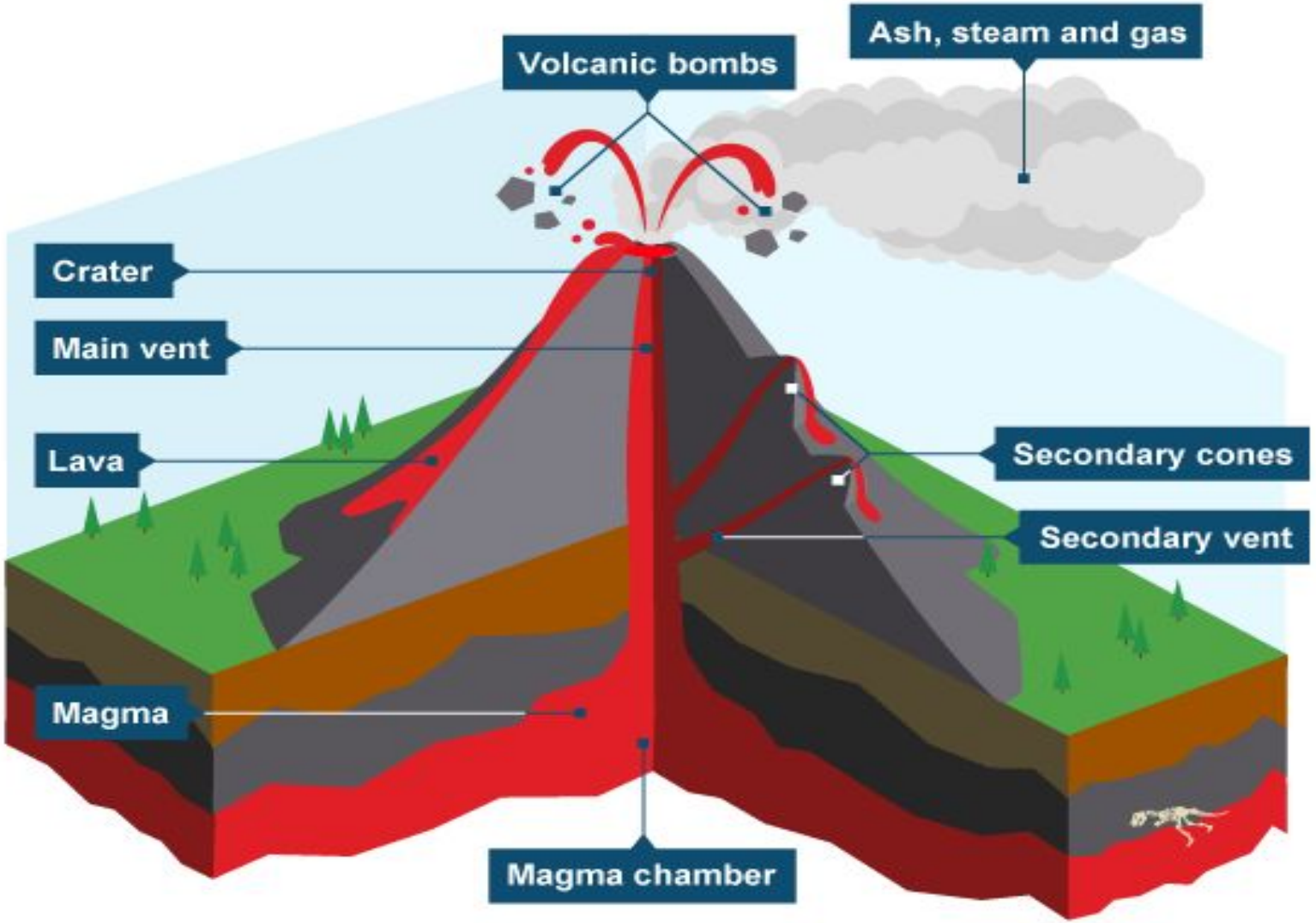
What will we learn today?

- We will review volcanoes.
- We will learn about earthquakes and tsunamis.
- We will learn what we must do in an earthquake and a tsunami.

VOLCANO

When the **magma** comes out of a volcano it is called **lava**.


Ash, steam and gas
Volcanic bombs
Crater
Main vent
Lava
Secondary cones
Secondary vent
Magma
Magma chamber

There are 2 kinds of volcano.

One is called a **stratovolcano**.

It is very steep and tall, like a mountain.

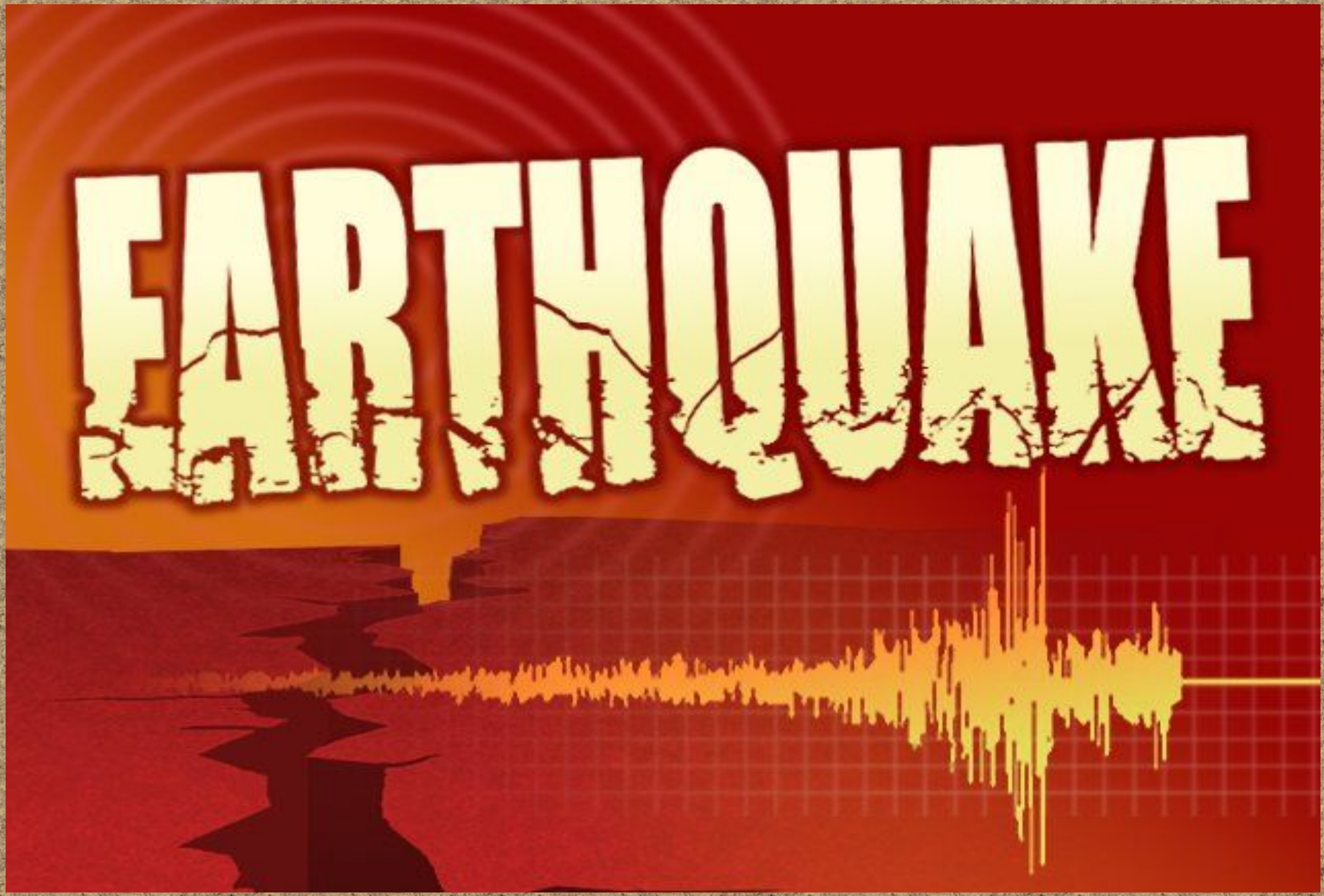
stratovolcano

Stratovolcanoes are made from **sticky lava** which moves slow.

The other type is called a **shield volcano**.

It is very wide and flat.

