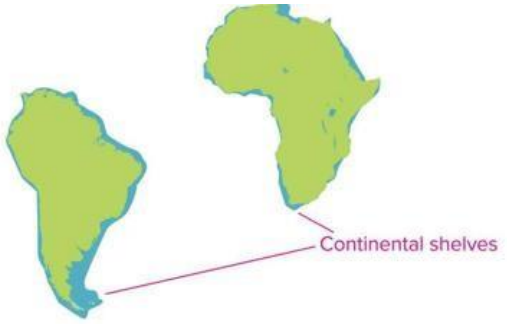
Review-Writing Part-Term 3- 24/25	
Subject: science/	**Date:**
Name:	**Class : 7/**

16	Students will explore how the continents have moved over time on Earth's surface. They will analyze and interpret data and identify patterns of the distribution of fossils and rocks, continental shapes, landmasses, glacial features, and climate to provide evidence of past plate motions. Students will explore the development of the theory of plate tectonics. They will analyze and interpret data and identify patterns based on the locations of sea floor structures and the ages of rocks to provide evidence of past plate motions.	Collect Evidence	10	16
		Three Dimensional Thinking	14	17
		2	21	18
		Collect Evidence	33	19
		3	39	20

I 1. What do you notice about the shapes of the continents including the continental shelves? What do you think the apparent fit of the continent suggests?

The eastern coast of South America and the western coast of Africa appear to fit together, which suggests they were once joined in the past .



2.**What was Pangaea?**

Pangaea was a supercontinent , or single landmass, composed of all of the continents on Earth

3.-**Describe Wegener's continental drift hypothesis?**

Continental drift suggests that over millions of years, Pangaea split up and the continents drifted over Earth's surface

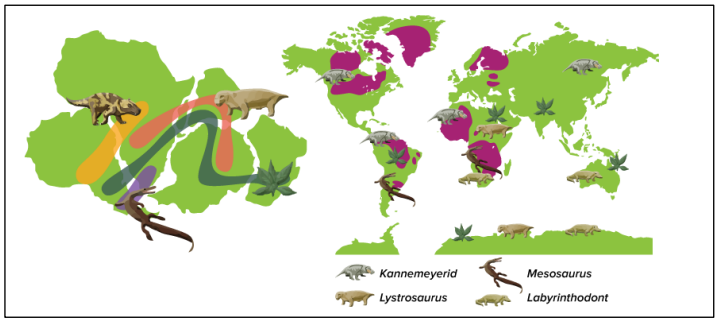
4.

Analyze the map below. The white areas show the locations of glacial grooves.

Interpret the map. Could ice caps, similar to the one that covers Antarctica today, exist on these continents in their present locations? How do **patterns** of glacial features provide evidence of continental drift?

These areas are too warm to have massive ice sheets today. If the Southern Hemisphere continents could be reassembled into Pangaea, the presence of an ice sheet would explain the glacial features on these continents today.

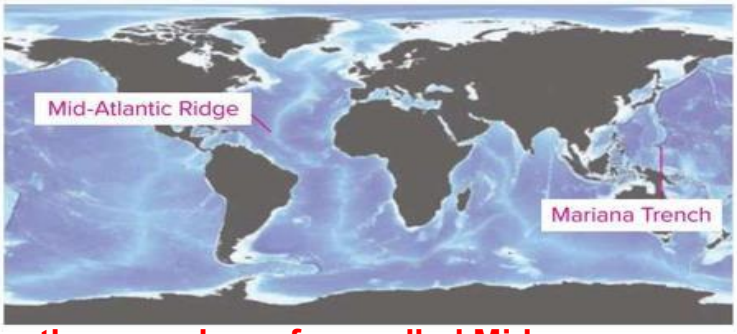
Alfred Wegener found different types of evidence to help support the hypothesis of continental drift. He found fossils of a reptile called *Mesosaurus* on land areas that were once part of Pangaea. The locations where the fossils are found are shown in the figure below.



5.Which statement below describes how the presence of *Mesosaurus* fossils in South America and Africa helps support the hypothesis of continental drift?

