Glossary

accustomed (ə **kəs** təmd): Being in the habit or custom.

astronomical (**as** trə **nä** mi kəl): Of or relating to astronomy, which is the scientific study of stars, planets, and other objects in outer space.

bolide (**bō** līd): A large meteor or fireball; especially, one that explodes.

invigorate (in **vi** gə rāt): To cause (something) to become more active and lively.

magnitude (**mag** nə tüd): A number that shows the power of an earthquake.

migratory (**mī** grə **tör** ē): Having a characteristic of moving from one place to another on a periodic basis.

probability (**prä** bə **bi** lə tē): A measure of how often a particular event will happen if something (such as tossing a coin) is done repeatedly.

seismic (**sīz** mik): (1) Of, subject to, or caused by an earthquake; (2) Of or relating to an earth vibration caused by something else (as an explosion or the impact of a meteorite).

supersonic (**sü** pər **sä** nik): Faster than the speed of sound.

trajectory (trə **jek** t(ə-)rē): The curved path along which something (such as a rocket) moves through the air or through space.

Accented syllables are in **bold**. Marks and definitions are from http://www.merriam-webster.com. Definitions are limited to the word's meaning in the article.

Adapted from Wald, D.J.; Quitoriano, V.; Worden, B.; Hopper, M.; Dewey, J.W. 2011. USGS "Did You Feel It?" Internet-based macroseismic intensity maps. Annals of Geophysics. 54(6): 688-707.

FACTivity

Time Needed

One class period

Materials

(for each student or group of students)

- Two earthquake data tables
- Graphing paper
- Pencils
- Highlighters

The questions you will answer in this FACTivity are: How do the number of earthquakes from the 1990s compare to the number of earthquakes in the 2000s? How do the magnitudes of the earthquakes compare between the two time periods?

Methods

Look at the two earthquake data tables on page 35. Highlight the row in each table for total earthquakes. Create two bar charts and compare total earthquakes for the 1990–1999 time period with the 2000–2009 time period. Here are a few questions to think about:

- Which year had the most earthquakes during 1990–1999?
- Which year had the most earthquakes during 2000–2009?
- Look closely at the two data tables. Circle magnitudes with the highest occurrence of earthquakes. Is the magnitude you highlighted the same in each time period?
- Do you think that the two time periods are similar or not? Why do you think this? Use evidence from the tables to help support your thinking.

Number of Earthquakes in the United States for 1990–1999
Located by the U.S. Geological Survey National Earthquake Information Center

Magnitude	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
8.0 to 9.9	0	0	0	0	0	0	0	0	0	0
7.0 to 7.9	0	NA	2	0	1	0	2	0	0	NA
6.0 to 6.9	2	4	15	9	4	6	4	6	3	6
5.0 to 5.9	64	49	72	62	64	45	100	63	62	50
4.0 to 4.9	284	242	404	270	333	350	612	362	411	352
3.0 to 3.9	626	713	1717	1119	1543	1058	1060	1072	1053	1398
2.0 to 2.9	414	559	998	1009	1196	822	654	759	742	814
1.0 to 1.9	1	3	5	7	2	0	0	2	0	0
0.1 to 0.9	0	0	0	0	0	0	0	0	0	0
No Magnitude	877	599	368	457	444	444	375	575	508	381
Total Earthquakes	2268	2171	3581	2933	3587	2725	2807	2839	2779	3003

NA = Not Applicable

Number of Earthquakes in the United States for 2000–2009
Located by the U.S. Geological Survey National Earthquake Information Center

Magnitude	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
8.0 to 9.9	0	0	0	0	0	0	0	0	0	0
7.0 to 7.9	0	1	1	2	0	1	0	1	0	0
6.0 to 6.9	6	5	4	7	2	4	7	9	9	4
5.0 to 5.9	63	41	63	54	25	47	51	72	85	58
4.0 to 4.9	281	290	536	541	284	345	346	366	432	288
3.0 to 3.9	917	842	1535	1303	1362	1475	1213	1137	1486	1492
2.0 to 2.9	660	646	1228	704	1336	1738	1145	1173	1573	2379
1.0 to 1.9	0	2	2	2	1	2	7	11	13	26
0.1 to 0.9	0	0	0	0	0	0	1	0	0	1
No Magnitude	415	434	507	333	540	73	13	22	20	14
Total Earthquakes	2342	2261	3876	2946	3550	3685	2783	2791	3618	4262