

1. **DESCRIPTION:** This event will determine the participants' ability to design, conduct, and report the findings of an experiment actually conducted on site.

**A TEAM OF UP TO:** 3

**EYE PROTECTION:** C

**APPROXIMATE TIME:** 50 minutes

2. **EVENT PARAMETERS:**

- a. Participants must bring goggles and writing utensils. Chemicals that require other safety clothing will not be used.
- b. **Each Division B team** may bring a timepiece, **one linear measuring device**, and a **non-programmable non-graphing calculator dedicated to computation**.
- c. **Each Division C team** may bring a timepiece, **one linear measuring device**, and a **dedicated calculator of any kind dedicated to computation**.
- d. **The event supervisor will provide each team** with identical sets of materials **either at a distribution center or in an individual container**.
- e. The event supervisor will supply an outline, based on the **Experimental Design Checklist posted on the event page at [www.soinc.org](http://www.soinc.org), to follow when** recording their experiment along with additional paper to record data, graphs and procedure.

3. **THE COMPETITION:**

- a. **The teams must design, conduct, and report the findings of an experiment actually conducted on site that addresses the assigned question/topic area provided by the event supervisor.** The assigned question/topic area should be the same for all teams and allow the **participants** to conduct experiments involving relationships between independent and dependent variables (i.e., height vs. distance).
- b. **Each team must use at least two of the provided materials to design and conduct an experiment.** The materials will be listed on the board or placed on a card for each team. If provided, both the card and the container will be considered part of the materials. The identity of the materials will be unknown until the start of the event.
- c. When a team finishes, all materials must be returned to the event supervisor along with all written materials **and reports**.

4. **SCORING:**

- a. High score wins.
- b. Scoring will be done using the **Experimental Design Checklist** found on the Science Olympiad website ([www.soinc.org](http://www.soinc.org)).
- c. Points will be awarded depending upon the completeness of the response. Zero points will be given **for no responses as well as illegible or inappropriate responses**.
- d. Ties will be broken by comparing the point totals in the scoring areas in the following order:
  - i. Variables
  - ii. Procedure
  - iii. Analysis of Results
  - iv. Graph
  - v. Data Table
- e. Any participant not following proper safety procedures will be asked to leave the room and will be disqualified from the event.
- f. Any team not addressing the assigned question or topic area will be ranked behind those who do address the assigned question.
- g. Any team not conducting an experiment (i.e., performing a dry lab) will be ranked behind those who do conduct an experiment.

**Recommended Resources:** The Science Olympiad Store ([store.soinc.org](http://store.soinc.org)) carries the Experimental Design CD and Problem Solving/Technology CD; other resources are on the event page at [soinc.org](http://soinc.org).