisor **starts the video**. This video must be **one continuous, uncut video**.
4. **Students clearly open the test in Scilympiad on video** and will read a **Codeword** to the video. The student must state their team number, school name, and team name audibly to the camera.
5. Students will have **one attempt** to test their bridge, just like in-person competition.
6. Students verify **construction parameters (all rules in rule 3.)**. Comparable to in-person competition, this is the “impound” or “check-in”.
7. When the student is ready, the supervisor begins the timer to start the event. From here, the student cannot have external help from supervisors or teammates.
8. The event supervisor will measure the load held after testing as accurately as possible.
9. After the students finish competing, the event supervisor will **end the video**.
10. The video must be uploaded to a file hosting website, such as Google Drive or YouTube, with the proper sharing settings (e.g. Link sharing ON, unlisted video).

All video submissions and practice logs will be properly disposed

of two weeks (14 days) after competition. No build videos will be saved.

Cell Biology

No change

Chemistry Lab

No hands-on component

Codebusters

Students should print the following reference sheet: https://drive.google.com/file/d/1QMC_tVhEZfG-9SWMCKwoZrHbs0tKruDL/view?usp=sharing. Participants are allowed to use this during the Codebusters event, but must not use an online copy.

Detector Building

Test Only

Disease Detectives

No change

Dynamic Planet

No change

Environmental Chemistry

No hands-on component

Teams will be allowed to use a **programmable calculator**.

Experimental Design

A list of materials will be provided at least 1 week prior to the tournament. During competition, the topic will be revealed and only those items may be used to conduct the experiment.

2 pieces of string each at least 12 inches long

Tape

1 plastic 6 inch ruler

1 plastic 12 inch ruler

1 protractor

1 pair of Scissors

1 clear plastic cup

1 Stopwatch

Water

1 Electric scale

3 small binder clips (make sure they are the same)

3 medium sized binder clips (make sure they are the same)

3 large binder clips (make sure they are the same)

3 Pencils

A few (~3-5) small marbles

A few coins of some sort (quarters, nickels, pennies, etc)

Forensics

No hands-on component

Gravity Vehicle

Students will submit their log with their video/testing submission.

1. The student must be accompanied by an adult(s), who will act as the supervisor(s). The supervisor's job is to not only record the video, but to measure the distances as well.
2. The students must also demonstrate their track area (rule 6.) meets specifications.

3. The event supervisor **begins the video**. This video must be **one continuous, uncut video**.
4. **Students clearly open the test in Scilympiad on video** and will read a **Codeword** to the video. The student must state their team number, school name, and team name audibly to the camera.
5. Teams will set up the target distance per the distance given in the Scilympiad test.
6. Students will have **three runs** to test their device, just like in-person competition.
7. Students verify **construction parameters (all rules in rule 3.)**. Comparable to in-person competition, this is the “impound” or “check-in”.
8. When the student is ready, the supervisor starts the timer to begin the event. From here, the student cannot have external help from supervisors or teammates.
9. The supervisor must be the one measuring distances from the target.
10. After the students finish competing, the event supervisor will **end the video**.
11. The video must be uploaded to a file hosting website, such as Google Drive or YouTube, with the proper sharing settings (e.g. Link sharing ON, unlisted video).

Green Generation

No change

It's About Time

No build component

Ornithology

No change

Teams may need headphones, as audio will be present in the test.

Ping Pong Parachute

This event will be run through **video submission**.

Students will submit their log with their video/testing submission.

1. The student must be accompanied by an adult(s), who will act as the supervisor(s). The supervisor’s job is to not only record the video, but to time the flights as well.
2. 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 a submitted ceiling height will use a ceiling height of 31’. The times of the flights will use the following modifications based on the local ceiling height (Figure below).
3. The event supervisor **begins the video**. This video must be **one continuous, uncut video**.
4. **Students clearly open the test in Scilympiad on video** and will read a **Codeword** to the video. The student must state

their team number, school name, and team name audibly to the camera.

5. Students will have **three scored attempts** to test their rocket, just like in-person competition.
6. Students verify **construction parameters clearly shown in video (all rules in rule 3.)**. Comparable to in-person competition, this is the “impound” or “check-in”.
7. When the student is ready, the supervisor starts the timer to start the event. From here, the student cannot have external help from supervisors or teammates.
8. One separate timer is needed to record the flight times. This cannot be a teammate and must be an adult.
9. After the students finish competing, the event supervisor will **end the video**.
10. The video must be uploaded to a file hosting website, such as Google Drive or YouTube, with the proper sharing settings (e.g. Link sharing ON, unlisted video).

Ceiling Height	Adjustment Multiplier	Ceiling Height	Adjustment Multiplier
< 19.0’	1	25.0’ - 26’ 11.99”	0.693
19.0’ - 20’ 11.99”	0.9	27.0’ - 28’ 11.99”	0.643
21.0’ - 22’ 11.99”	0.818	29.0’ - 30’ 11.99”	0.6
23.0’ - 24’ 11.99”	0.75	≥ 31.0’	0.565

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Remote Sensing

No change

Rocks and Minerals

No change

Trajectory

This event will be run through **video submission**. Please read through the submission guidelines [here](#).

Students will submit their log with their video/testing submission.

1. The student must be accompanied by an adult(s), who will act as the supervisor(s). The supervisor’s job is to not

only record the video, but to measure the distances as well. Please measure the straight line distance from the CENTER of the target to the center of the initial impact of your projectiles for scoring.

