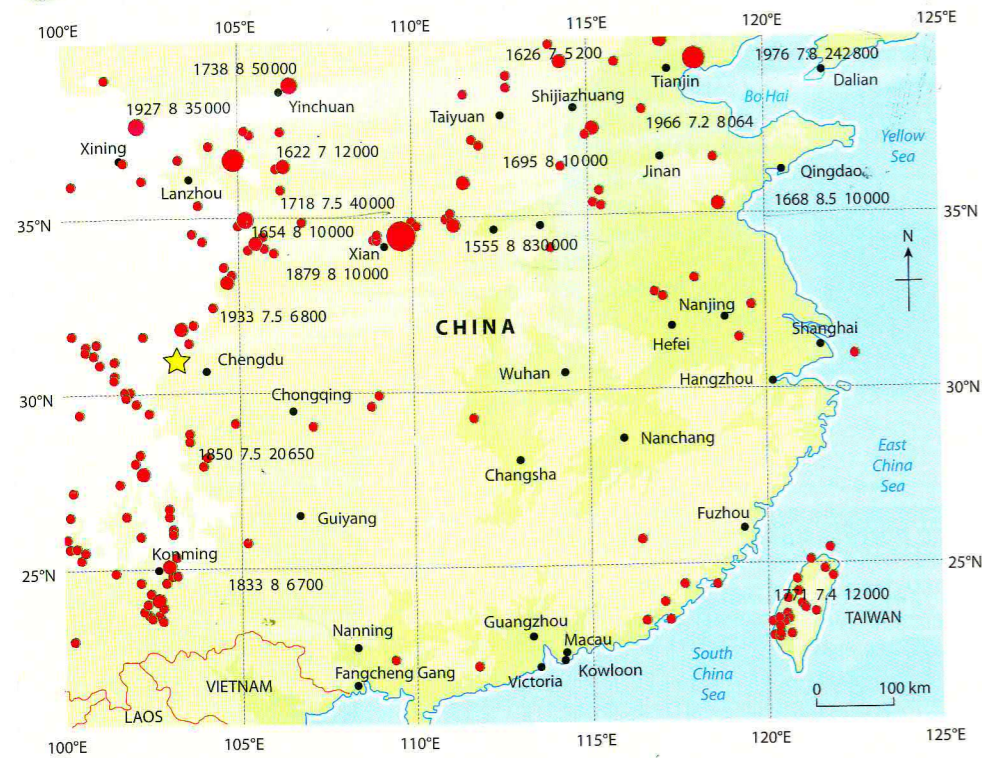


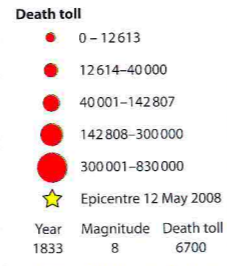
11b An earthquake in China



A Sichuan – no stranger to earthquakes



Earthquake energy is measured on the Richter scale. Most are felt between 3.5 and 8 magnitude. The higher the number the more energy is released and more damage caused. The Great Chilean earthquake of 22 May 1960 was measured at 9.5. The Sichuan area is vulnerable to earthquakes because it is close to the boundary of two converging plates. These have also created many surface cracks or faults.

