

Bio-Sphere

Date: 1/19/2014, written by Dr. Andrew Skinner

1. **DESCRIPTION:** This event will test the student's knowledge of scientists (biology, chemistry and physics), mathematicians, and computer scientists/technologists and how they fit into the history of science. In Division C, it will also test a student's knowledge of recent scientific events and news.

TEAM: 2 **EYE PROTECTION:** Cool glasses (Optional) **EVENT TIME:** 50 minutes

2. **EVENT PARAMETERS:** Each team may bring only one 8.5" x 11" double-sided page of information in any form from any source.
3. **THE COMPETITION:**

Division B teams must be prepared to answer questions about any person from List 1.

LIST 1

Archimedes of Syracuse
Robert Boyle
George Washington Carver
Francis Crick and James D. Watson
Marie Curie
Charles Darwin
Thomas Edison
Albert Einstein
Euclid of Alexandria
Rosalind Franklin
Bill Gates
Carl Friedrich Gauss
Jane Goodall
Grace Hopper

Edwin Hubble
Edward Jenner
Antoine and Marie Lavoisier
Gottfried Wilhelm Leibniz
Ada Lovelace
Lise Meitner
Gregor Mendel
Dmitri Ivanovich Mendeleev
Isaac Newton
Alfred Bernhard Nobel
Louis Pasteur
Joseph Priestly
Nikola Tesla
E. O. Wilson

Division C teams must be prepared to answer questions about people from both List 1 and List 2.

LIST 2

Niels Bohr
Subrahmanyam Chandrasekhar
Pierre de Fermat
Alexander Fleming
Évariste Galois
William and Caroline Herschel

Fritz Haber
Stephen William Hawking
John von Neumann
C.V. Raman
Srinivasa Ramanujan
Alan Turing

Division C teams will be expected also to answer questions on recent scientific news, discoveries and events in the **2013 calendar year**. NOTE: There will be no scientific news on the test for Division B teams.

4. **REPRESENTATIVE TASKS:**

Students should know the following topics:

- a. Knowledge of each scientist's biography. For example: nationality, time period, personal background, personality traits, contributions, discoveries or inventions, collaborators, rivalries, controversies, accolades, and other interests or hobbies.
- b. Describe (briefly) the significance of the scientist's work in his or her chosen field.
- c. Identify a scientist from a series of clues, facts, or important quotations from his or her life.
- d. Answer narrative questions to champion a scientist or to compare scientists.
- e. **Answer questions on recent scientific news, events and discoveries (DIVISION C ONLY)**

5. **SCORING:**

High score wins. Points will be awarded for the quality and accuracy of responses. Ties will be broken by the accuracy and/or quality of answers to pre-selected questions.

Useful Resources:

- a. Biography section of school or local library.
- b. Newspapers (print or online) or key science sites (e.g., <http://www.sciencenews.org> , <http://www.sciencefriday.com>)
- c. Scientific magazines (e.g., *Scientific American*, *Popular Science*, *New Scientist*)