A. A reptile would not have been able to swim across an entire ocean, so the landmasses must have been closer together.
B. It shows that the climates of both continents were different during the time that *Mesosaurus* lived.
C. This suggests that South America and Africa moved apart, but India, Antarctica, and Australia remained stationary.
D. It shows that *Mesosaurus* could only exist on South America and Africa because all other continents were covered in ice.

6.Examine the map. The different colors indicate changes in water depths. Light blue indicates shallower depths, dark blue indicates deeper depth. The land regions are shaded in black.



1-What is the light blue linear features that run along the ocean floors?

These are vast mountain ranges deep below the ocean's surface called Mid- ocean ridges

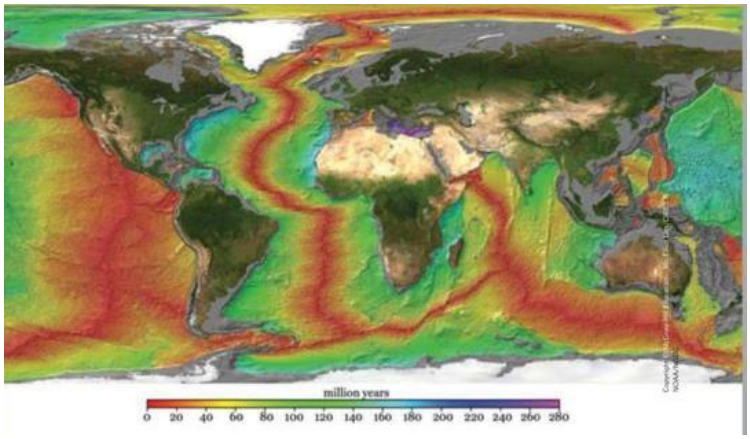
2-What are ocean trenches?

Are deep, underwater troughs on the seafloor.

Scientists were able to determine the age of the ocean floor and create isochron maps. An isochron map is an imaginary line on a map that shows points that have the same age, they formed at the same time.

3-What pattern do you observe?

The colored bands are symmetrical on either side of a mid-ocean ridge



4-In general, where is the youngest crust located?

It shown in red, is generally located in the center of the oceans.

5.Compare the isochron map to the topographic map of the seafloor. Which seafloor features are associated with the young crust? What can infer form this?

Mid-ocean ridges are associated with the youngest oceanic crust.

New oceanic crust must form at mid-ocean ridges.

7.🌐 THREE-DIMENSIONAL THINKING

For many years, scientists thought that the ocean floor was flat. During World War II, U.S. Navy ships patrolled the oceans. A captain of one of the ships, Harry Hess, was also a geologist. He used a new device called an echo sounder to map the ocean floor. The echo sounder data showed that the ocean floor had mountains and volcanoes in addition to flat areas.
When scientists took samples of the rocks that made up the ocean floor, they discovered something surprising. The rocks closer to the mid-ocean ridge were younger in age than the rocks far away from the mid-ocean ridge. They concluded that this difference in age was another way to support the theory of plate tectonics.

2. Which best describes how the scientists could explain their observations?

○	A They thought that sediment washing in from the shore formed the ocean floor, and continued to build out from the shore.
○	B They thought that strong ocean waves pushed the younger rock material toward the middle of the ocean.
○	C They thought that wave erosion at the shore removed the younger rock layers that were on top of the older rock layers.
○	D They thought the young rock formed at the mid-ocean ridge and pushed the older rock toward the shore.

8.

3. A continent travels 0.006 m/year. How long would it take the continent to travel 100 m?

○	A 600 years
○	B 16,667 years
○	C 60,000 years
○	D 167 years

T = D/R

T= 100/0.006

= 16667 years

9.Read each Read each statement carefully. Write True or False

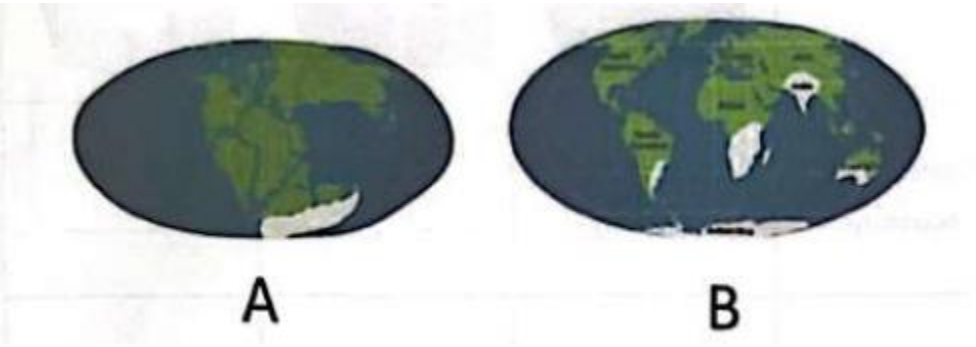
1. Alfred Wegener is best known for proposing the theory of continental drift. ……T

