

Sangam S.K.M College-Nadi

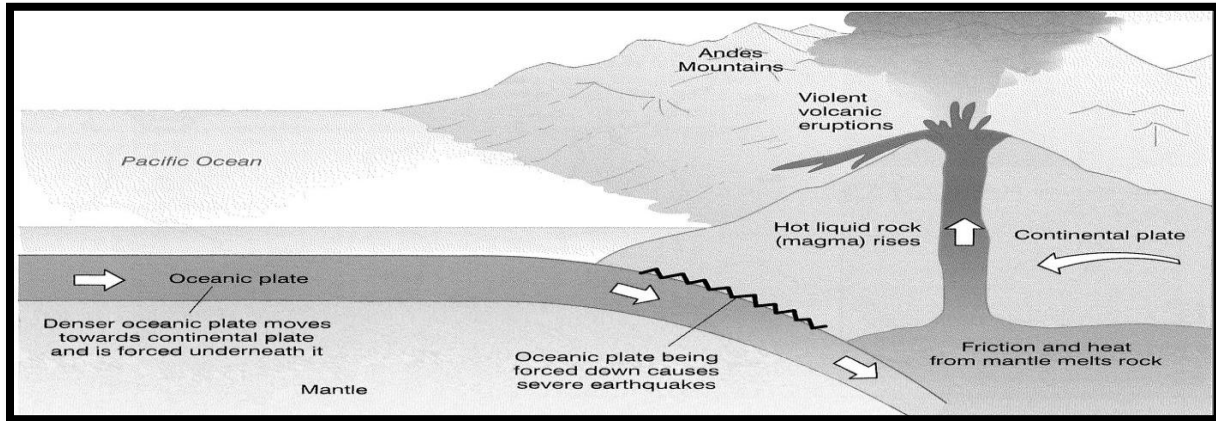
Year 13

Geography

Worksheet 5 – Solution

Questions:

1. Use the resource given below to answer the questions that follow:



- a.) Describe the plate movements occurring at the plate margin as illustrated above.

The above resource is illustrating a convergent plate boundary, this occurs when plates moves towards each other and collide.

- b.) Explain the process that occurs at the subduction zone.

Where two tectonic plates meet at a **subduction zone**, one bends and slides underneath the other, curving down into the mantle. (The mantle is the hotter layer under the crust.) At a **subduction zone**, the oceanic crust usually sinks into the mantle beneath lighter continental crust

- c.) Explain one way in which a landform feature associated with the above plate margin can be useful to humans.

Soil enrichment and other benefits to volcanoes are the precious gems, minerals and building materials that eruptions make available. For instance, stones like pumice volcanic ash and perlite (volcanic glass) are all mined for various commercial uses

2. **Short Answer Questions**

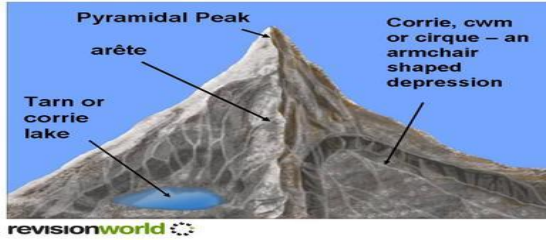
- a. Describe the formation of karst landform.

Karst is an area of land made up of limestone. Limestone, also known as chalk or calcium carbonate, is a soft rock that dissolves in water. As rainwater seeps into the rock, it slowly erodes. **Karst** landscapes can be worn away from the top or dissolved from a weak point inside the rock.



b. Describe how arêtes are formed.

An arête is a knife-edge ridge . It is **formed** when two neighboring corries run back to back. As each glacier erodes either side of the ridge, the edge becomes steeper and the ridge becomes narrower.



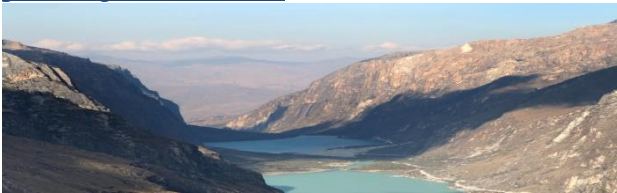
c. What are erratic?

Erratic's are stones and rocks that were transported by a glacier, and then left behind after the glacier melted, often for many kilometres, to be deposited on areas of completely different lithology.



d. How are U-shaped valleys formed?

U-shaped valleys have steep sides and a wide, flat floor. They are usually straight and deep. They are **formed** in river valleys which, during the ice age, have been filled by a large glacier. These glaciers have deepened, straightened and widened the valley by plucking and abrasion.



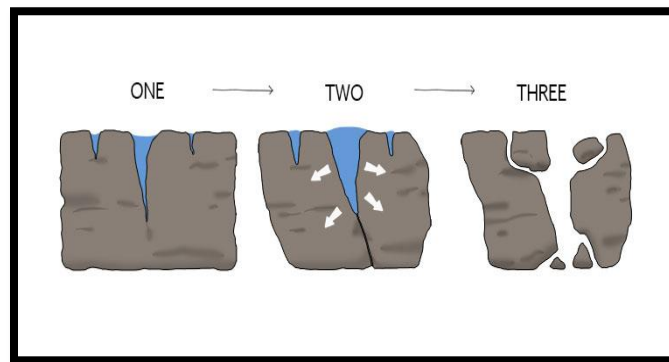
e. Describe how an ox-bow lake is formed.

An **oxbow lake** starts out as a curve, or meander, in a river. A **lake** forms as the river finds a different, shorter, course. The meander becomes an **oxbow lake** along the side of the river. **Oxbow lakes** usually **form** in flat, low-lying plains close to where the river empties into another body of water.



3. Use the diagram given below to answer the questions that follow:

Weathering Process



- a. **Identify the weathering process shown in the diagram above.**
Physical weathering- freeze –thaw weathering.
- b. **Explain two processes of erosion that occur in colder regions.**
 - **Abrasion** occurs when rocks and stones become embedded in the base and sides of the **glacier**. These are then rubbed against the bedrock (at the bottom of the **glacier**) and rock faces (at the sides of the **glacier**) as the **glacier** moves. This causes the wearing away of the landscape as the **glacier** behaves like sandpaper.
 - **Plucking** occurs when rocks and stones become frozen to the base or sides of the **glacier** and are **plucked** from the ground or rock face as the **glacier** moves.
- c. **Describe what happens during the process of freeze- thawing weathering.**
Freeze-thaw weathering occurs when rocks are porous (contain holes) or permeable (allow water to pass through).
 - Water enters cracks in the rock.
 - When temperatures drop, the water freezes and expands causing the crack to widen.
 - The ice melts and water makes its way deeper into the cracks.
- d. **Distinguish between chemical and biological weathering process.**
Chemical weathering is caused by rain water reacting with the mineral grains in rocks to form new minerals (clays) and soluble salts. These reactions occur particularly when the water is slightly acidic whereas **biological weathering** is **weathering** caused by plants and animals. Plants and animals release acid forming chemicals that cause **weathering** and also contribute to the breaking down of rocks and landforms.

The End.