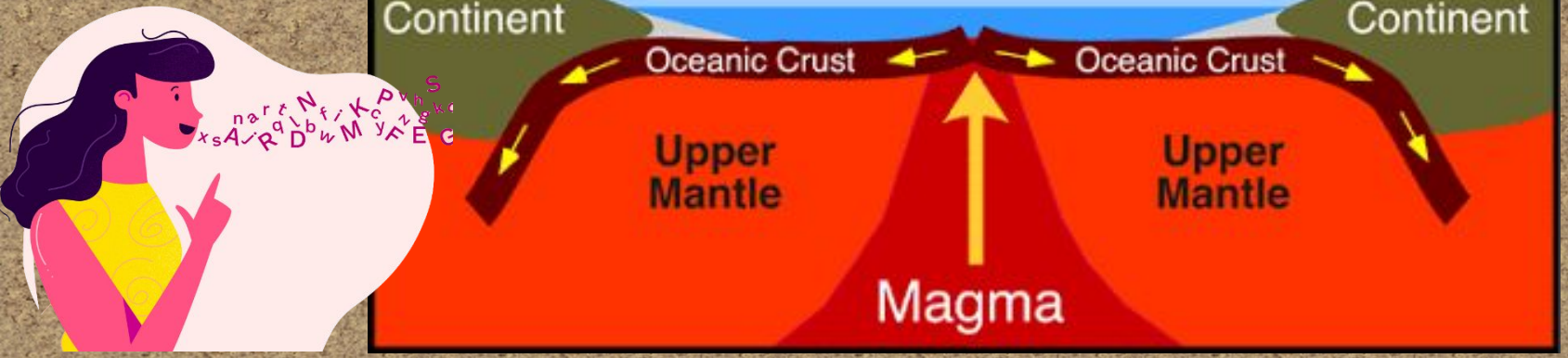
Shield volcanoes are made from **runny lava** that moves very fast!

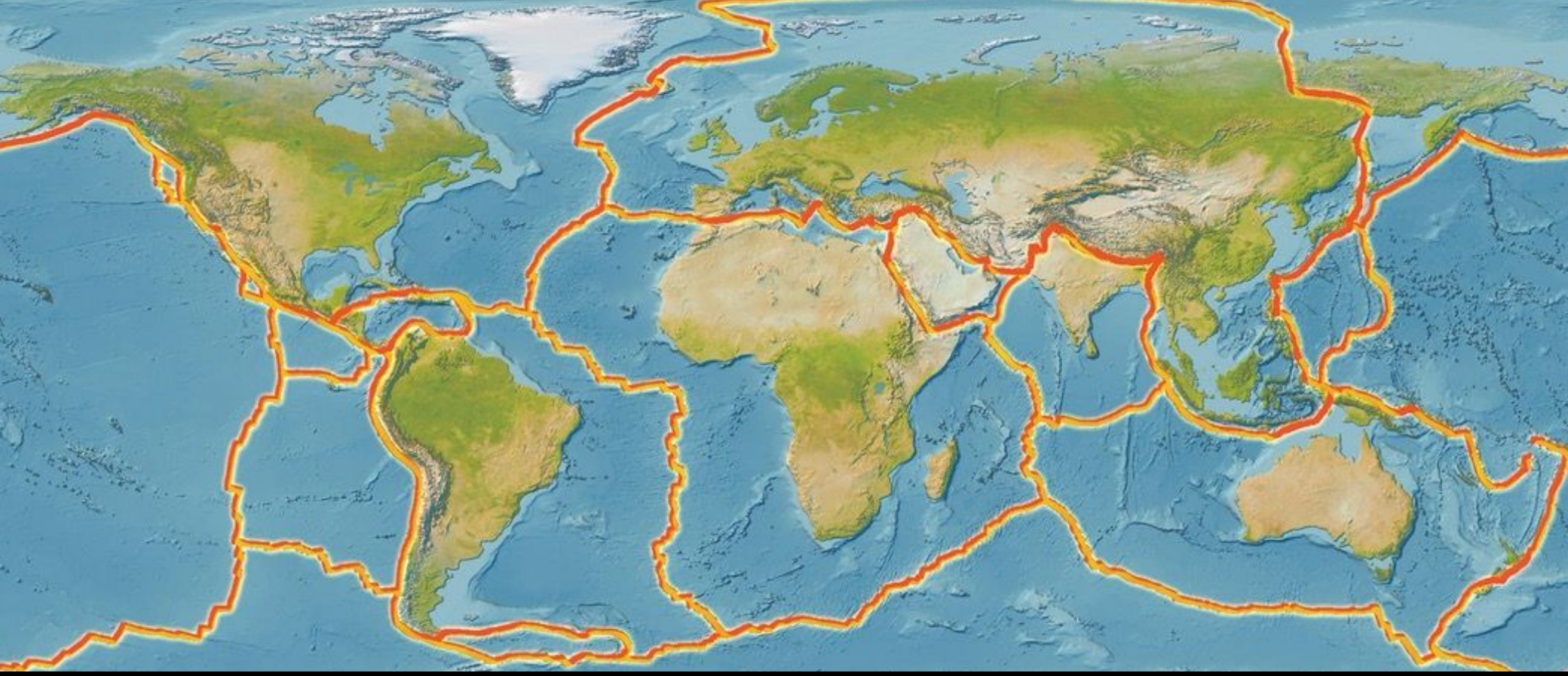

EARTHQUAKE

An **EARTHQUAKE** *is when the earth* moves and shakes.

earthquake

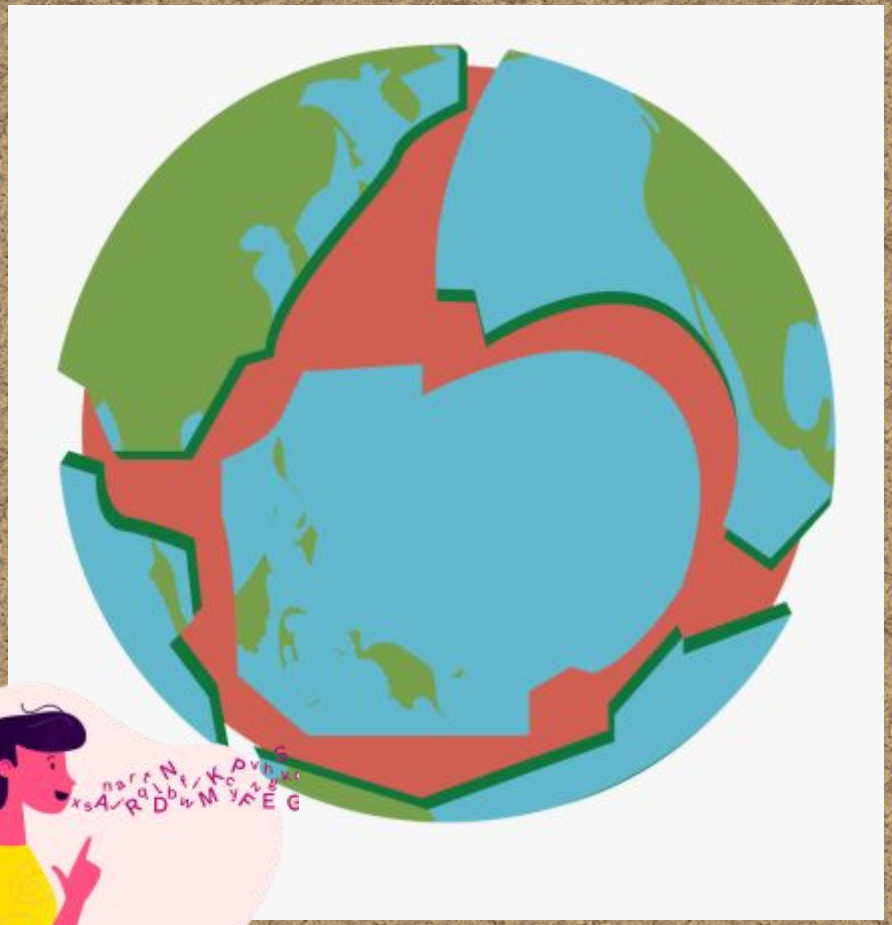
It happens when the magma inside the Earth moves, making the ground move too!