2. According to Wegener, all the continents were once joined together in a supercontinent called Eurasia. ……F

3. Wegener believed that the continents are fixed in place and do not move. ……..F

4. Fossils of the same plants and animals were found on continents that are now separated by oceans. ……T

10. Using the figures and the table below, answer the following questions:

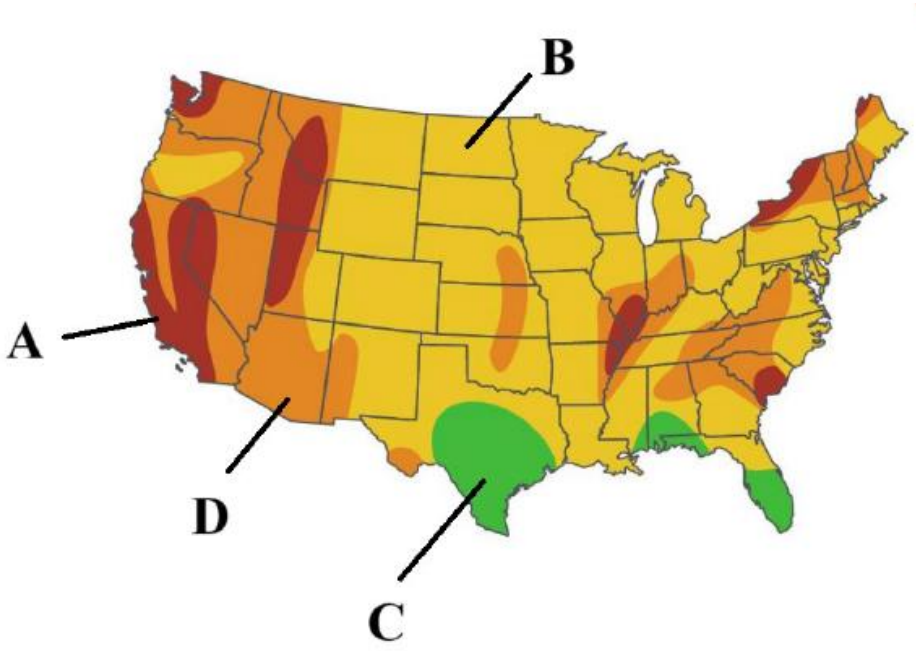


Fossils	Pangaea	Continental drift
Glacial Features	Gondwana	Coal Deposits

1. **Figure A is called .....Pangaea**
2. **Figure B is called .....Gondwana**
3. **The hypothesis that supports Earth's continents were once joined and slowly over time moved to their present positions is called .....Continental Drift.**
4. **The ice caps shown in the map in white color, similar to the one that covers Antarctica today serve as an evidence for the transition between A to B. What is the name given to this evidence? Glacial features**

17	Students will construct explanations about the geologic forces that cause earthquakes, including the build-up of stress along tectonic plate boundaries. They will discover how earthquakes are measured and recognize the factors that affect the severity of damage caused by an earthquake. Students will analyze and interpret data related to earthquake risk and use maps to understand the patterns scientists use to predict the likelihood of future events. Students will also learn about earthquake safety measures, including technologies to mitigate the impacts of an earthquake. Students will construct explanations about the factors that cause severe weather, such as hurricanes, tornadoes, droughts, and floods. They will analyze and interpret data to determine the risk of severe weather in different regions, and use maps to understand the patterns scientists use to predict the likelihood of future events. Students will also learn about safety measures to take in the event of severe weather.	4	163	21
		Summaraize it	222	22
		Investigation	200	23

II.1. Choose the appropriate words and fill the boxes.



