



# Measuring Earthquakes: The Mercalli Scale

To explain what causes earthquakes and how they are measured.



Draw a picture to show the effect of each strength of earthquake.

2. Felt by very few people. Hanging objects may swing.

5. Felt by nearly everyone. Sleeping people may be woken. Trees and telegraph poles sway.

7. Felt by all. People run outside. Moderate damage to buildings.

11. Almost all buildings destroyed. Wide cracks in the ground. Water, gas and electric out of action.

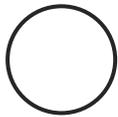


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To explain what causes earthquakes and how they are measured.



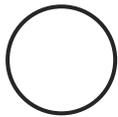
- Sort the following cards into order of strength from the least to the most powerful.
- Number the statements from 1 to 12.
- Choose four different descriptions to illustrate.



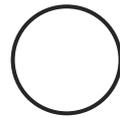
Felt by nearly everyone.  
Sleeping people may be woken.  
Trees and Telegraph poles sway.



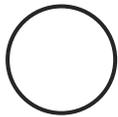
Felt by no-one.



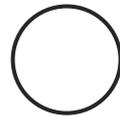
Felt by all. People run outside.  
Furniture moves. Slight damage  
to property.



Total destruction.  
Waves seen on the ground.



Felt by many but they don't  
realise it is an earthquake.



Many buildings destroyed.  
Ground is badly cracked.



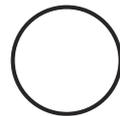
Felt indoors by most people.  
Vibrations similar to a lorry  
hitting a building.



Almost all buildings destroyed.  
Wide cracks in the ground. Water,  
gas and electric out of action.



Specially designed buildings  
damaged, others collapse.



Felt by very few people. Hanging  
objects may swing.



Felt by all. People run outside.  
Moderate damage to buildings.



All buildings damaged. Cracks  
appear in the ground.



# Measuring Earthquakes: The Mercalli Scale **Answers**

5

Felt by nearly everyone.  
Sleeping people may be woken.  
Trees and Telegraph poles sway.

1

Felt by no-one.

6

Felt by all. People run outside.  
Furniture moves. Slight damage  
to property.

12

Total destruction.  
Waves seen on the ground.

3

Felt by many but they don't  
realise it is an earthquake.

10

Many buildings destroyed.  
Ground is badly cracked.

4

Felt indoors by most people.  
Vibrations similar to a lorry  
hitting a building.

11

Almost all buildings destroyed.  
Wide cracks in the ground. Water,  
gas and electric out of action.

8

Specially designed buildings  
damaged, others collapse.

2

Felt by very few people. Hanging  
objects may swing.

7

Felt by all. People run outside.  
Moderate damage to buildings.

9

All buildings damaged. Cracks  
appear in the ground.



# Measuring Earthquakes: The Mercalli Scale

To explain what causes earthquakes and how they are measured.



- Sort the following cards into order of strength from the least to the most powerful.
- Can you use Roman numerals to label the effects from I to XII?

Felt by nearly everyone.  
Sleeping people may be woken.  
Trees and Telegraph poles sway.

Felt by no-one.

Felt by all. People run outside.  
Furniture moves. Slight damage to property.

Total destruction.  
Waves seen on the ground.

Felt by many but they don't realise it is an earthquake.

Many buildings destroyed.  
Ground is badly cracked.

Felt indoors by most people.  
Vibrations similar to a lorry hitting a building.

Almost all buildings destroyed.  
Wide cracks in the ground. Water, gas and electric out of action.

Specially designed buildings damaged, others collapse.

Felt by very few people. Hanging objects may swing.

Felt by all. People run outside.  
Moderate damage to buildings.

All buildings damaged. Cracks appear in the ground.

Why might the descriptions for an earthquake of a certain Mercalli intensity differ in different places?



# Measuring Earthquakes: The Mercalli Scale **Answers**

<p><b>V</b> Felt by nearly everyone. Sleeping people may be woken. Trees and Telegraph poles sway.</p>	<p><b>I</b> Felt by no-one.</p>
<p><b>VI</b> Felt by all. People run outside. Furniture moves. Slight damage to property.</p>	<p><b>XII</b> Total destruction. Waves seen on the ground.</p>
<p><b>III</b> Felt by many but they don't realise it is an earthquake.</p>	<p><b>X</b> Many buildings destroyed. Ground is badly cracked.</p>
<p><b>IV</b> Felt indoors by most people. Vibrations similar to a lorry hitting a building.</p>	<p><b>XI</b> Almost all buildings destroyed. Wide cracks in the ground. Water, gas and electric out of action.</p>
<p><b>VIII</b> Specially designed buildings damaged, others collapse.</p>	<p><b>II</b> Felt by very few people. Hanging objects may swing.</p>
<p><b>VII</b> Felt by all. People run outside. Moderate damage to buildings.</p>	<p><b>IX</b> All buildings damaged. Cracks appear in the ground.</p>

Why might the descriptions for an earthquake of a certain Mercalli intensity differ in different places?

*It depends on how built-up the area is and how well constructed the buildings are.*