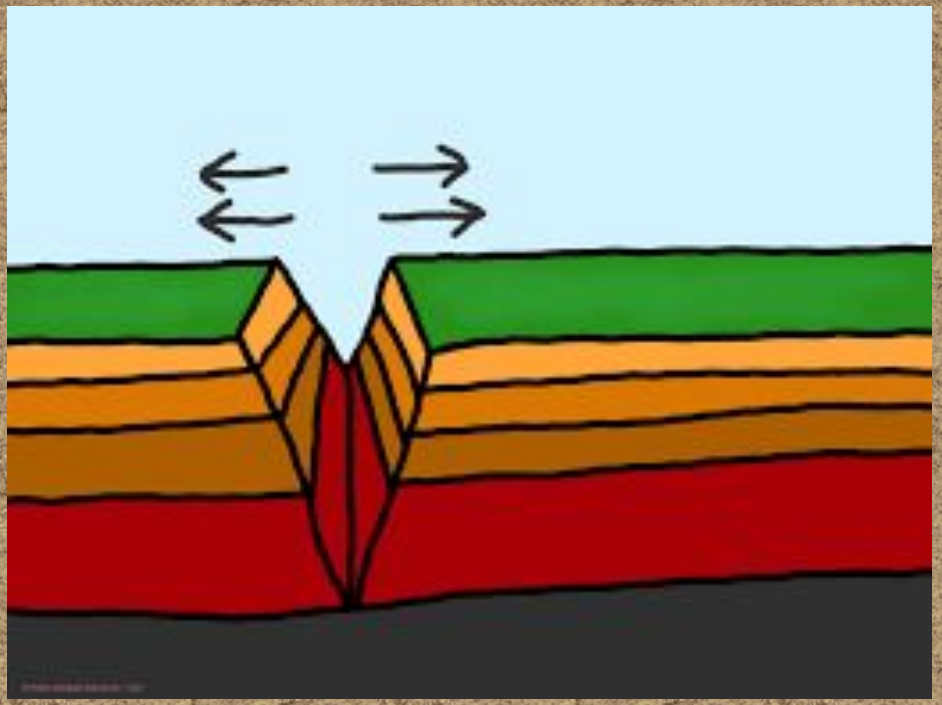


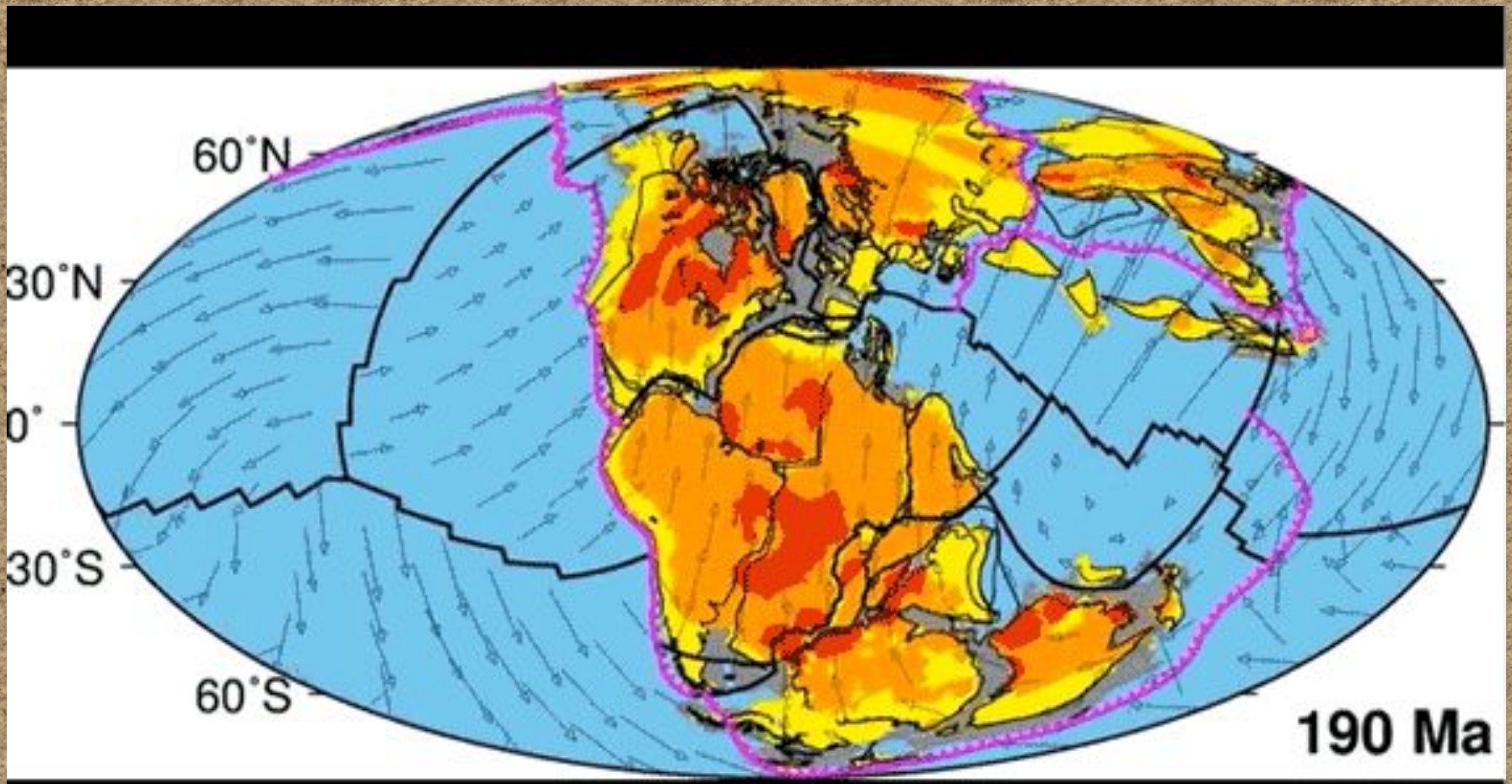


On top of the magma, the Earth is made of 7 big pieces of rock called **tectonic plates**.

