

# GEO TREKKER: TOPOGRAPHIC MAPPING

(FINAL DRAFT 12.13.07)

A

**TEAM EVENT:** Division A & B

**ESTIMATED TIME NEEDED FOR EVENT:** 45 Minutes

**MAX/MIN NUMBER OF STUDENTS NEEDED TO PARTICIPATE:** Max of Two (2)

**IMPOUND:** No

**OBJECTIVE(S):** Participating students will use combinations of maps, primarily official U.S. state highway maps and USGS 7.5 Minute Quadrangle Topographic maps, to answer questions as they navigate their way through a system of several stations.

B

**EQUIPMENT PROVIDED BY EVENT JUDGE(S):** Event hand-outs, maps, legends/keys and tracing paper.

**EQUIPMENT NEEDED TO BE BROUGHT BY PARTICIPATING STUDENTS:** Calculators, writing utensils & measurement tools (limited to): two (2) metric rulers, two (2) mapping wheels, two (2) georulers, two (2) protractors, four (4) triangles and two (2) magnifying glasses..

**EVENT PREPARATION:** 1) Students, their coaches and/or parents are encouraged to locate several official U.S. state highway maps and several USGS 7.5 Minute Quadrangle Topographic maps and accompanying legends/keys. *Note: The USGS produces a legend/key which is meant to be used in accompaniment with USGS 7.5 minute Quadrangle Topographic maps. These are available for viewing and color printing at: <http://erg.usgs.gov/isb/pubs/booklets/symbols/moreinformation.html>. Hard copies are **not** available for purchase on-line. Call to order: 1.888.ASK.USGS.*

2) GeoTrekker students will be assessed on mapping knowledge and skills related (but not limited) to:

- ~ Topographic Cartography      ~ Measurement      ~ Elevation Incline/Decline/Gradient
- ~ Mapping Incrementation (degree, minutes, seconds, sectors, segments, sections, contours)
- ~ Township      ~ Range      ~Map Reading      ~ Map Symbols      ~ Azimuths      ~ Bearings

**EVENT PROCEDURES:** 1) GeoTrekker students report directly to the event location five (5) minutes before the event begins. 2) Event judge(s) will invite students into the competition area when they are ready. 3) Students will be given last minute instructions, possibly, a brief description of the event, student expectations and specific information as to how that days event has been organized, event hand-outs and/or anything else which may be important to the event. 4) Students are given the, "Go ahead." and they can begin reading their event materials and completeing event related tasks. 5) Students who need to borrow event materials will be required to use test time to check out their equipment from the event judge(s). 6) Depending on exact specifications as to how the event is organized the event judge(s) may or may not provide verbal indicators in relation to time. 7) Nearing the end of the event, the event judge(s) will attempt to give a time-related warning. 8) As the time period ends, the event judge(s) will ask students to stop working, clean up their tools and work space, turn in their event materials and dismiss the participants.

**SCORING:** Point values will be assigned to given tasks. Event judge(s) will use a score key to assess student knowledge and skills as they relate to GeoTrekker. Individuals and/or teams will be ranked according to their score. Students who do not come to the event prepared and need to borrow equipment or resources from the event judge(s) will be ranked below those who come prepared.

**RECOMMENDED STUDY/PRACTICE RESOURCES:** National Science Decathlon Message Board on-line student event help and coaches resources for coaches and students: [www.sciencedecathlon.com/community](http://www.sciencedecathlon.com/community).

**ACCOUNTABILITY:** Event judges, not coaches, parents, tournament directors or any other individuals, are responsible for holding students accountable for abiding by the rules of this event.

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