

ROAD SCHOLAR

1. **DESCRIPTION:** Participants will respond to interpretive questions that may use one or more state highway maps, USGS topographic maps, Internet-generated maps, a road atlas or satellite/aerial images.

A TEAM OF UP TO: 2

APPROXIMATE TIME: 50 Minutes

2. **EVENT PARAMETERS:** Participants must bring a protractor, ruler, and may bring a USGS Map Symbol Sheet, a calculator, notes, reference materials, and other measuring devices. Computers are not permitted. The event supervisor will provide all required maps, question booklets, and response sheets.
3. **THE COMPETITION:** The highway and quad maps may be from one or more states. The event may be presented in a storyline format. Participants may be asked to draw map features located within a one square mile (1-mile x 1-mile) section using the correct features listed in 3.c. This square will be included on the answer sheet. Participants may not write on the maps.

a. Topographic Map Testing Areas

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| i. Map location/series/scale/index/legend | x. Distance values between features (both English and metric units) |
| ii. Marginal information | xi. Geographic coordinate system features and symbols (degrees, minutes, seconds) |
| iii. Contours | xii. Public Land Survey System (PLSS) |
| iv. Magnetic declination | xiii. Elevation of features and symbols |
| v. Map symbols | xiv. *Slope (feet per 100 feet) |
| vi. Map features | xv. Sector Reference System |
| vii. Survey control marks (control stations and spot elevations) | xvi. Direction of stream flow |
| viii. Azimuths and bearings | xvii. *Profiles |
| ix. *Stream gradient (feet per 1000 feet) | xviii. Graticule tick marks |
| | xix. *Universal Transversal Mercator (UTM) |



b. Highway Map Testing Areas

- i. Distances between features
- ii. Map legend/tables/index
- iii. Map grid system
- iv. Map symbols
- v. City/Regional inserts on the highway map

c. Student-Created Map Design

- i. Map scales
- ii. USGS topographic map symbol
- iii. Distances
- iv. Azimuths and bearings
- v. Public Land Survey System

* Items marked with an asterisk should be written at an introductory level for regional exams.

4. **SCORING:** Teams will be ranked according to their point total. Values of questions may be weighted. Ties will be broken by the accuracy and/or quality of answers to pre-selected questions.

Recommended Resources: All reference and training resources including the **Road Scholar/Map Reading Coaches Manual on CD (RDCD)** are available on the Official Science Olympiad Store or Website at <http://www.soinc.org> Also see USGS Science education: <http://education.usgs.gov/> and USGS Topographic Maps: <http://education.usgs.gov/common/secondary.htm#topographic>