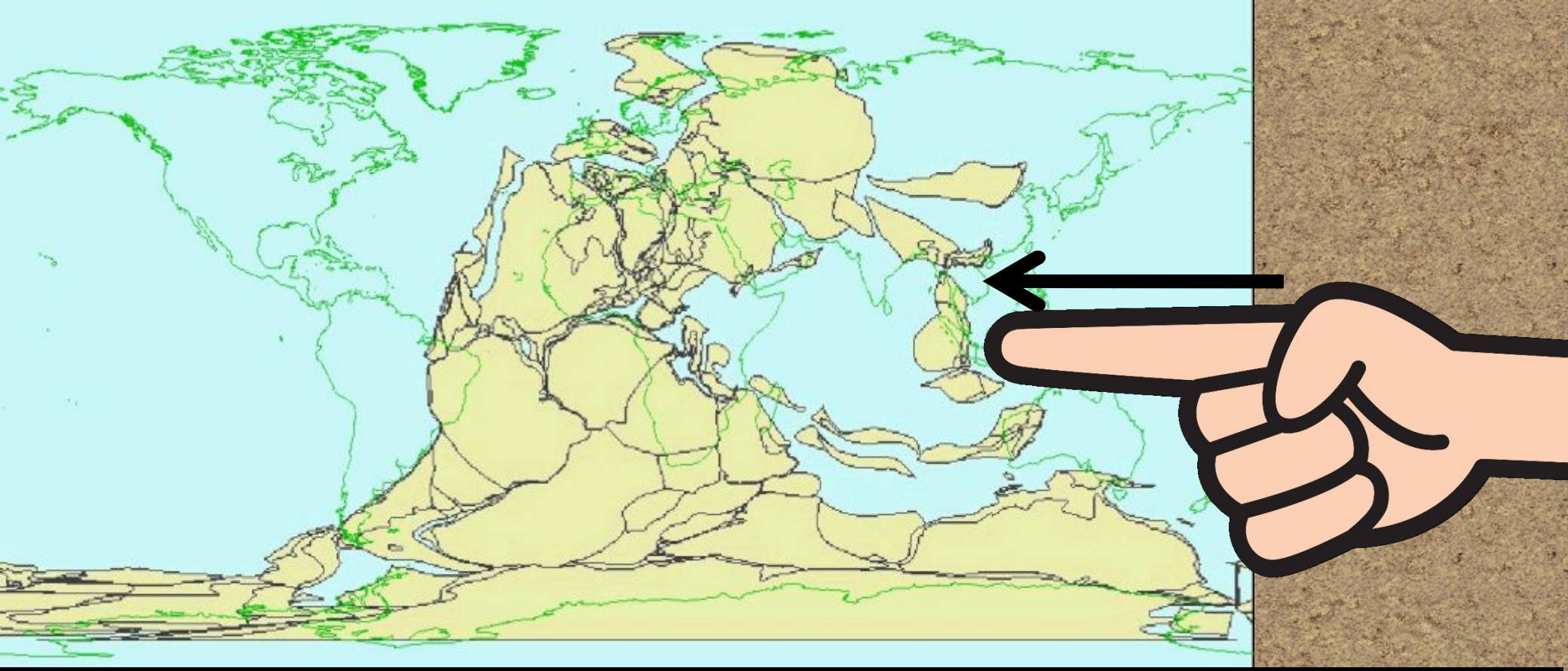
tectonic plates



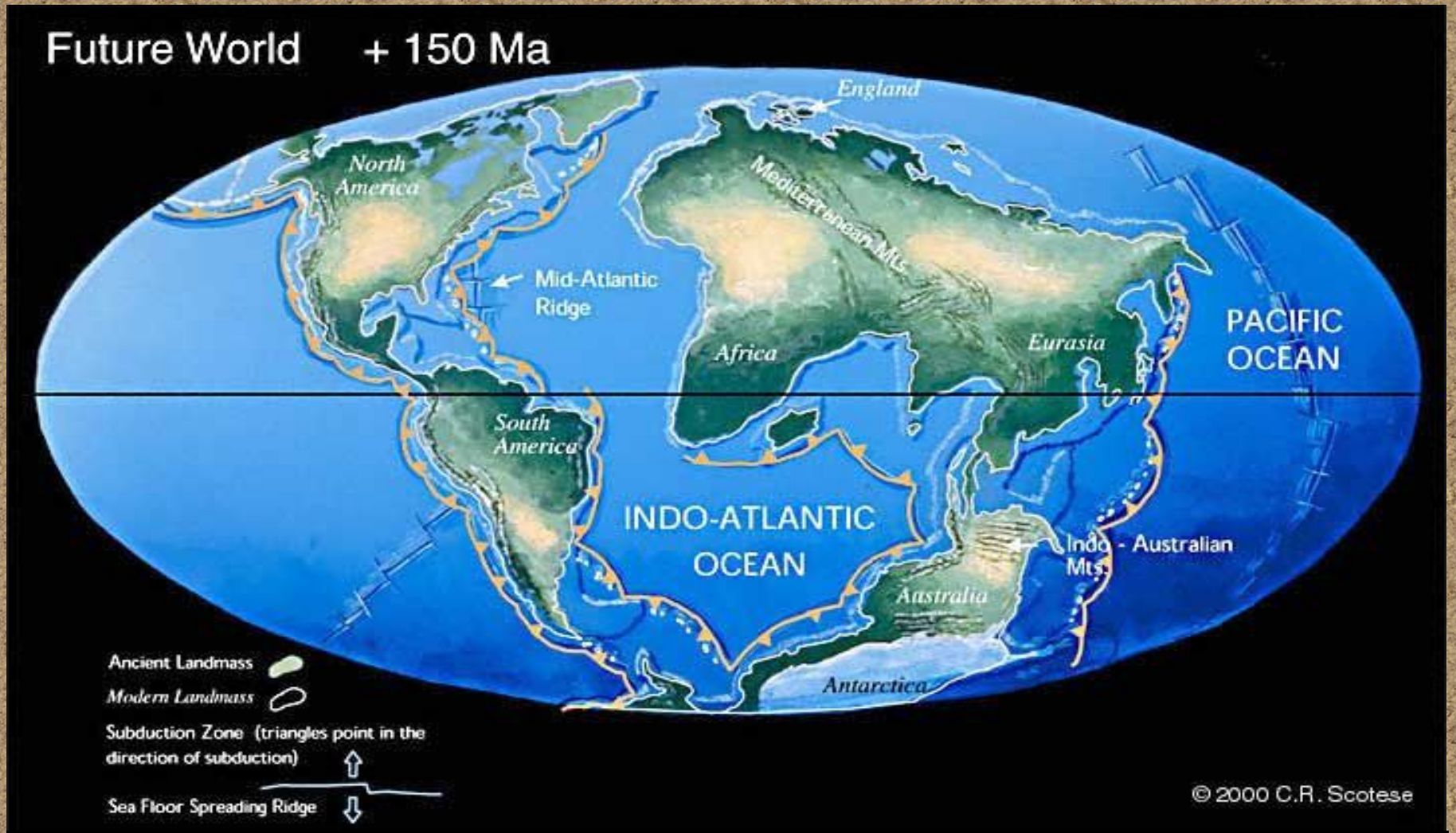




The magma pushes the tectonic plates, and over millions and millions of years they move around.



Every year, all the land in the world moves the same length as your finger.



In 150 million years in the future, this is what the world will look like.

When tectonic plates push together, it can make mountains, volcanoes, and sometimes **earthquakes**.

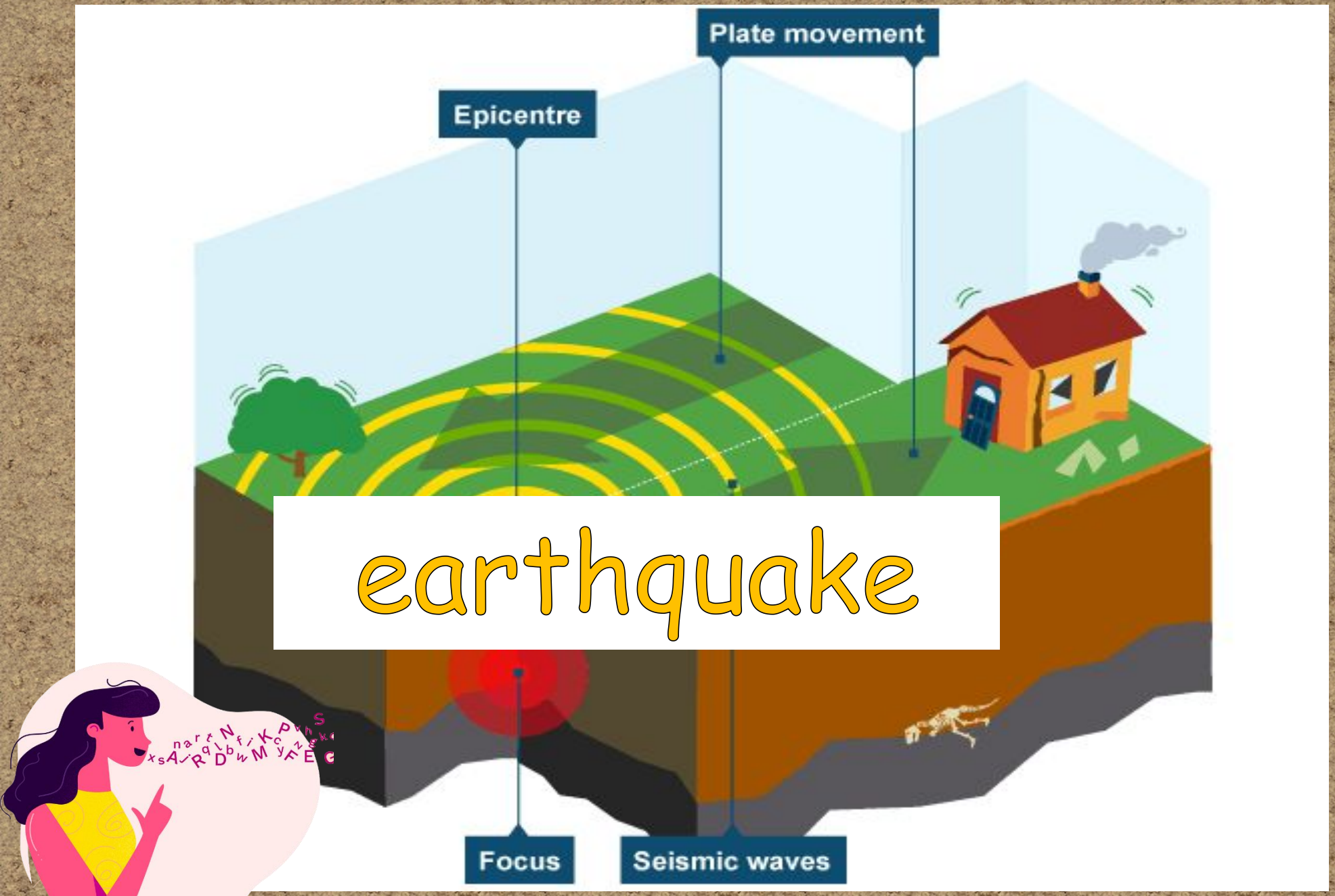
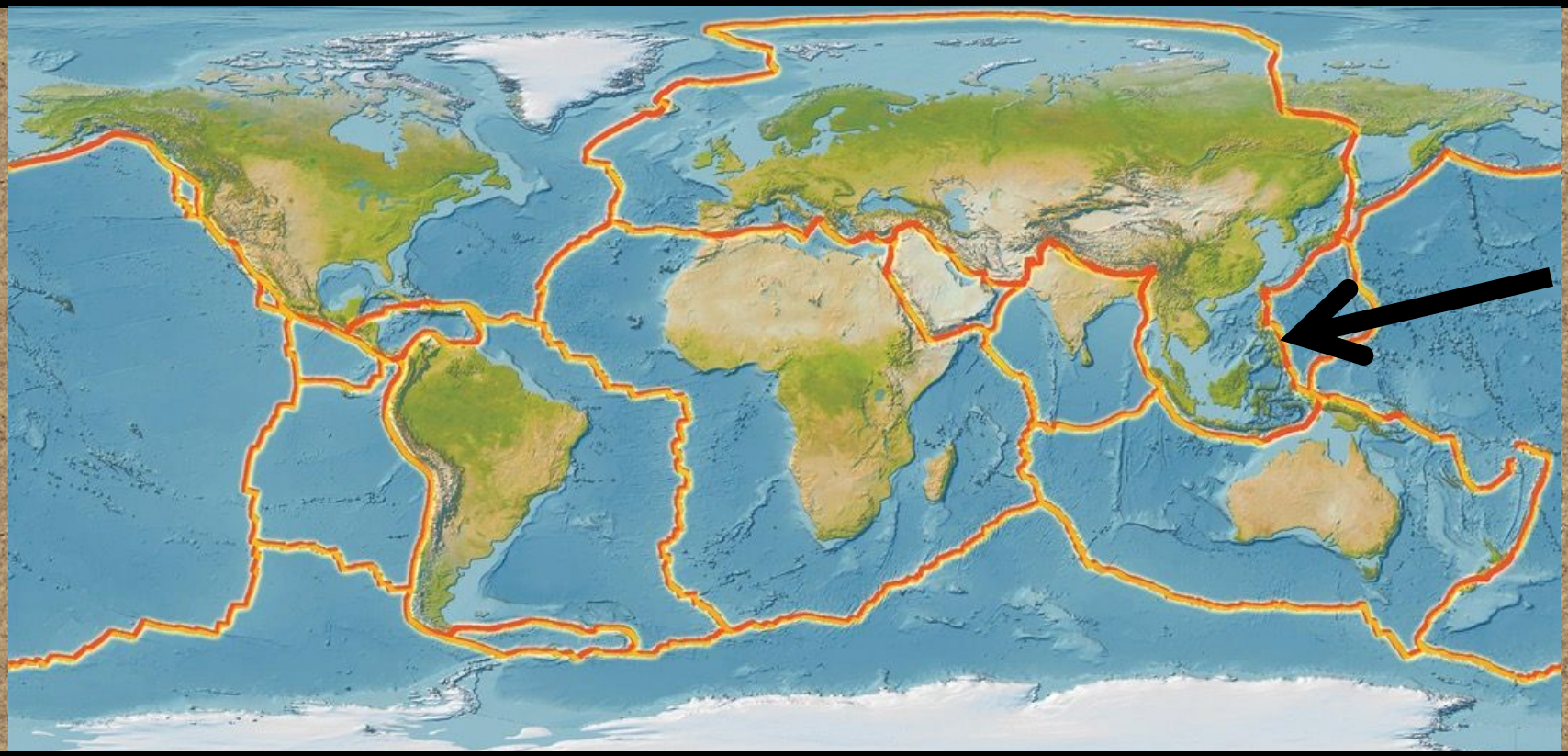


