

1. What type of drainage pattern resembles the veins of a leaf? \_\_\_\_\_

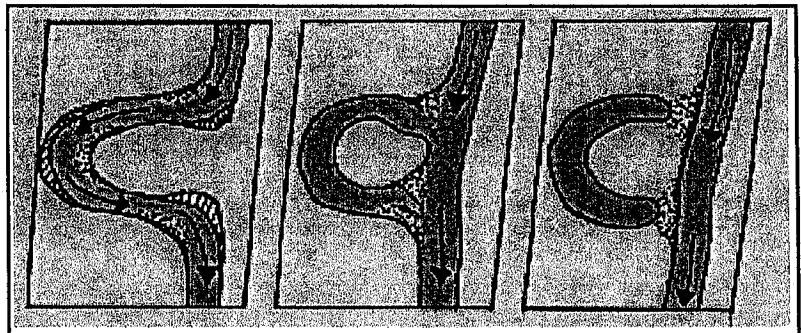
2. There are 4 stages of river development. In which stage would fast moving water, rapids, and waterfalls be found? \_\_\_\_\_

3. Define hydraulic action.

\_\_\_\_\_  
\_\_\_\_\_

4. The lake on the far right of the diagram formed when a river bend was cut off. What kind of lake is it?

\_\_\_\_\_



5. Mounds of debris along river banks that grow higher with each flood are called

\_\_\_\_\_

6. Define attrition \_\_\_\_\_

\_\_\_\_\_

7. Sand particles may move along the river bed by bouncing and rolling. This process of sediment transport is known as \_\_\_\_\_.

8. Of the following sediments carried by the river, which one would be the first to be deposited near the river mouth? silt, sand or clay? \_\_\_\_\_

Which one would be deposited last? \_\_\_\_\_

9. Define delta. \_\_\_\_\_

\_\_\_\_\_

10. A river delta that has many distributary channels that branch out from a main river channel is referred to as a \_\_\_\_\_ delta.

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Unit 2: Gradational Processes Quiz

Topic: Rivers (B)

Name \_\_\_\_\_

1. What type of drainage pattern often occurs on cone-shaped mountains such as composite volcanoes? \_\_\_\_\_

2. The geographic area which supplies water to a network of streams is known as a  
\_\_\_\_\_

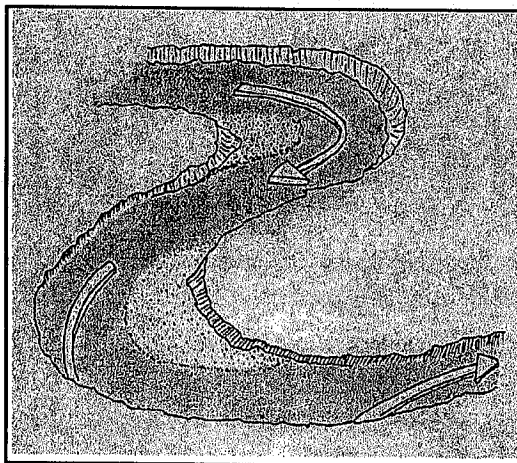
3. Define corrosion. \_\_\_\_\_  
\_\_\_\_\_

4. Place an X on the river diagram where a slip-off slope or point bar is located.

5. Place a Y on the river diagram where an under-cut bank is located.

6. Artificial river levees are known as  
\_\_\_\_\_

7. Heavy rock particles may move along the river bed by dragging. This process of sediment transport is referred to as  
\_\_\_\_\_

