

Omni Theater Educator Resource

Fort Worth Museum of Science and History

Film Overview

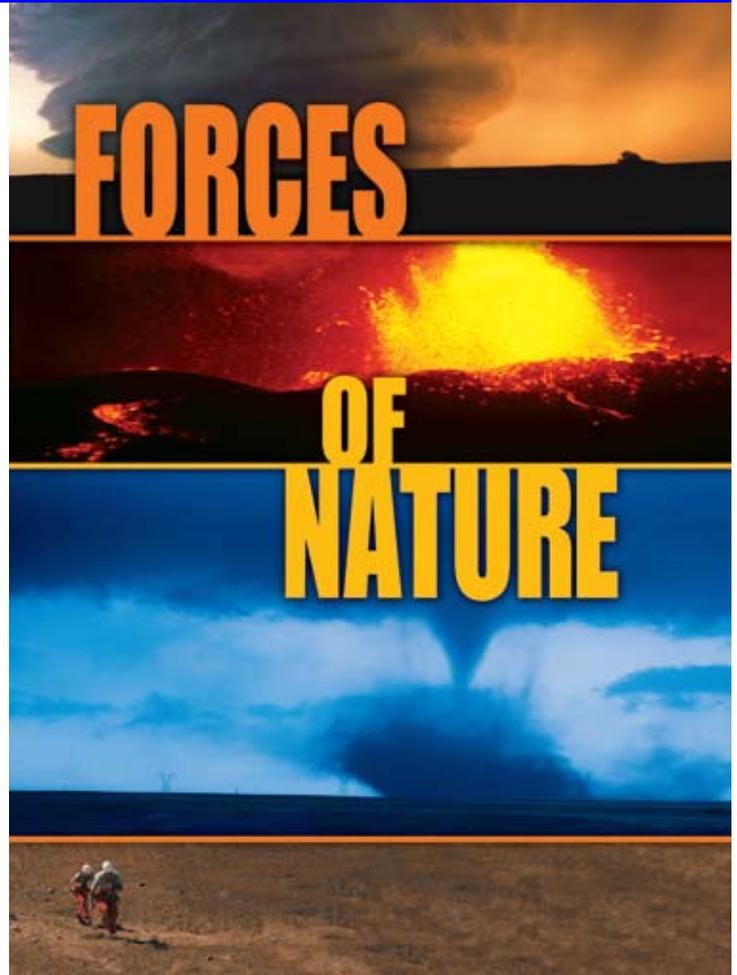
Forces of Nature showcases the awesome spectacle of earthquakes, volcanoes and severe storms and follows scientists on groundbreaking quests to understand what triggers these natural disasters. Your students will travel to the very brink of an erupting volcano, along massive fault lines, and ride vehicles barreling toward tornadoes. Along the way, they will learn what is being done to predict and prepare for these events — and minimize their deadly effects — as they come face to face with Earth’s most destructive forces.

Throughout the film, dramatic computer imagery takes you deep within the interior of the earth and to the heights of the atmosphere to examine the beginnings of these forces of nature.

Forces of Nature is a National Geographic film, produced by Graphic Films, made possible by Amica Insurance and funded in part by the National Science Foundation.

Texas Connection

Every U.S. state has experienced tornadoes, but Texas holds the record: an annual average of 120. The most recent tornado to affect our area occurred on March 28, 2000. Two people were killed and 80 injured as a Force 3 tornado moved through a 4-mile stretch of land around downtown Fort Worth, then Arlington, TX. There were no reported injuries. Want to find out about other Texas tornadoes? Visit the Storm Events Database at <http://www4.ncdc.gov/cgi-win/wwcgi.dll?wwevent~storms> for a comprehensive list of storms around the state and the nation.



Volcanoes usually occur where the earth’s continental plates come together, so the interior sections of continents, like Texas, are generally safe from volcanic activity. However, Texas experiences earthquakes periodically. The largest earthquake in Texas history occurred on August 16, 1931, near Valentine, Texas. The quake was felt from El Paso to Dallas. There were no deaths reported during the earthquake. Visit www.ig.utexas.edu/research/projects/eq/faq/tx.htm to learn more about Texas earthquakes, including the most recent ones in North Texas.

Did you know...

...Almost 90 percent of volcanoes are in the Ring of Fire, a band of volcanoes circling the edges of the Pacific Ocean.

...The largest volcanic eruption in modern times occurred in 1912 in Novarupta, Alaska. For 60 hours, 3.6 cubic miles of magma exploded from the Earth. That's 30 times the molten material that erupted from Mount St. Helens in 1980.

...Around the world, there are nearly a half million earthquakes each year. People can feel about 100,000 of these and approximately 100 cause damage.

...Only four states had no detectable earthquakes between 1975 and 1995: Florida, Iowa, North Dakota and Wisconsin. Who has the most? Alaska is the most seismically active, with a magnitude 7 earthquake almost every year. California records about 10,000 quakes each year, most only detectable with sensitive equipment.

...The largest radar-documented tornado appeared in Oklahoma on May 4, 1999, and measured more than a mile wide.

...The single most destructive tornado occurred in 1925, destroying four towns in three states and taking 695 lives.

TEKS/TAKS Correlations

Science

3.3, 3.6, 4.3, 4.6, 4.10, 5.3, 5.5, 5.11, 5.12, 6.3, 6.6, 7.3, 7.5, 7.14, 8.3, 8.11, 8.14

Elementary Science: TAKS Objective 1 and 4

Integrated Physics and Chemistry: 3 and 5

Environmental Science: 3 and 8

Geology, Meteorology, and Oceanography:

3, 6, 12



Looking for great activities that connect to your curriculum?

Visit:

www.destinationcinema.com/our_films/fon/educators.asp

You'll find a downloadable teacher's guide and detailed information about the film on this Forces of Nature Web site.

www.nationalgeographic.com/forcesofnature/

This Website created by the National Geographic Society features cool simulation labs for children and background information for teachers.

www.fema.gov/kids/

This kid-friendly site provides valuable safety information on how to prepare for natural disasters.



FORT WORTH MUSEUM
SCIENCE AND HISTORY

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