Plate movement
Epicentre
earthquake
Focus
Seismic waves

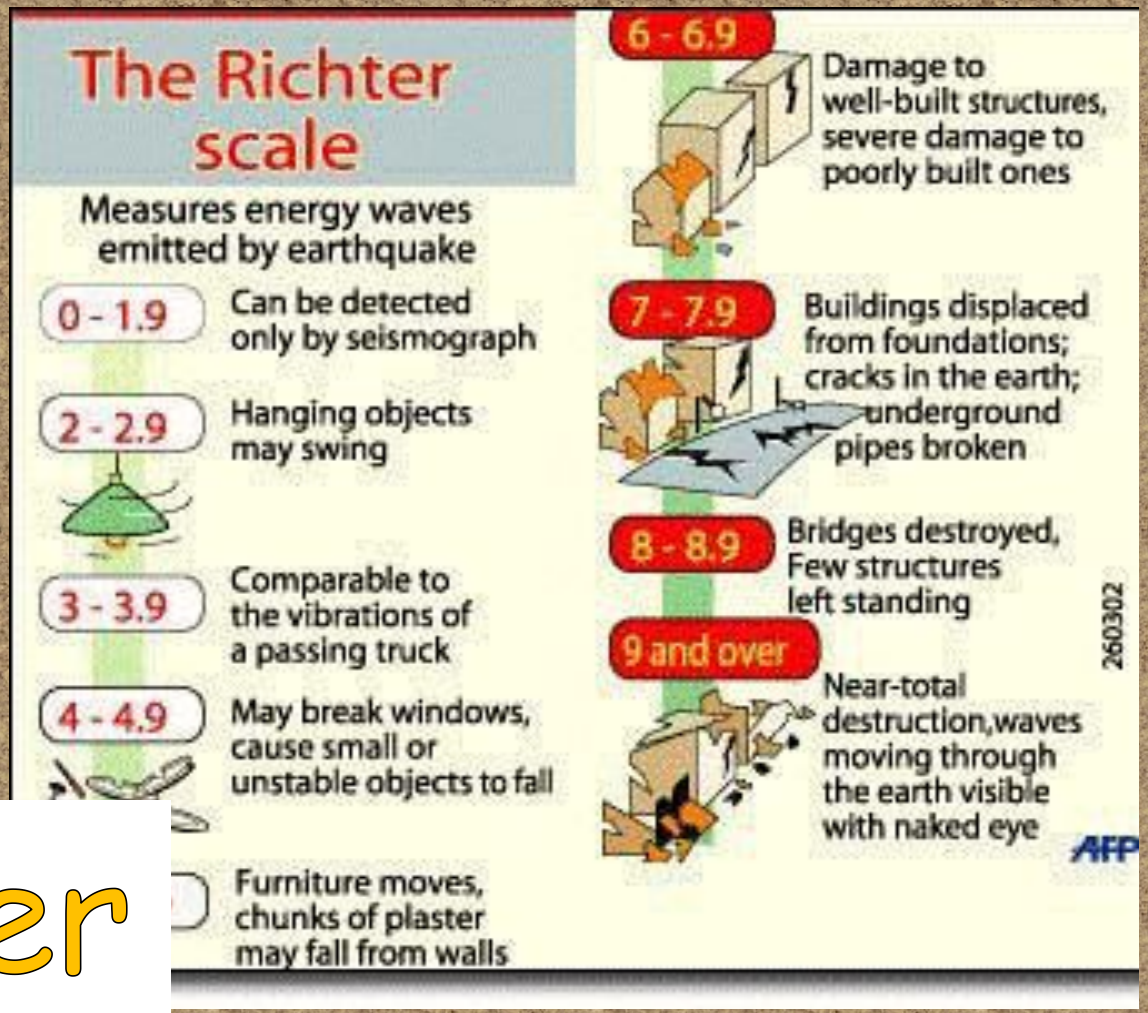
Earthquakes are biggest on tectonic plate boundaries.



Like near Japan!

We can use the **Richter scale** to measure earthquakes.