2. The students must also demonstrate their competition area (rule 6.) meets specifications. Distances will be provided in the Scilympiad platform upon entering the event.
3. The event supervisor **begins the video**. This video must be **one continuous, uncut video**.
4. **Students clearly open the test in Scilympiad on video** and will read a **Codeword** to the video. The student must state their team number, school name, and team name audibly to the camera.
5. Teams will set up the competition area as per the short target, far target, and bucket distances given in the test.
6. Students will have **four shots** to test their device, just like in-person competition.
7. Students verify **construction parameters (all rules in rule 3.)**. Comparable to in-person competition, this is the "impound" or "check-in".
8. When the student is ready, the supervisor starts the timer to start the event. From here, the student cannot have external help from supervisors or teammates.
9. The supervisor must be the one measuring distances from the target point.
10. After the students finish competing, the event supervisor will **end the video**.
11. The video must be uploaded to a file hosting website, such as Google Drive or YouTube, with the proper sharing settings (e.g. Link sharing ON, unlisted video).

WiFi Lab

No build component

Wright Stuff

This event will be run through **video submission**.

2/14 5:06 AM Modification: Apologies for the contradictory instructions. Please follow the instructions as outlined in the submission form:

Two items are needed for a complete submission.

1. Device Schematics video

A single video of the models being measured and weighed by the competitor, showing that all wing and stab sizes fall within the required dimensions, and that the model weighs over 8 grams without the mass of the rubber motor.

2. Flight video

A single video of the massing of each rubberband that the competitor may use (up to 6), and the flight period in the same video. No cutting or pausing is allowed.

~~Students will submit their log with their video/testing submission.~~

- ~~1. The student must be accompanied by an adult(s), who will act as the supervisor(s). The supervisor's job is to not only record the video, but to time the flights as well.~~
- ~~2. 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'. The times of the flights will use the following modifications based on the local ceiling height (Figure below).~~
- ~~3. The event supervisor **starts the video**. This video must be **one continuous, uncut video**.~~
- ~~4. **Students clearly open the test in Scilympiad on video** and will read a **Codeword** to the video. The student must state their team number, school name, and team name audibly to the camera.~~
- ~~5. Students will have **two scored flights** to test their plane, just like in-person competition.~~
- ~~6. Students verify **construction parameters (all rules in rule 3.)**. Comparable to in person competition, this is the "impound" or "check in".~~
- ~~7. When the student is ready, the supervisor starts the timer to start the event. From here, the student cannot have external help from supervisors or teammates.~~
- ~~8. One separate timer is needed to record the flight times. This cannot be a teammate and must be an adult.~~
- ~~9. After the students finish competing, the event supervisor will **end the video**.~~
- ~~10. The video must be uploaded to a file hosting website, such as Google Drive or YouTube, with the proper sharing settings (e.g. Link sharing ON, unlisted video).~~

Ceiling Height	Adjustment Multiplier	Ceiling Height	Adjustment Multiplier
< 19.0'	1	25.0' - 26' 11.99"	0.85
19.0' - 20' 11.99"	0.96	27.0' - 28' 11.99"	0.825
21.0' - 22' 11.99"	0.925	29.0' - 30' 11.99"	0.8
23.0' - 24' 11.99"	0.875	≥ 31.0'	0.775

All video submissions and practice logs will be properly disposed of two weeks (14 days) after competition. No build videos will be saved.

Write It CAD It

See Write It CAD It Rules at the back of the SOINC manual.

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".

Fermi Questions (Trial)

See Fermi Questions rules [here](#).

Materials Science (Trial)

See Materials Science rules [here](#). There will be no wet lab.

Science Quiz Bowl (Trial)

See Science Quiz Bowl rules [here](#).

Science Quiz Bowl's top 6 buzzer round will be held via Discord on Sunday, February 20th at 1:00 PM PT. Please see the [SQB rules](#) (buzzer) for more details.

Moreover, participants that get into the top 6 will need to be 13+ years of age. If a participant is below that age minimum, they may switch students in order to meet the age requirement.

Changes: Each participant may bring a non-programmable, non-graphing calculator. The written exam will have **five (5)** categories: Biology, Chemistry, Physics, Earth/Space Science, and **Miscellaneous**.

Spreadsheet Scripting (Trial)

See Spreadsheet Scripting rules [here](#).

Bioinformatics (CS)

See Bioinformatics rules [here](#).

Cybersecurity (CS)

See Cybersecurity rules [here](#).

The event will be run in an **open internet** format.

- Participants will be registering for the HackerRank contest.
- Prior to the competition, participants should go to <https://www.hackerrank.com/auth/signup> and create an account.
- During the competition, participants can write, upload, and/or paste their code in each challenge page. The autograder will then automatically run the submitted program against the test cases. Team scores will be based on the number of passed test cases. Participants can change and re-upload/paste their program an unlimited number of times during the competition period. If more than one solution per challenge is submitted, the score will reflect the highest score achieved across both usernames submitted. More info here: <https://www.hackerrank.com/faq>.
- The following languages will be allowed: C, C++, Java (Java 7), Java 8, Python 2, and Python 3.
- During, before, or after the Scilympiad test, participants will be required to submit at most two HackerRank usernames in a Google Form that they will use to enter the contest on HackerRank. The link can be found in the test.

Data Science (CS)

See Data Science rules [here](#).

Machine Learning (CS)

See Machine Learning rules [here](#).

Kaggle Signup:

<https://www.kaggle.com/c/birdso-satellite-ml-2022/overview/description>.

Kaggle “pre”-builds will be due by **February 18th**, at the end of competition.

Run It Code It (CS)

See Run It Code It rules [here](#).

Languages allowed are C++ 17, Python 3, and Java 17.

