

Interactive Earthquake Browser (IEB)

A map-based interactive tool for exploring earthquake patterns by filtering time, magnitude, depth, and location, and then visualizing the results. Selections of up to 5000 events can also be viewed in 3D and freely rotated with the 3D viewer companion tool.

Learning Objective:

- Students will use the interactive earthquake browser to analyze patterns in earthquake location, depth and magnitude with plate boundaries.

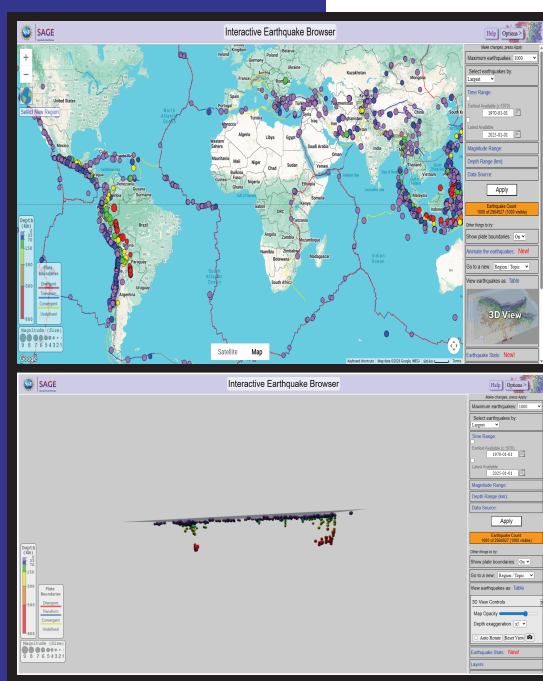
Steps

Step 1: **Start Broad:** Open IEB and set a recent time window; click **Apply** so students see earthquakes appear immediately.

Step 2: **Add one filter at a time:** Try magnitude, then depth. Ask; "What changes when we only show shallow quakes vs. deep quakes?"

Step 3: **Make a pattern claim:** "Where do earthquakes cluster? What might those clusters represent?"

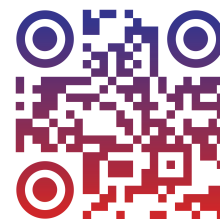
Step 4: **Turn on plate boundaries:** Toggle "Show plate boundaries" and ask students to compare their pattern observations to boundary locations.



Also featured in an activity

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ShakeAlert

- Keep "Maximum earthquakes" modest at first so the map stays readable.
- Ask students to write one sentence: "Most earthquakes happen near _____ because _____."
- Use the Help button in the app for available features and how to use them.
- NGSS: MS-ESS2-2, HS-ESS2-3, Analyzing and Interpreting Data, Patterns



Find more at earthscope.org!