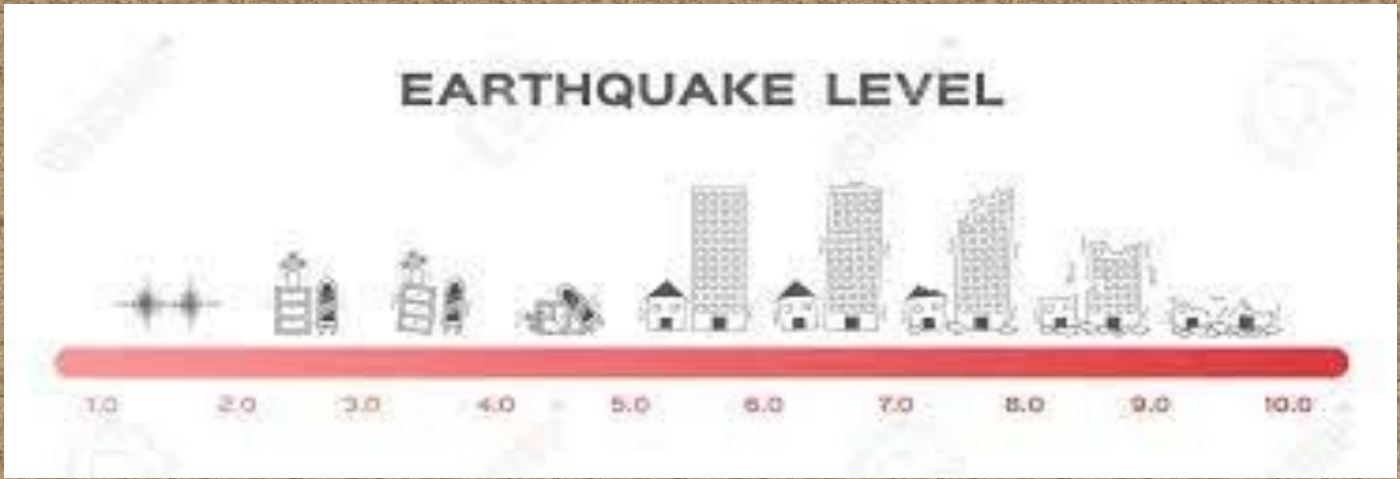
Richter scale



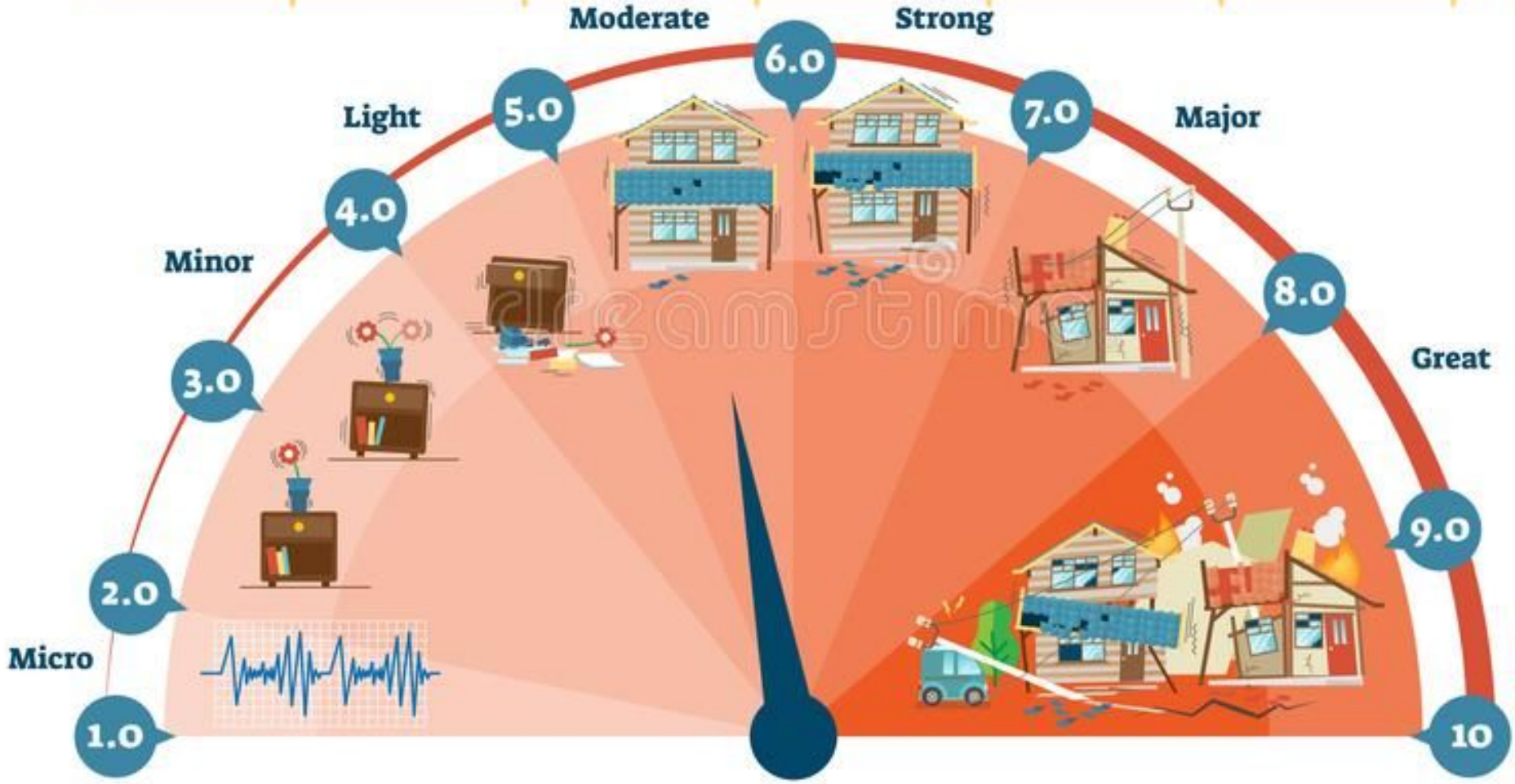
A **Richter scale** goes from 1.0 to 10.0 or more!

1.0 is the smallest

10.0 is the biggest



EARTHQUAKE MAGNITUDE SCALE



What must we if there is an earthquake?

Raise your hand!

If there is an earthquake you must...

drop

If there is an earthquake you must...

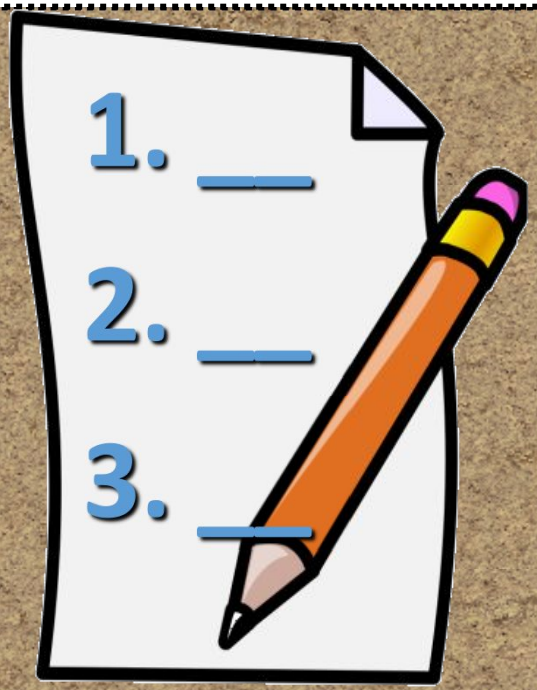
cover

If there is an earthquake you must...

hold on!

Question Time

1. Write these 5 number of points on the Richter Scale at home.
2. Hands on head when finished!



1) Look at the pictograph and write the number of points on the Richter Scale to show the strength of the earthquake.

Key
= 2 points

Earthquake (Country and Year)	Pictogram	Number of points
Thailand 2014		6
Indonesia 2004		
Japan 2011		
India 2008		
Vietnam 2018		

1) Look at the pictograph and write the number of points on the Richter Scale to show the strength of the earthquake.

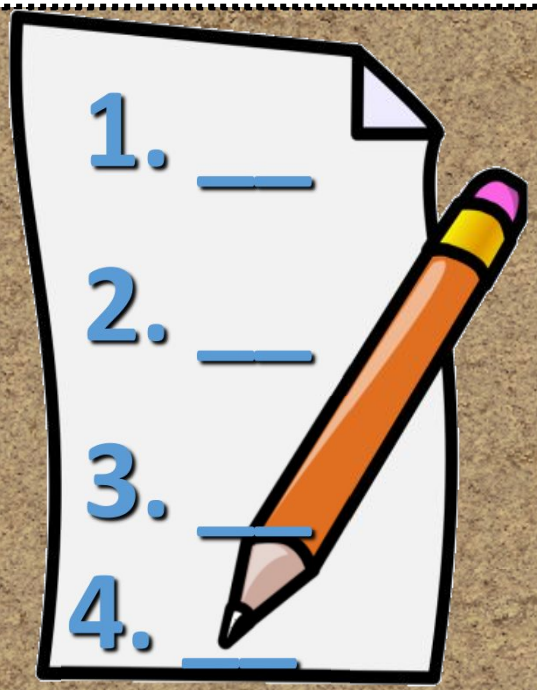
Answers

Key
 = 2 points

Earthquake (Country and Year)	Pictogram	Number of points
Thailand 2014		6
Indonesia 2004		7
Japan 2011		9
India 2008		5
Vietnam 2018		3

Question Time

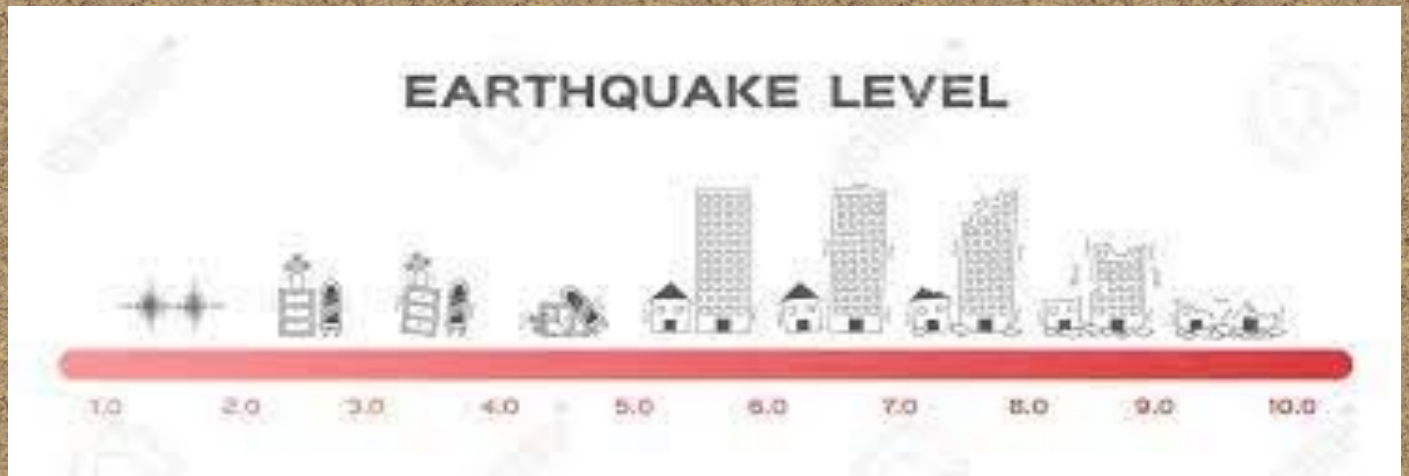
1. Write numbers 1-4. Fill in the missing words.
2. Hands on head when finished!

