

Earthquakes 2023: Turkey and Syria (Text 1)



On February 6th an earthquake with a magnitude of 7.8 hit a region between the countries of Turkey and Syria. The quake struck near the town of Sivrice and was felt as far away as neighboring countries such as Iraq and Iran. Over 570 aftershocks were recorded in the following 24 hours, the strongest had a magnitude of 6.7 and hit just 10 minutes after the main shock.

Just over two weeks later, on February 20th, another earthquake struck the region. This time the epicenter of the earthquake was near the city of Aleppo in northern Syria, with a magnitude of 6.3. The earthquake caused significant damage to buildings in the city, with many residents left homeless.

As of March 2023, 54,700 have died as a result of these earthquakes, and 84,000 buildings have been destroyed. It is estimated that it will cost Turkey €80 billion to repair the damage, while it will cost Syria €5 billion. More than 1 million people in Turkey have been left homeless.

In Turkey, the areas most affected by the earthquake were large manufacturing areas. Many factories were destroyed which resulted in large unemployment in the region. It is feared that this could lead to large amounts of migration into other areas of Turkey.

The earthquakes in Turkey and Syria are not unusual for the region, which is located along the boundary of the Eurasian and African tectonic plates. This area is known as the Mediterranean seismic belt, and is prone to earthquakes and volcanic activity. Despite this, many buildings in the region are not built to withstand earthquakes, leaving residents vulnerable to the effects of these natural disasters.

In the aftermath of the earthquakes, there was an outpouring of support from people around the world, with donations and aid sent to the affected areas.

1. When did the first earthquake hit the region?

2. How many aftershocks were recorded within the first 24 hours following the first earthquake?

3. On average, how many aftershocks per hour took place in the first 24 hours?

4. The text above lists 3 earthquakes that hit the region and their magnitudes. What scale is used to measure the magnitude of earthquakes?

5. What is the epicenter of an earthquake?

6. Distinguish between 'economic impact' and 'social impact'. Use an example of each from the text to support your answer.

Economic Impact:
Example:
Social Impact:
Example:

7. Why do it think it will cost more to repair damage in Turkey than in Syria?

8. Draw a bar chart to display the magnitude of the 3 earthquakes listed in this text.

Marking scheme of bar charts:

Title - 2 marks

Both axis labelled - 2 marks (1 mark each)

3 magnitudes correctly drawn - 6 marks (2 marks each)



9. The text states that earthquakes are common in Turkey and Syria. Explain one way in which the countries could prepare their buildings for future earthquakes.

Marking Scheme:

Statement – 3 marks

Development Points – 3 + 3 marks

Earthquakes 2023: Turkey and Syria (Text 2)

On February 6th an earthquake with a magnitude of 7.8 hit a region between the countries of Turkey and Syria. The quake struck near the town of Sivrice and was felt as far away as neighboring countries such as Iraq and Iran. Over 570 aftershocks were recorded in the following 24 hours, the strongest had a magnitude of 6.7 and hit just 10 minutes after the main shock.

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2. How many aftershocks were recorded within the first 24 hours following the first earthquake?

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3. On average, how many aftershocks per hour took place in the first 24 hours?

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4. The text above lists 3 earthquakes that hit the region and their magnitudes. What scale is used to measure the magnitude of earthquakes?

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5. What is the epicenter of an earthquake?

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Economic Impact:
Example:
Social Impact:
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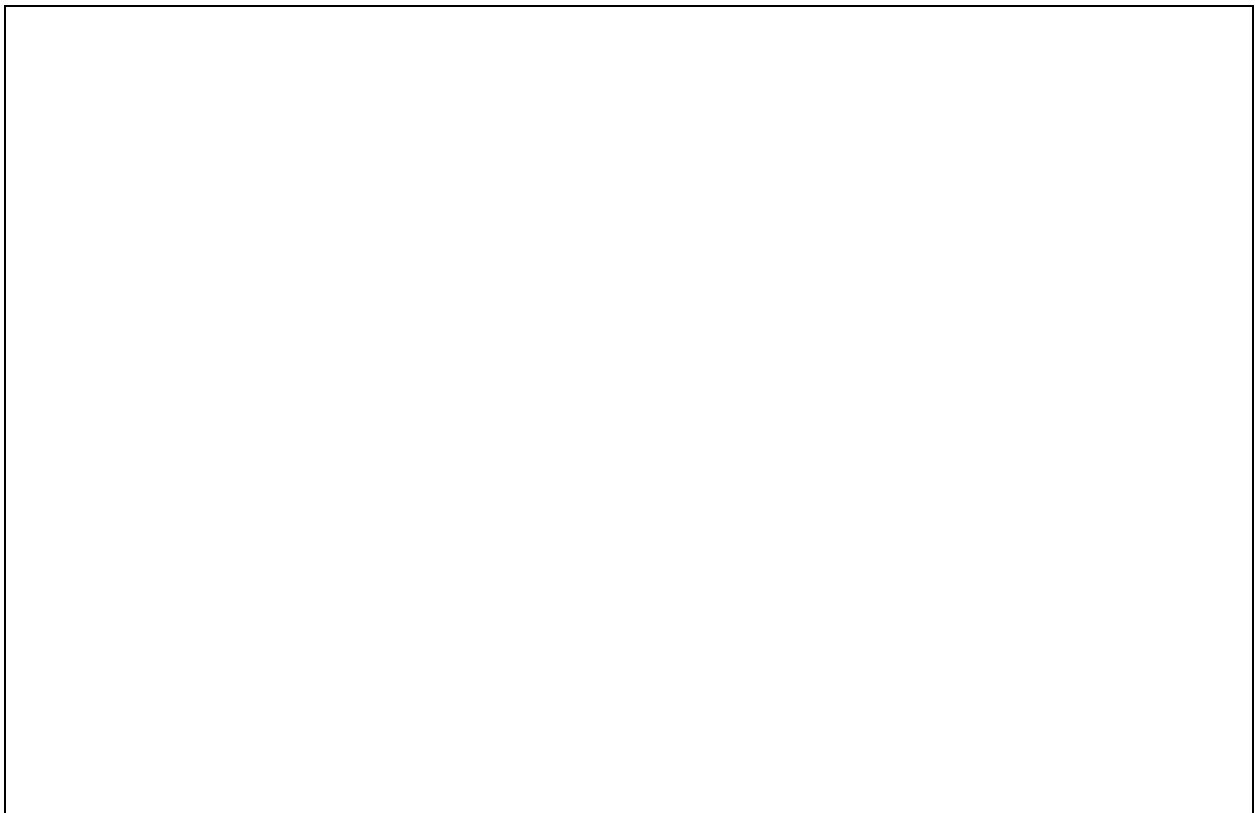
8. Draw a bar chart to display the magnitude of the 3 earthquakes listed in this text.

Marking scheme of bar charts:

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3 magnitudes correctly drawn - 6 marks (2 marks each)



9. The text states that earthquakes are common in Turkey and Syria. Explain one way in which the countries could prepare their buildings for future earthquakes.

Marking Scheme:

Statement – 3 marks

Development Points – 3 + 3 marks

10. What type of aid, do you think, was sent to Turkey and Syria, both by other countries and by charities?

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11. Explain one way in which aid could have been used by Turkey and Syria.

Marking Scheme:

Statement – 3 marks

Development Points – 3 + 3 marks
