

General Event Tips & Rule Clarifications

General Event Tips:

- Some events may allow you to bring materials to help you answer questions. Make sure you know your notes well. Study tests will be timed, and having lots of notes will be useless if you don't have a general understanding of them.
- **Google** is your friend. He'll have lots of resources for you to use.
- When we refer to a textbook, only study the relevant sections. Reading the whole book will not be very useful.

Websites to Visit:

- **Scioly Wiki:** http://scioly.org/wiki/index.php/Main_Page - A wiki for all your events. This is a great starting point in your studies. However, it's not comprehensive, so you'll have to look for other websites to go deeper into your studies.
- **Scioly Forums:** <http://www.scioly.org/phpBB3/index.php> (look at threads for the events you're doing; it might give you greater insight, questions that other people also have on those events)
- **Scioly Test Exchange:** http://www.scioly.org/wiki/index.php/Test_Exchange - Practice Tests for all the events (sometimes with outdated rules, be careful). DO the practice tests for each event, they will help you tremendously in identifying your weaknesses and knowing what to expect during the actual tests. You'll also get a feel for how deeply you need to know the various topics.
- **Official Event Rules:** <https://drive.google.com/open?id=0B3WeYkPI8aPpUmtPbEd3dVIIbEU> - This is important, adhere to the rules, especially for build. For study, this is the ultimate comprehensive list of the things you'll need to study. Again, scioly.org will give you a nice overview and brief introduction to these topics, but you'll need to dig deeper.
- **Soinc Descriptions:** https://www.soinc.org/2018_div_c_events - Official website which provides necessary links for some of the rules for some events. Not at all comprehensive.

For Study: Cheat Sheet Tips for events allowing a max of 4 sheets/8 pages or so:

First and foremost, use Microsoft Word. It'll make your life much easier.

- 1) Choose fonts like Arial Narrow that are space efficient. 6 point font is readable.
- 2) Decrease the margins of the paper, from 1 inch to 0.5 inches (or even 0.25 inches - check with your printer to see if that works)
- 3) Decrease the spacing between lines. Click line spacing options, and under line spacing, select multiple. Set it to 0.90 or lower (some words may get cut off if the spacing is too small).
- 4) If you have empty space at the end of lines, create columns - go to page layout, select columns, and click 2, 3, 4, whatever is most space efficient and readable. Make sure that the spacing between columns is minimal by working with the ruler.
- 5) On MS Word, make sure the pictures are set to "Square" fit so they can be resized without disturbing the rest of the cheat sheet. Plus you can also use "In front of text" or "behind text" for the same reason.

For events that say 2 sheets front and back, for instance, we don't care if you bring 4 one sided sheets

Event Specific Rules and Resources

Study

Anatomy & Physiology

50 minutes

National Topics also included on test. One double-sided piece of paper for cheatsheet. A nonprogrammable, nongraphing calculator is allowed. Selected questions will be used to break ties.

Resources-

<https://www.soinc.org/anatomy-and-physiology-c>

https://scioly.org/wiki/index.php/Anatomy_and_Physiology

https://scioly.org/wiki/index.php/2018_Test_Exchange#Anatomy_and_Physiology

<https://scioly.org/forums/viewtopic.php?f=265&t=10874>

Campbell:

<https://mega.co.nz/#!aI0WEA4J!EmKdcg2hloHXmQ9I2zdb2DBftCwSc5vNsO6Rke-m8RE>

Ecology

60 minutes

State and National topics included, Division C. Station format, not exam. One double sided piece for cheatsheet. Includes low math section, non-graphing calculators only. Reminder: North American theme.

Sample Questions: Div C: e. f. g. h.

Resources-

<https://www.soinc.org/ecology-c>

<https://scioly.org/wiki/index.php/Ecology>

https://scioly.org/wiki/index.php/2018_Test_Exchange#Ecology

http://scioly.org/wiki/index.php/Green_Generation

https://www.soinc.org/green_generation_c

First part very similar to old Water Quality, study nutrient cycles well

<http://www.sswm.info/category/concept/nutrient-cycle>

https://en.wikipedia.org/wiki/Nutrient_cycle

Then study biomes, desertification, deforestation, etc:

<http://www.ucmp.berkeley.edu/glossary/gloss5/biome/>

legislation and boring stuff

Contact thsscio@gmail.com or justinzhang27@gmail.com (for a faster response) to questions

<http://des.nh.gov/organization/divisions/water/wmb/wqs/history.htm>

Herpetology

60 minutes

50 page limit on three ring binder. Field Guide and National List do not count towards page limit. Station format. No live specimens (pictures). No state list.