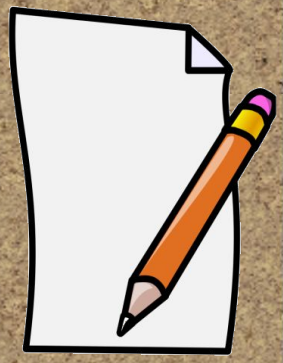


earthquake, tectonic plates, crust, Richter scale

Use the words above to fill in the missing words

1) Scientists measure earthquakes using the Richter scale.

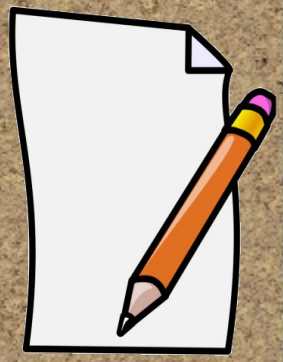




earthquake, tectonic plates, crust, Richter scale

Use the words above to fill in the missing words

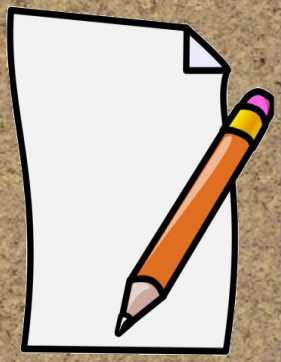
2) An earthquake makes the ground move or shake.



earthquake, tectonic plates, crust, Richter Scale

Use the words above to fill in the missing words

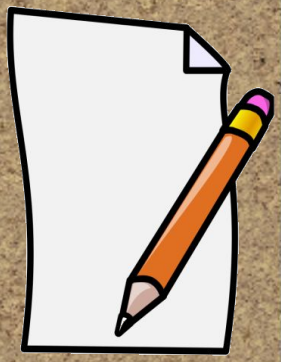
3) The earth's crust is divided into big pieces of rock.



earthquake, tectonic plates, crust, Richter scale

Use the words above to fill in the missing words

4) The big pieces of rock are called ___tectonic plates___ and float on the earth's mantle.



Can an earthquake happen underwater?

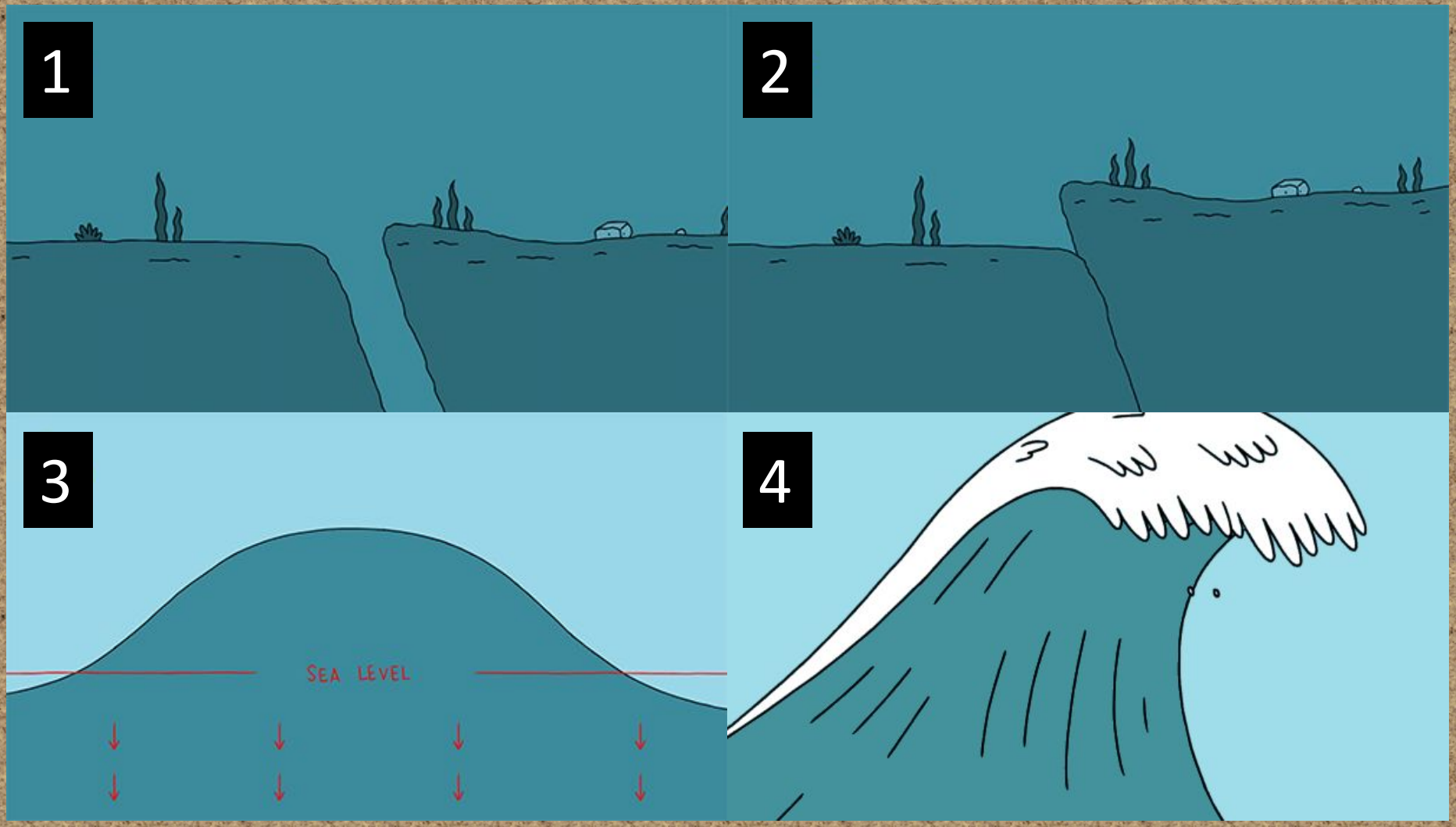
Yes

What happens when there is an earthquake underwater?

We get a big wave called a **tsunami**.

tsunami

When the tectonic plates push together underwater, they create a BIG wave.



What must we do if there is a tsunami?

Raise your hand!

If there is a tsunami, you must go to high ground!