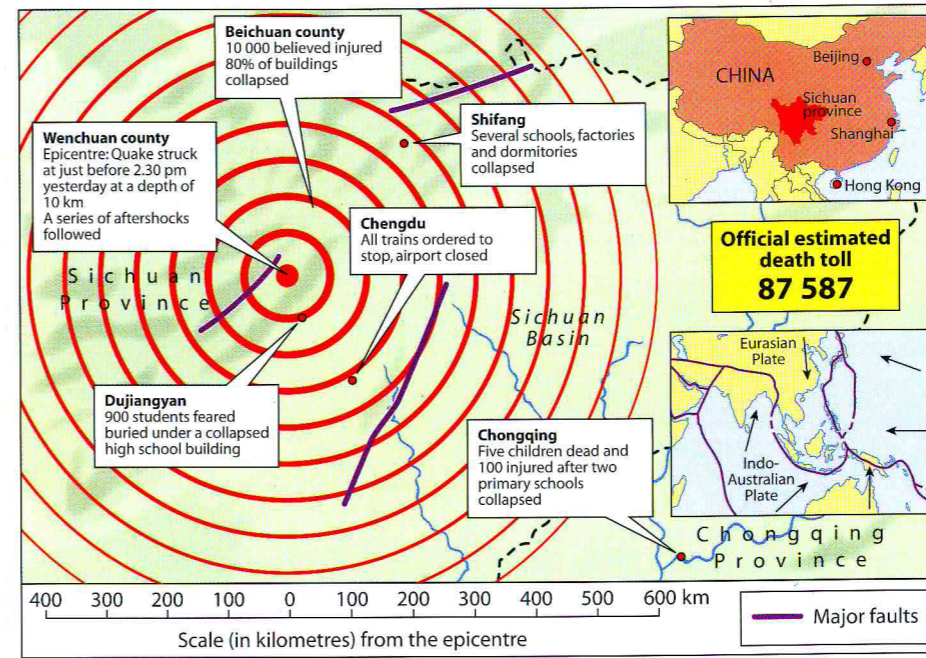


CHINA'S ONE-CHILD FAMILIES OFFER HOME TO ORPHANS

Almost 2000 children have been made orphans by the earthquake. The Chinese authorities have relaxed their one-child policy and are allowing childless and one-child families to adopt some of the orphans over the next 6 months. Some one-child families also lost their only child in the disaster. Over 68 000 people are estimated to have died since the earthquake hit Sichuan 3 weeks ago; 10 000 were school children. Over 18 000 are still missing.

2 June 2008

B The first day: what happened, where and why?



The earthquakes in this region are caused by the Indo-Australian plate subducting beneath the Eurasian plate at a rate of 50 mm per year. Occasionally the plate slips as it overcomes friction, causing earthquakes. The focus (directly below the epicentre) where the plate 'slipped' was only 10 km beneath the surface which increased the area affected by the shocks. They were felt in Beijing, Hong Kong and Shanghai – nearly 1500 km away.



C 13 May onwards – after-effects

'JUST 10 SECONDS. ONE MOMENT THE SCHOOL WAS THERE, THEN IT WAS GONE'

A primary school of 900 pupils in Dujiangyan was amongst thousands of buildings that collapsed on Monday. There were also reports of 1000 students and teachers killed or missing after a six-storey school in Beichuan county crumbled into a pile of rubble. Rescuers pulled out bodies while, with no power, survivors ate bread and biscuits, unable to light a fire or boil water. Soldiers were drafted in to repair roads and restore electricity.

14 May 2008

600 000 AT RISK FROM DAMAGED DAM

Two thousand soldiers have been sent to plug cracks in a dam upriver from the earthquake-stricken town of Dujiangyan. The Zipingpu dam is one of the most modern in China but was built, against experts' advice, close to a significant fault line. Two HEP stations have been seriously damaged.

15 May 2008

LANDSLIDES BLOCK RIVER VALLEYS AS RAIN THREATENS FLOODS

Heavy rain and landslides have added to the earthquake effects. Almost 200 000 survivors have been evacuated as lakes and reservoirs fill up. They may burst their banks and flood towns and villages downstream. 1.3 million people have been moved to higher ground.

18 May 2008

From Chaiten (Chile) to Chengdu (China)!

No country has suffered natural disasters on the scale of China. Tens of millions died from famine, floods and earthquakes in the 20th century alone. Just ten days after the Chaiten volcano erupted, on Monday 12 May 2008 China's most devastating earthquake in 30 years took place. The epicentre of the 7.9 magnitude earthquake was in a mountainous region of Sichuan province. This was about 100 km north-west of Chengdu, a bustling city of 10 million people.

Task 1

Study Source A.

- How many earthquakes have been recorded in this area of China with a magnitude of more than 7?
- Describe the distribution of the earthquakes with a magnitude larger than 7.
- Describe the location of the epicentre of the 2008 earthquake. Refer to latitude and longitude in your answer.
- The 2008 earthquake killed over 87 000 people. How many earthquakes listed on the map caused a higher death toll? When did these earthquakes occur and what was their magnitude?
- How can you tell that the area west of Chengdu is vulnerable to earthquakes? Give evidence.

Task 2

Study Source B.

- Why did this earthquake take place in Sichuan?
- List the damage caused at two places on the map and estimate the distance of these places from the epicentre.

Task 3

It is 12 May 2013 – the fifth anniversary of the Sichuan earthquake. You are a journalist who has been asked to write an article about the earthquake for a magazine. The audience is 14–16-year-old teenagers who remember little about this earthquake.

Your article should contain one headline, one illustration and one map, and have a maximum word-count of 250 words. You should cover causes and effects. (Use Sources A–C and the Internet to help you.)

Sample case study question

Name an area you have studied and state whether it has been affected by an earthquake or a volcanic eruption. Describe how the earthquake or eruption affected people and the environment in the area.