

The Great Benchmark Quest Project Credit for Regents Earth science

1. The first step is to find out what survey marks are located in your area. The easiest way to do this is to use the search engine on the National Geodetic Survey website at <https://www.ngs.noaa.gov>. Click on “Looking for Bench Marks ” and the picture of the magnifying glass. This will open a page allowing you to search for survey marks using several different methods including the “Data Explorer” search engine - AKA the interactive map. Detailed instructions will appear when you open it. To find survey marks in your area:

- A) Enter the county, city, or zip code for your area in the “Go To Location” menu, then click “Go”.
- B) The map will zoom in to the area you specified. Colored squares show the general location of survey marks (if there are no squares, there are no marks in the specified area). You can change the radius of the area using the “Location radius” box. Click on one of the squares to zoom in further to show individual survey marks.
- C) Click on one of the survey mark icons, and a summary window will pop up. Click on “Datasheet” at the bottom of the popup window to open the complete datasheet for the survey mark you selected.
- D) Near the bottom of the Datasheet is a section titled “Station Description,” which may be followed by one or more sections titled “Station Recovery.” The “Station Description” section gives very precise instructions for finding the survey mark, starting from easy-to-find landmarks (such as a public building or the intersection of major roads). This description also includes information about things that may make it easier to find the survey mark, such as:

“30 FEET SOUTH OF THE CENTER LINE OF THE ROAD, 23.98 FEET WEST OF BENCH MARK 33 A (USGS), AND ABOUT 2 FEET LOWER THAN THE ROAD.” or “8 FEET SOUTHEAST OF A GATE IN AN EAST-AND-WEST FENCE, AND IN THE TOP OF A LAVA ROCK. A UNITED STATES GEOLOGICAL SURVEY STANDARD COPPER NAIL AND WASHER, STAMPED 5240.4.”

The “Station Recovery” section gives information about the condition of the survey mark at various times when the mark location was visited. This section can be very important, because sometimes it says that the mark was not found. This information can save you a lot of time spent looking for a mark that no longer exists!

2. Now see whether you can locate some benchmarks. Read the location descriptions carefully, and try to start in areas that are familiar. **BE SURE TO DO THIS ONLY WITH AN PARENT!**

When you find a benchmark, you can take pictures, but that’s all! Never disturb or move a benchmark, even if it appears to have been damaged. Remember that benchmarks are important, they are public property, and are protected by law.

If the location for survey marks is described as something like a radio tower, church steeple or smokestack, the top of these structures is usually the survey point. Do not climb these structures! Just log your find, and take the structure’s picture from the ground!.

- 3. You must take a selfie-photo of you and the benchmark (close up and IN FOCUS) in the picture.
- 4. You can email 5 points, **BUT YOU NEED TO INCLUDE EXACTLY** where this benchmark is located and a short narrative (story) about your experience for each benchmark

You may earn a maximum of 10 points for completing 2 benchmark quests (limit 2 total).

This is due by Halloween – October 31st .