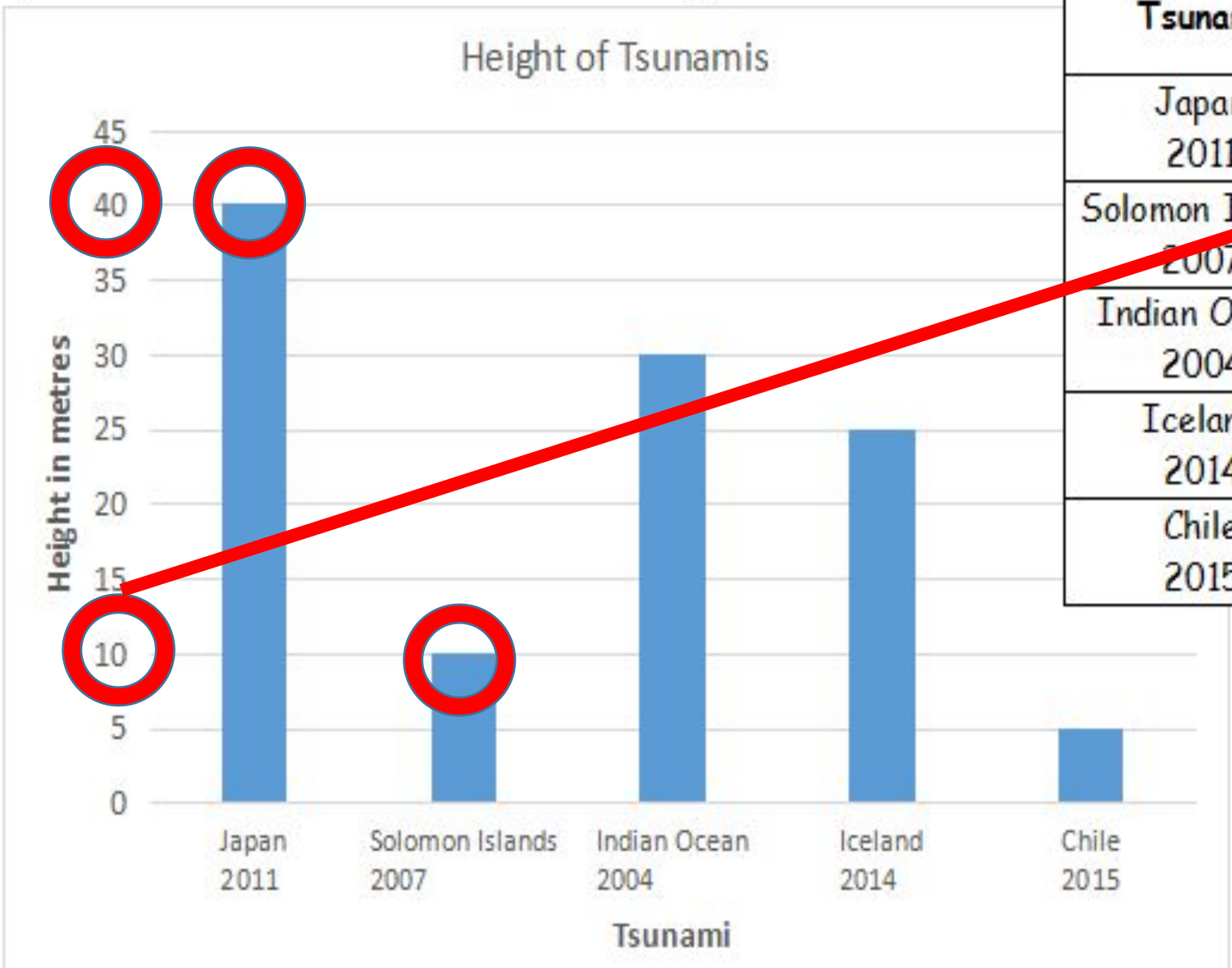
Safety Rules

Question Time

1. Copy this table.
2. Hands on head when finished!

Tsunami	Height (metres)
Japan 2011	40m
Solomon Island 2007	
Indian Ocean 2004	
Iceland 2014	
Chile 2015	

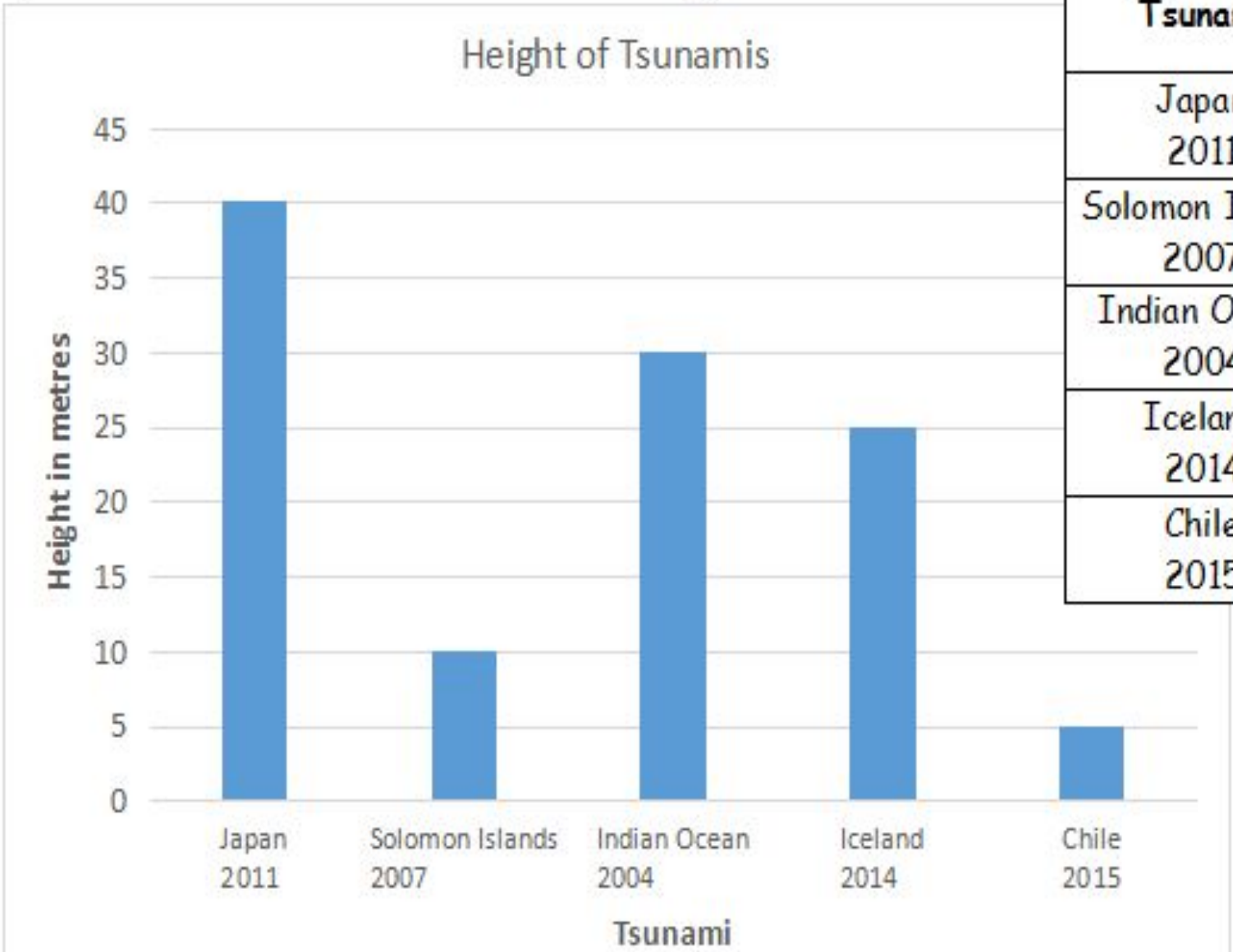
Look at the bar chart and write the height of each tsunami.



Tsunami	Height (metres)
Japan 2011	40m
Solomon Island 2007	10m
Indian Ocean 2004	
Iceland 2014	
Chile 2015	

Answers

3) Look at the bar chart and **write the height** of each tsunami.

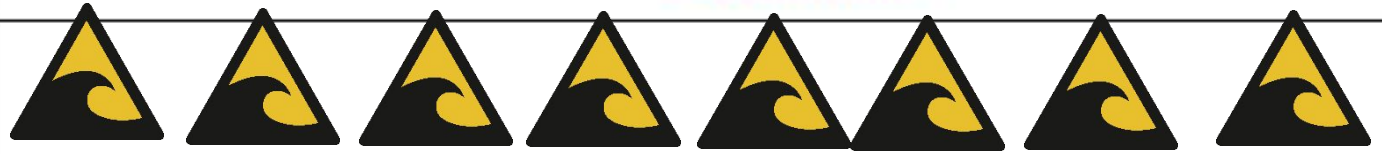


Tsunami	Height (metres)
Japan 2011	40m
Solomon Island 2007	10m
Indian Ocean 2004	30m
Iceland 2014	25m
Chile 2015	5m

Question Time

1. Make your own pictogram using this table.
2. Hands on head when finished!

Tsunami	Height (metres)
Japan 2011	40m
Solomon Island 2007	10m
Indian Ocean 2004	30m
Iceland 2014	25m
Chile 2015	5m

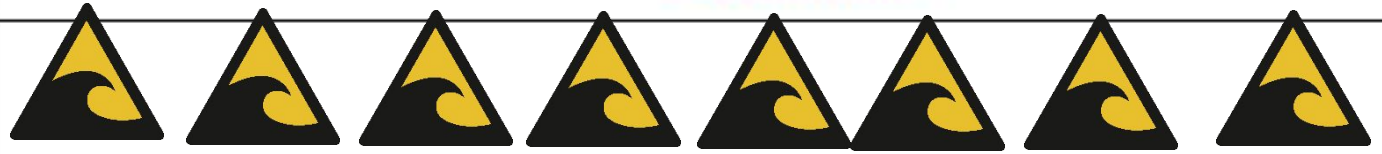
Tsunami	Pictogram
Japan 2011	
Solomon Island 2007	
Indian Ocean 2004	
Iceland 2014	
Chile 2015	

Tsunami	Height (metres)
Japan 2011	40m
Solomon Island 2007	10m
Indian Ocean 2004	30m
Iceland 2014	25m
Chile 2015	5m

Key

= 5 metres

Make your own pictograph to show the height of each tsunami.

Tsunami	Pictogram
Japan 2011	
Solomon Island 2007	
Indian Ocean 2004	
Iceland 2014	
Chile 2015	

Tsunami	Height (metres)
Japan 2011	40m
Solomon Island 2007	10m
Indian Ocean 2004	30m
Iceland 2014	25m
Chile 2015	5m

Key
 = 5 metres

Answers