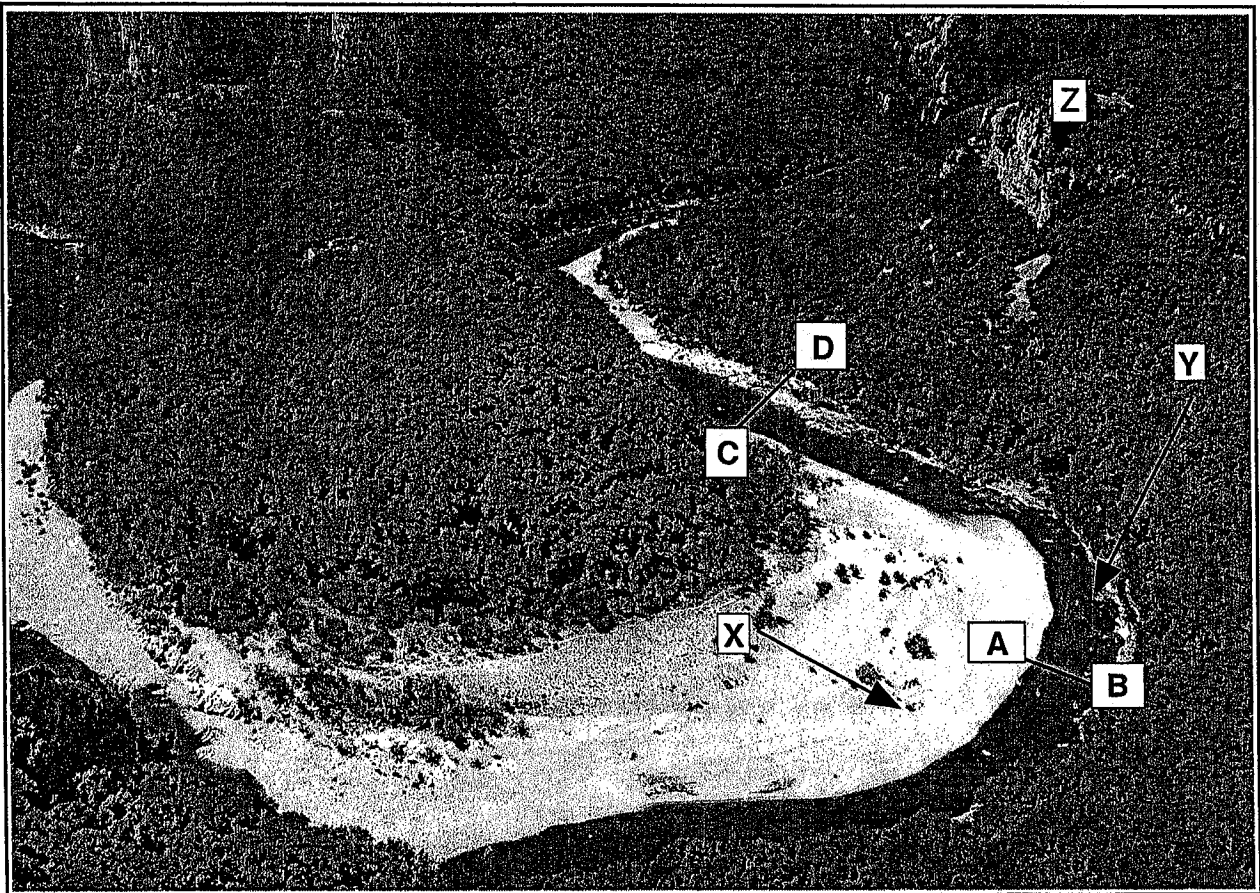


8. What type of river delta has the shape of an inverted cone?  
\_\_\_\_\_

9. Define oxbow lake. \_\_\_\_\_  
\_\_\_\_\_

10. Define flood plain. \_\_\_\_\_  
\_\_\_\_\_

Refer to the river in the photograph to answer the questions below.



1. The large curve in the river is referred to as a \_\_\_\_\_.

2. The river water can appear crystal clear yet enormous amounts of material may be transported in solution. Define solution.

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3. Area X is called the slip-off slope or point bar where much deposition has occurred. Why has so much material been deposited at this location?

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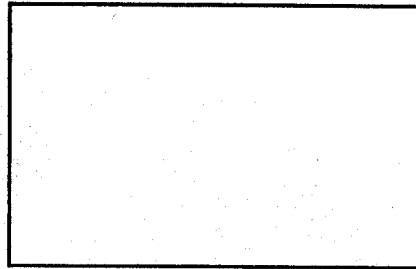
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4. Area Y is the undercut bank where erosion occurs continuously. Why does so much erosion occur on this side of the river?

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5. Draw a profile of the river channel from point A to B. Draw the profile line in the box on the right.



6. A small landslide is evident at location Z, but the heavy vegetation has helped to stabilize the slopes throughout the river valley. How does vegetation make slopes more stable?

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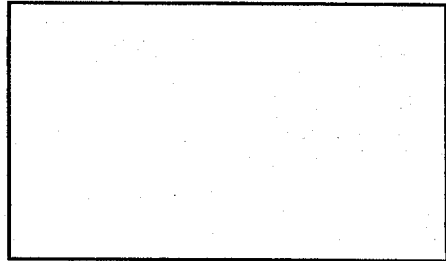
7. Far into the future an oxbow lake may form in this river valley. How does an oxbow lake form?

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Draw a line on the photo in the area where the river may cut its new channel.

