

Earthquake activity 9: **Earthquake Damage and Earthquake Preparedness**

Description: A student research activity on earthquake hazards and ways to reduce risk, culminating in group presentations to the class.

Teacher instructions:

This is an independent research activity for secondary school students, culminating in group presentations to the class.

Divide the class into small groups and assign one research topic to each group.

Natural Resources Canada's website **Earthquakes Canada**, <http://earthquakescanada.nrcan.gc.ca>, is a good place to start their research. "Frequently Asked Questions" under <General Information> includes information addressing the engineering topics.

In addition to the **Earthquakes Canada** website, Public Safety Canada's website **Get Prepared**, <http://www.getprepared.gc.ca>, is a good source of information on personal preparedness. Select <Know the Risk>.

Depending on their topic, the group should consider what potential problems or damages may occur and why, provide examples if possible, and explain how the proper design, early warning, local planning, or personal preparedness, etc., can reduce risk and increase safety.

Each group should compile a poster or PowerPoint presentation on their topic and make a formal presentation to the class.

Topics:

- Earthquake hazard and urban centres (*Note: The emphasis should not be on large buildings, which are covered by the next topic.*)
- Earthquake hazard and large buildings and the National Building Code
- Earthquake hazard and electrical and communication lines and pipelines
- Earthquake hazard and roads and railways and bridges
- Earthquake hazard and dams and reservoirs
- Earthquake hazard and tsunamis
- Earthquake hazard and landslides
- Personal preparedness