

1. **DESCRIPTION:** Teams will demonstrate their knowledge of rocks and minerals.

A TEAM OF UP TO: 2

APPROXIMATE TIME: 40-50 Minutes

2. **EVENT PARAMETERS:** Each **team** may bring only one magnifying glass; one commercially published resource that may be tabbed and written in and one 3-ring binder (any size) containing pages of information in any form from any source. The pages must be 3-hole punched and inserted into the rings (sheet protectors are allowed).

3. **THE COMPETITION:**

- a. Equal time intervals, as determined by the supervisor, will be allotted for each station. When the start signal is given, participants will begin work at their initial station.
- b. Participants may not move to the next station until prompted to do so, may not skip stations, or return to any previously visited station.
- c. Specimens and other materials placed at the various stations may not be taken to other stations.
- d. HCl will not be provided, nor may it be brought to or be used during the competition. Written descriptions as to how a specimen might react were it to be tested with HCl may be provided.
- e. Only those specimens appearing on the **Official NSO list** (see www.soinc.org) will be used in the competition with the following exception: Tournament Directors may include up to five additional specimens important to their own state. If additional specimens are to be included, all teams must be notified **no later than three weeks prior to the competition**.

4. **Topics may include, but are not limited to:**

- a. Specimen identification
- b. Rock cycle
- c. Properties of minerals
- d. Mineral groups
- e. Economic importance
- f. Formation and properties of igneous, sedimentary, and metamorphic rocks
- g. Clues to past environments
- h. Composition and structure of minerals
- i. Bowen's reaction series

5. **REPRESENTATIVE STATION ACTIVITIES:**

- a. Using the materials provided, fingernails included, determine the relative hardness of each of these six minerals. List the specimens, by name and number, in order of increasing hardness.
- b. Match each metamorphic rock with the type of rock from which it may have been formed.

6. **SCORING:** Total scores will determine rankings in this event. Ties will be broken by the accuracy or quality of answers to selected questions.

Recommended Resources: All reference and training resources including the **Science Olympiad Rock & Mineral Teaching Guide**, the **Bio/Earth CD** and the **National Audubon Society Field Guide to North American Rocks and Minerals** are available on the Official Science Olympiad Store or Website at <http://www.soinc.org> Also, **Rocks and Minerals kits** (*excluding only silver, gold, and diamond) may be purchased by check or School Purchase Order from ESES, P.O. Box 503, Lee's Summit, MO 64063 (No Credit Cards or Phone Orders-PH 816-524-5635; FAX 816-525-4263) item OLY01 at \$85.00. Price quoted includes shipping and handling.

