



The Geography of Science

Lesson 3: Sichuan Earthquake (2008): lessons learnt?

Key ideas:

1. Earthquakes happen due to the movement of tectonic plates.
2. Earthquakes affect a huge number of people.
3. Changes can be made to reduce the impact of earthquakes on people and places.

Starter activity:

How do earthquakes happen?

Use the [BBC's interactive earthquakes](#) resource. This is also available as a non-animated pdf version, to explain how earthquakes happen. Talk through the interactive resource with students. If required, this could be covered before the lesson and this resource used as a recap.

Main Activity:

Comparing two earthquakes in China: Tangshan (1976) and Sichuan (2008).

1) Students watch and read the PowerPoint "China Earthquakes: Learning from the past." There are also a range of other useful resources online to support the Sichuan earthquake part of this PPT. Here are some useful links that you may wish to add during the lesson:

- [BBC website](#) - aerial video of quake zone.
- Pictures of the earthquake's effects at [photoshelter](#).
- [Guardian website](#) - slide show gallery of earthquake effects and the aftermath.
- [BBC website](#) - An interactive map of the region, in depth information, videos and photos:

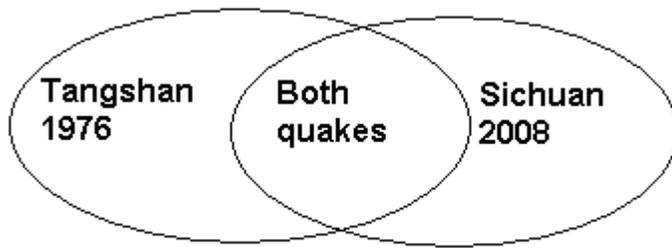
NB: There are few resources available online of the Tangshan earthquake due to the Chinese political climate at the time of the earthquake.

- 2) Students use the PowerPoint resource "China Earthquakes: Learning from the past," the "Flashpoint 3: Sichuan Quake fact file" (particularly referring to the section "Poorly Constructed Schools" and the card sort activity resource entitled "Learning from the past: Tangshan and Sichuan compared."

Students complete the card sort activity with the aim of considering how the two earthquake case studies are similar/different to each other. These could be cut into cards before the lesson, students could cut them or copy them.

- 3) Students produce a Venn-diagram (in groups or individually) to compare the two earthquakes on large sugar paper or on the computer to show:
 - How the earthquakes were similar
 - How the earthquakes were different

It could be set out something like this:



Discuss ideas.

- 4) Using the resource sheet "Learning from the past: Changing the future," students write an email response to the Chinese Government with recommendations of how they could prepare better for another earthquake.

Students may like to use these links:

- [ScienceDaily](#) – earthquake proof house
- Search "Earthquake resistant building" in 'Google Images.'

Extra: For more able students, the implications of China's large scale dam construction program in the area may also be considered. See [BBC News website](#) mapping the earthquake zone

The [Asia-Pacific Journal](#) - Japan Focus

Plenary:

Students feed back their recommendations to reduce the impact of earthquakes in China.

Extension:

Design your own earthquake resistant building. Key points to think about in its construction:

- How will you stop the building from falling down?
- If the building does not fall down, how will you prevent accidents both inside and outside as it moves?
- What about falling glass and rubble on the people outside?

Links: Search "Earthquake resistant building" in 'Google Images' for ideas.