Slight	**Minor**
Moderate	**Great**

A. Great	**B. Minor**	**C. Slight**	**D. Moderate**

2. Where do most of the Earthquake occur?

Earthquakes occur along Plate boundaries and at faults.

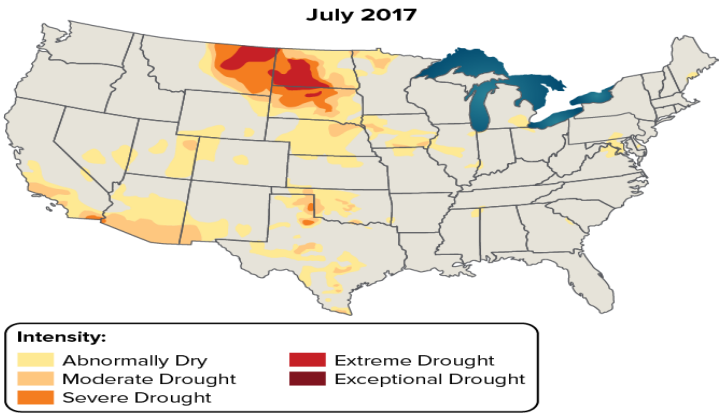
4. What can be inferred about the locations with only slight or minor earthquake risk?

○	A These locations have too low of an elevation for earthquakes to occur.
○	B These locations are not located on or near a plate boundary or fault line.
○	C These locations are too mountainous for earthquakes to occur.
○	D These locations are too far from the San Andreas Fault to be affected by an earthquake.

5. If a city has experienced a damaging earthquake in the past, what can you infer about the likelihood of a future earthquake event?

○	A An earthquake is not likely. Earthquakes never occur twice in the same location.
○	B An earthquake is not likely. Earthquakes only occur on coastlines.
○	C An earthquake is likely. How frequently an area experiences an earthquake determines its risk.
○	D An earthquake is likely. However, it will never exceed the magnitude of the first earthquake that occurred.

3.



Use the map to answer the question below.

2. What can be determined about future droughts from examining this map?

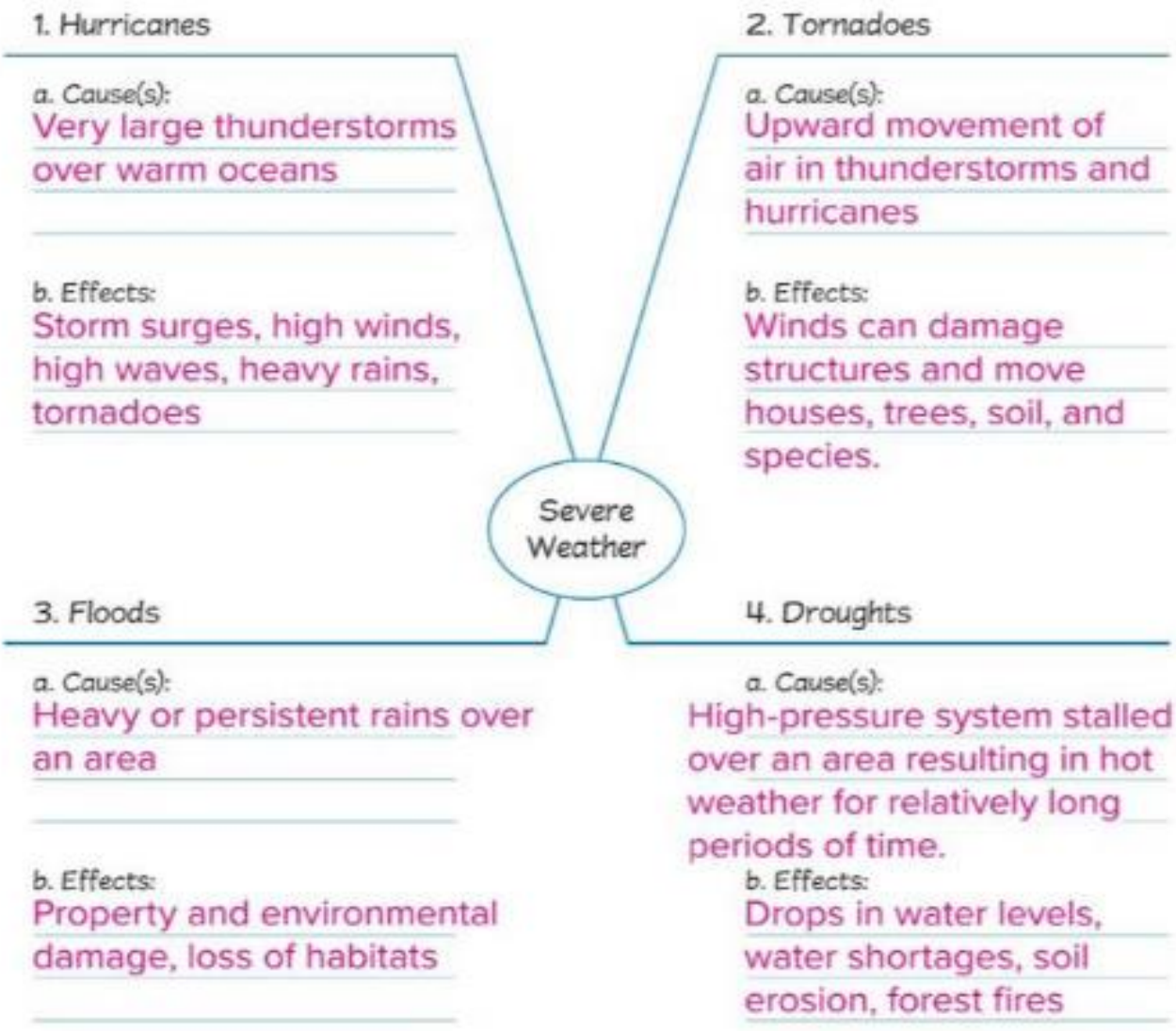
○	A The same areas will experience droughts in the future.
○	B Future droughts cannot be determined, only predicted.
○	C Droughts move from west to east so the eastern coast of the United States will experience droughts.
○	D Droughts move from east to west so the western coast of the United States will experience droughts.

