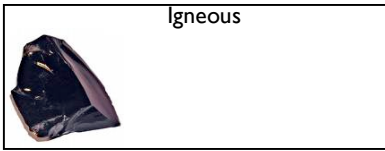


AIM: How does a stream's velocity affect erosion?

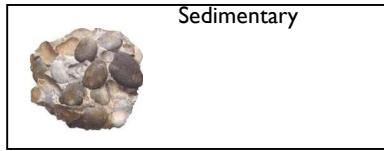
Unit 4: Weathering and Erosion—What happens to rocks once they've formed?

Do Now:

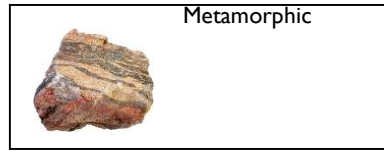
1) For each rock below, write down 1 observation that is evidence to support what type of rock it is:



Igneous



Sedimentary



Metamorphic

- 2) For the following statements, write down whether it's an example of physical weathering or chemical weathering:
- Rain gets into the rock and freezes, when the ice thaws, pieces of the rock fall off _____
 - Rain falls onto limestone and slowly dissolves the calcite in it _____
 - A stream breaks off pieces of rock as it moves through the land _____
- 3) What are 3 factors that can affect a stream's velocity?

By the end of class you should be able to...

- Define meander, flood plain, delta, deposition
- Locate the outside/inside of the meander
- Predict where the velocity of a stream is greatest
- Read & interpret the "Relationship of Transported Particle Size to Water Velocity" on page 6 of the ESRT?

Brainpop video: (0:01:35)

- What do rivers and streams start off as?
- What is a river?
- Describe a young stream:
- What does flowing water do to the land that it flows through?

1. A stream slowly changes over time because of changes in _____

A) Young stream: usually runs straight and most energy is at the _____, this creates a _____; many streams join together and form a larger stream

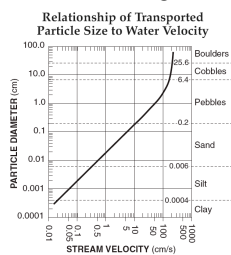
B) As a stream gets bigger, it begins to have _____

- After floods, some meanders may form _____
- A **flood plain** forms when _____

C) At the _____, a _____ forms when sediments are deposited over time



2. A stream with greater velocity can carry _____



- What are the names of the different sized particles from smallest to largest?
- How large are cobbles?
- How large are pebbles?
- If the stream velocity is between 0.01-0.5 cm/s, what types of particles will it be able to carry?

This generalized graph shows the water velocity needed to maintain, but not start, movement. Variations occur due to differences in particle density and shape.

3. When a stream does not have the velocity to carry a particle, the sediment will be dropped off, this is called _____

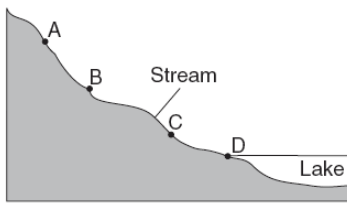


- 1) In the diagram above, label outside and inside of each meander.
- 2) Where is the velocity fastest in a meandering stream?
- 3) Draw a cross section of B-b



- 4) As a stream slows down in its velocity as it gets closer to its mouth, which types of particles will be dropped off first? Why?
- 5) Which sized particles will be deposited last? Why?

- 6) The cross section below shows a stream flowing downhill. Points A through D are locations in the stream.



At which point would most deposition occur?

- (1) A
- (2) B
- (3) C
- (4) D

- 7) A stream flowing at a velocity of 250 centimeters per second is transporting sediment particles ranging in size from clay to cobbles. Which transported particles will be deposited by the stream if its velocity decreases to 100 centimeters per second?

- (1) cobbles, only
- (2) cobbles and some pebbles, only
- (3) cobbles, pebbles, and some sand, only
- (4) cobbles, pebbles, sand, silt, and clay

Explanation:

Summary and Reflection:

Homework: Log into [teacherease.com](https://www.teacherease.com) for this class and answer the following questions

- 1) What is your current grade?
- 2) Look at all the lab assignments, fill in the grade that you have gotten so far. If there is no grade, for a lab, leave it blank

Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10

- 3) Which labs do you need to make up because they were missing or because you received a 6 or lower?