Sample Activities: a. b. c. d. e. f.

Critical detail: An e-copy of your 50-page binder must be submitted to thsscio@gmail.com by Tuesday, October 10, Midnight. Counts for points.

Resources-

<https://www.soinc.org/herpetology-c-0>

<https://scioly.org/wiki/index.php/Herpetology>

https://scioly.org/wiki/index.php/2018_Test_Exchange#Herpetology

Dynamic Planet

60 minutes

All topics. Exam format, no stations. Four double-sided pieces cheatsheet. Includes medium math section, non-graphing calculators only. Half points given. Tiebreakers available.

Sample Tasks: a. c. d. e. f.

Astronomy

50min

May bring one computer/3-ring binder and a calculator of any type. No page limit. No internet access.

Resources-

Download and read #1: [Foundations of Astronomy](#) by Seeds , #2 [Astronomy Today](#) by McMillan, and #3 relevant chapters in [An Introduction to Modern Astrophysics](#) by Carroll. You only need to cover the relevant chapters, but many invitational/regional/state tests may cover topics outside of the rules sheet (a travesty, I know). The more you read, the higher a score you will get.

Contact thsscio@gmail.com or justinzhang27@gmail.com (for a faster response) to questions

You can look up information on DSO objects online (and on wikipedia too). Be familiar with these DSOs; you should be able to identify them at a glance from a picture.

<http://scioly.org/wiki/index.php/Astronomy>

http://soinc.org/astronomy_c

(These links may take a while to download: be patient)

<https://mega.co.nz/#!CoMiSbhB!TrWDgRoYJcWjvzQAmoKF0ujF1aRfYnPS31MulQmQN4>

<https://mega.co.nz/#!nsFzEBJK!2Zj0Clc8CGNmDrRgOPME89pYKTqfc3ZcXRhrNenIM9k>

https://mega.co.nz/#!PI0CQRaA!rt_a6X6Ybh1Sk9wrxXjYnnil83K40xqez02Yr-URiOY

Also read this <http://www.astro.caltech.edu/~george/ay20/Ay20-Lec14x.pdf>

There will be lots of math and free response on the test.

Thermodynamics

50 minutes

No device portion. Three ring binder allowed. May bring a calculator of any type.

Materials Science

50 minutes

No lab portion. Two double sided pieces for cheatsheet. May bring a calculator of any type. Exam format.

Sample Activities: a. b. c. d.

Resources-

Halliday: <https://mega.co.nz/#!F!KEcwWJBK!eXKaFmSeQtgtwfdFAZqzKQ>

Other online links that may be helpful (but certainly are not complete)

<http://mypage.iu.edu/~lwoz/socrime/Event%20Supervisors/MaterialEventSuper.htm>

<http://www.ndt-ed.org/EducationResources/CommunityCollege/Materials/Introduction/introduction.htm>

Build

No impound for any of the events. Testers fill out forms before build testing. Only helicopters and towers can bring pre-made blueprints for points as their projects may break after testing.

Towers and helicopters HIGHLY EXPECTED to bring working builds!

Mousetrap Vehicle

No practice log required. Run twice, first run VTP determined by student, second run VTP determined by proctor. Cup provided. Room location released a week prior. Lowest Score counts.

Helicopters

Maximum 2 helicopters. Two flights for each helicopter. Commercial kits allowed. Room location released one week prior testing.

Longest flight time counts. No flight log necessary. No bonuses apply except for "non-coaxial rotors" (5.c.).

Hovercraft

No Written Test portion. Only bring hovercraft, graphs and data tables. No bonuses. Battery check. Highest score counts.

Towers

Eye protection needed. Three towers maximum. Construction must meet inspection strictly or else possible disqualification. Please review towers before submission. 15 kg maximum weight. Bonuses count. High score wins.

Mission Possible

Only Start, scorable, and final actions count for points. ASL wanted. Ideal time 60 seconds.