Cause and effects

Hurricanes	Very large thunderstorms over warm oceans	Storm surges, high winds, high waves, heavy rains, tornadoes
Floods	Heavy or persistent rains	Property and environmental damage, loss of habitats
Tornadoes	Upward movement of air in thunderstorms and hurricanes	Winds can damage structures and move houses, trees, soil, and species
Droughts	High-pressure system stalled over an area causing prolonged hot weather	Drops in water levels, water shortages, soil erosion, forest fires

Summarize It!

1. **Organize** Complete the concept map to organize information you learned throughout the lesson about hurricanes, tornadoes, floods, and droughts.



5.

Saffir–Simpson Hurricane Scale		
Category	**Wind Speed**	**Damage**
1	119–153 km/h (74–95 mi/h)	Winds damage unanchored mobile homes and poorly constructed signs. Some coastal flooding and minor pier damage occur.
2	154–177 km/h (96–110 mi/h)	Some damage to building roofs, doors, and windows occurs. Mobile homes have considerable damage. Flooding damages piers, and small craft in unprotected moorings may break their moorings. Some trees are blown down.
3	178–209 km/h (111–130 mi/h)	Some structural damage occurs to small residences and utility buildings. Large trees are blown down. Mobile homes and poorly built signs are destroyed. Flooding near the coast destroys smaller structures. Larger structures are damaged by floating debris. Inland terrain may be flooded.
4	210–249 km/h (131–155 mi/h)	Some complete roof-structure failure occurs on small residences. Major erosion of beach areas occurs, and terrain may be flooded far inland.
5	>249 km/h (>155 mi/h)	Many residences and industrial buildings experience complete roof failure. There are some complete building failures with small utility buildings blown over or away. Flooding causes major damage to lower floors of all structures near the shoreline. Massive evacuation of residential areas may be required.

INVESTIGATION

Gone with the Wind

On the line before each description of damage on the Saffir–Simpson hurricane scale, write the letter of the category that you think corresponds.

D Major erosion of beach areas occurs.

A Minor pier damage occurs.

E Complete roof failure on residential and industrial buildings occurs.

B Small trees are blown down.

C Large trees are blown down.