8. Draw a profile of the river channel from point C to D in the box on the right.



9. Suspension is another way that rivers transport sediment. Define suspension.

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10. Hydraulic action and attrition are 2 forms of erosional action carried out by rivers. Define hydraulic action and attrition.

Hydraulic action \_\_\_\_\_

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Attrition \_\_\_\_\_

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Unit 2: Gradational Processes

Topic: River Valley

Name \_\_\_\_\_

1. Area from which water drains into river system is referred to as its \_\_\_\_\_.
2. Steep gradients, rapids, waterfalls are commonly seen as the river wears down the valley on its way to the ocean. At this point the river is in \_\_\_\_\_ stage.
3. Erosional action dominates as the water rushes down the steep gradient and very little deposition occurs in this area. The force of the flowing water erodes the river valley. This form of erosional action is called \_\_\_\_\_. Material such as gravel and sand carried by the moving water wears down the landscape. This form of erosion is called \_\_\_\_\_.
4. The fast moving water is transporting massive amounts of debris. Large boulders drag along the river bottom. This form of sediment transport is called \_\_\_\_\_. Lighter, smaller particles may bounce and roll. This method of transport is called \_\_\_\_\_. Some fine particles such as clay are so light that they are carried along without settling to the river bed. This form of transport is called \_\_\_\_\_. Dissolved materials in the river- water can sometimes make up as much as 50% of the total transport load - a method of transport known as \_\_\_\_\_.
5. As the river nears sea level, the river channel broadens and the river uses its energy laterally, creating a broad river valley. The gentle bends in the river are called \_\_\_\_\_. These bends are formed by both erosional action and deposition. On the outside bank where the water moves fastest, major erosion occurs and on this side of the river the bank is often very steep. This steep bank is known as the \_\_\_\_\_. On the opposite side of the river, the water flow is much slower and deposition dominates. This depositional side of the river is known as the \_\_\_\_\_.
6. As the river bends become more prominent, the river may cut through a meander creating a(n) \_\_\_\_\_.
7. During spring floods, the river may overflow its banks depositing rich soil called \_\_\_\_\_ throughout the broad valley bottom.
8. The area that is seasonally covered in water is called a(n) \_\_\_\_\_.
9. With each flood, sediment collects along the river bank, and over time, these deposits can create a substantial mound of debris that will help combat future flooding. These naturally forming mounds are known as \_\_\_\_\_.
10. Extensive deposition occurs at the river mouth. Heaviest materials are put down first. The lightest particles such as clay are carried out into the ocean. River deltas that take the shape of an inverted cone are called \_\_\_\_\_ deltas. Sometimes river deltas have numerous distributaries that cut through the river deposits. These types of deltas are called \_\_\_\_\_.
11. Uplifting of the lowland river valley may occur, at which time the river will again begin to erode vertically. Over time, the original broad river valley will be uplifted creating a river \_\_\_\_\_.

Pick the correct term from the group of words in the box to fill in the blanks below

attrition	cutbank	meander	dendritic
levees	saltation	terrace	alluvium
abrasion	flood plain	point bar	oxbow lake
traction	dikes	solution	pothole
corrosion	radial		

1. A natural mound of debris along a river bank created by flood waters. \_\_\_\_\_
2. Drainage pattern often seen on volcanic cones. \_\_\_\_\_
3. Rich river deposits found on and near the river delta. \_\_\_\_\_
4. This erosional action is responsible for making rocks smooth. \_\_\_\_\_
5. Method of river transport in which heavy rocks drag along bottom of the river bed.  
\_\_\_\_\_
6. Area of the river valley that is periodically covered in water. \_\_\_\_\_
7. Man-made mounds designed to limit river flooding. \_\_\_\_\_
8. Part of an original flood plain that has undergone uplifting. \_\_\_\_\_
9. Area of the river bank where fast moving water causes severe erosion. \_\_\_\_\_
10. Erosional action in which rocks strike together and reduce in size. \_\_\_\_\_
11. Curve of a slow moving mature river. \_\_\_\_\_
12. Area of the river bank along which deposition occurs. \_\_\_\_\_
13. Dissolving of river rock by the water. \_\_\_\_\_
14. The transport of dissolved river materials is referred to as. \_\_\_\_\_
15. A small lake formed along a river valley when a bend in the river has been completely cutoff from the rest of the river. \_\_\_\_\_
16. Method of transport in which material carried by a river bounces and rolls along the river channel.  
\_\_\_\_\_
17. Created when pebbles are spun around in a river bed depression. \_\_\_\_\_
18. Drainage pattern that resembles the veins of a tree leaf. \_\_\_\_\_