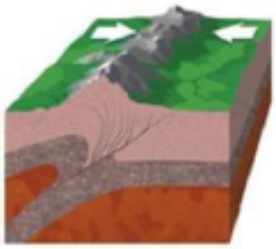
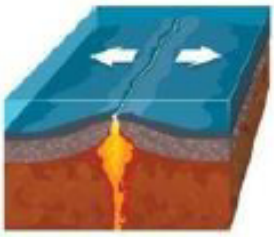
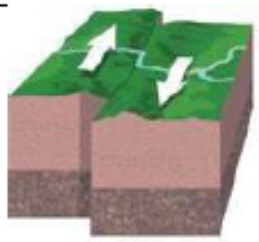
A. Category 1
B. Category 2
C. Category 3
D. Category 4
E. Category 5

18	Students will explore how the movement of plates forms mountain ranges and volcanoes and causes earthquakes. They will construct explanations, develop and use models, and identify patterns to understand how plates move and interact.	Summaraize it	64	24
		Practice Questions Document		25
		Practice Questions Document		26

III.1.

1-Compare between the different types of boundaries by completing the following table.

page 48-64

			
Name of the boundary	Convergent boundary	Divergent boundary	Transform boundary
Movement (motion)	Two plates move Toward each other	Two plates move apart from each other	Plates slide horizontally past each other
Example of a result of this type of plate motion	Mountains Volcanoes Faults Earthquakes	Mid ocean ridges Faults Earthquakes	Earthquakes Faults Fault zones
Scale of example	Large scale mountains created slowly Earthquakes occur rapidly	Large scale mountains created slowly Earthquakes occur rapidly	Large scale mountains created slowly Earthquakes occur rapidly

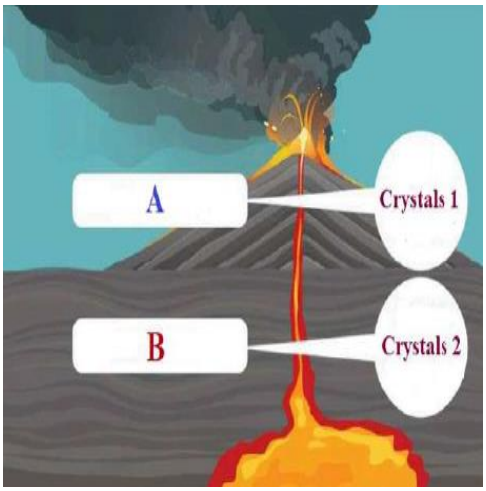
2.An earthquake can change Earth's surface quickly and dramatically. We see the results of earthquakes in-

1…Faults….2……Landslide….3……Tsunami

3.A curved line of volcanoes that form parallel to a plate boundary is called a ……Volcanic Arc

19	Students will explore the processes of melting, crystallization, weathering, deformation, and sedimentation, which act together to form minerals and rocks through the cycling of Earth's materials. They will develop and use models to describe the stability and change of these geoscience processes.	Three Dimensional Thinking	104	27
		Collect Evidence	104	28
		Three Dimensional Thinking	105	29
		Collect Evidence	112	30

IV.1. Complete the box with correct answers.



Feature	Extrusive Igneous Rock	Intrusive Igneous Rock
Formation	Forms on Earth's surface	Forms inside Earth
Cooling Speed	Cools quickly	Cools slowly
Crystal Size	Small or no crystals	Large crystals
Example	Obsidian	Diorite

2.How does the flow of energy from Earth's hot interior drive the formation of igneous rocks?

Earth's hot interior allows rocks to melt. When molten rock reach Earth's surface they cool and crystallize to form igneous rocks.

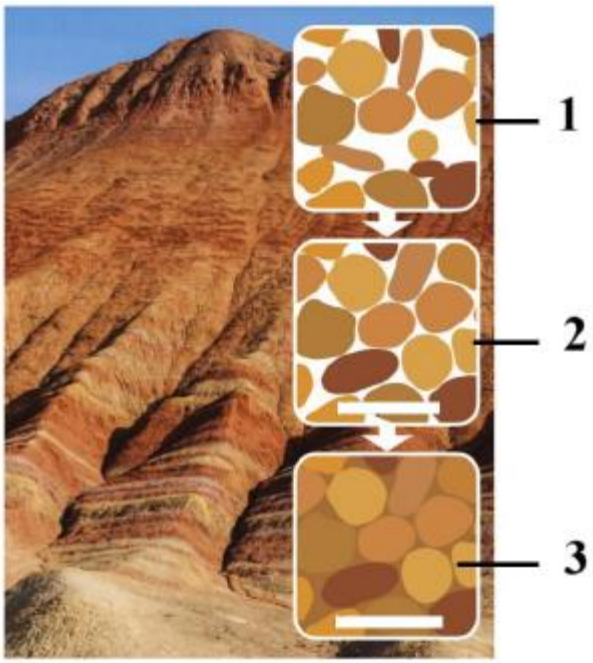
3. How does lava flowing out of a volcano relate to the formation of igneous rock?

Lava flowing out of a volcano relates to the formation of **igneous rock** because when the lava **cools and hardens**, it becomes solid rock. Here's how it works:

- When a volcano erupts, it releases **magma** from beneath the Earth's surface. Once magma reaches the surface, it is called **lava**.
- As the **lava cools quickly** on the surface, it **solidifies** to form **extrusive igneous rocks** (like basalt or pumice).
- If the magma **cools slowly underground**, it forms **intrusive igneous rocks** (like granite).

5.Formation of sedimentary rocks.

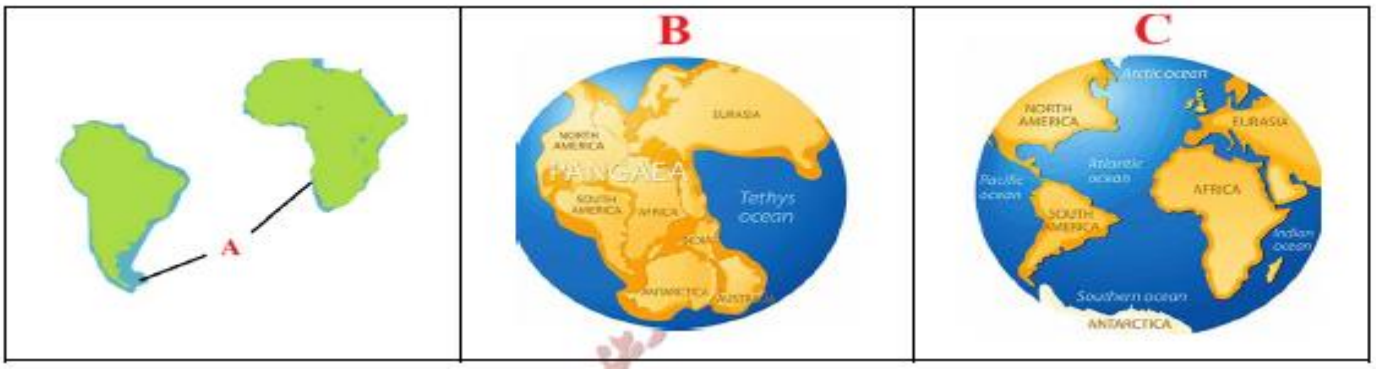
4



1. Deposition	2. Compaction	3. Cementation	4. Lithification

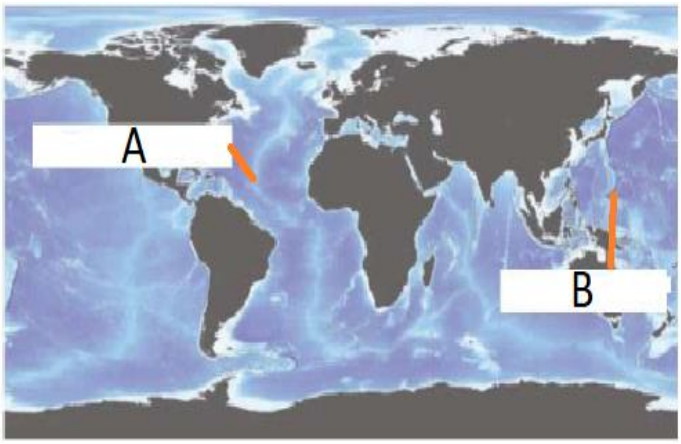
Extra Questions

1.

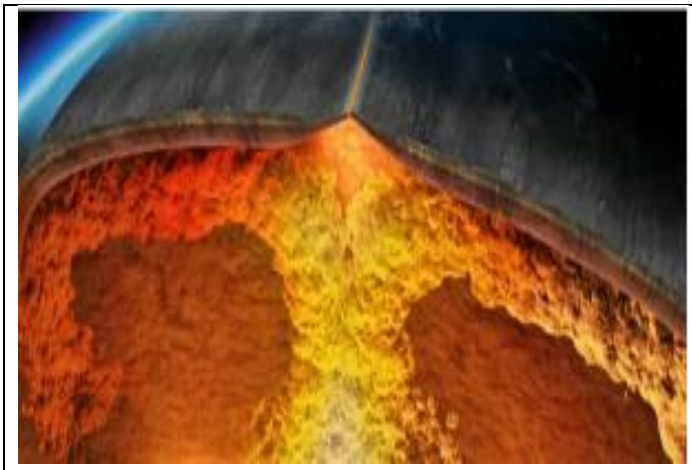


A. Continental Shelves	B. Pangaea	C. Gondwana

2. Name the image.



A. Mid ocean ridge
B. Ocean trench



Seafloor Spreading

3.Name the land forms formed by erosion.

Sand dunes	Loess	Arches	Sanblasted rocks

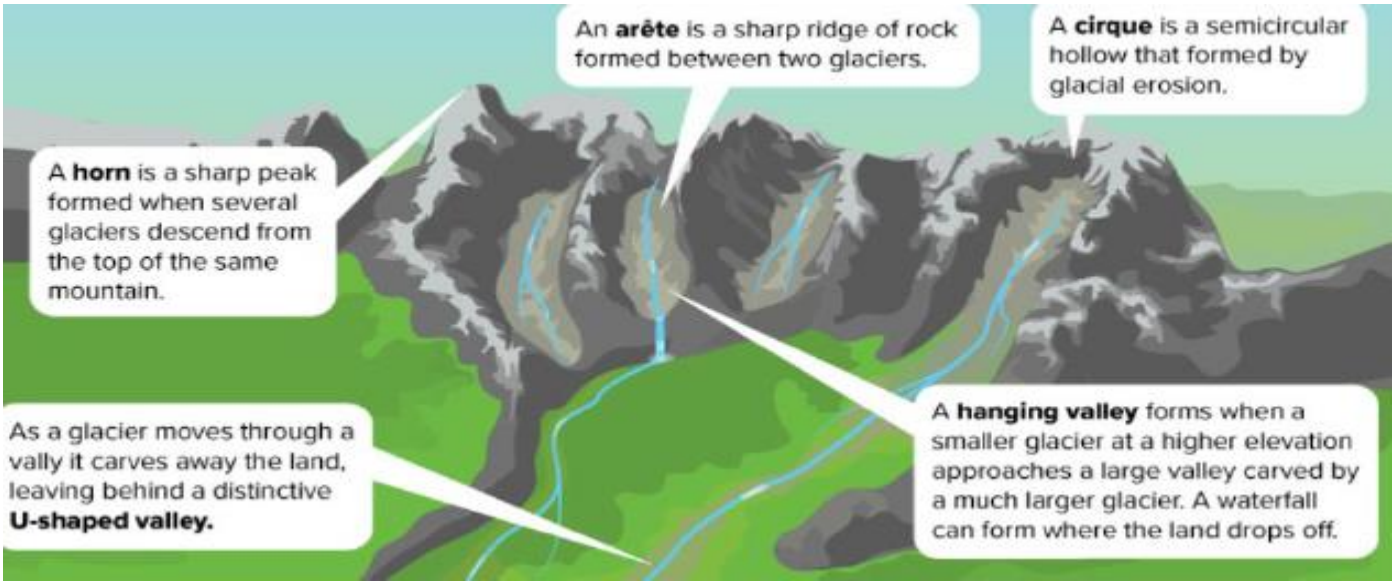
4. Name the type of sedimentary rocks.

		
Bio chemical	**Chemical**	**Clastic**

5.**Effect of earthquake on earth's surface.Name the following features**

		
Fault	**Landslide**	**Tsunami**

6.Label the part of a Glacier.



Arate	cirque	Hanging valley	U-shaped Valley	Horn