NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Chapter 5 – Section 2: Surface Processes & Landscapes: Oceans, Glaciers, & Environmental Changes

**Lesson: Erosion by Glaciers**

I Can…/Main Ideas Notes

I can define what a glacier is & describe how they move

Glacier – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ you get a glacier

* Mass of \_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_ that moves \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on \_\_\_\_\_\_\_\_\_\_\_\_\_ under the influence of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

More snow & Ice accumulates = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Less snow & ice accumulates = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Glacial movement is by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Acts like a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

Movement is fastest in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_ where there is less \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Till: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Striations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on bedrock that \_\_\_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the glacier was \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_ shaped valleys

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lakes – Glacial Carved

Moraine: Formed when a glacier \_\_\_\_\_\_\_\_\_\_\_\_ moving

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ sediment \_\_\_\_\_\_\_\_\_\_\_\_\_\_ directly from the \_\_\_\_\_\_\_\_\_\_\_ or bottom of a **glacier**

Outwash Plain: Rock material deposited by the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of a glacier which form a broad\_\_\_\_\_\_\_\_\_\_\_ beyond a \_\_\_\_\_\_\_\_\_\_

Kettle Lake: Formed when a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ in glacial sediments \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Erratic: a boulder transported and deposited by a glacier that is a \_\_\_\_\_\_\_\_\_\_\_\_\_ type of rock than the \_\_\_\_\_\_\_\_\_\_\_ upon which it is sitting

I can describe different glacial features that form





Drumlin: – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mound of \_\_\_\_\_\_\_\_\_\_\_\_\_ sediments

- Shows the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the glacier was \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Lesson: Erosion by Running Water**

I Can…/Main Ideas Notes

Most \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of Erosion

Dissolved Minerals – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Small Sediments – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in water

Large Sediments – carried by \_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3 Factors Effecting:

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ( \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ( \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_ Gradient = \_\_\_\_\_ Velocity

\_\_\_\_\_\_ Slope = \_\_\_\_\_ Velocity

Kinetic energy \_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Occurs in regions of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Kinetic energy \_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Occurs in regions of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Greater Velocity - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ it can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Stream Direction:**

Channel is STRAIGHT – MAXIMUM \_\_\_\_\_\_\_\_\_\_\_\_\_ is in the \_\_\_\_\_\_\_\_\_\_\_ of the stream

Channel CURVES – MAXIMUM \_\_\_\_\_\_\_\_\_\_\_\_\_ shifts to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DEPTH – greatest velocity is just \_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_\_\_\_\_\_ of water.

I can explain how running water transports sediment

I can describe stream velocity

Other factors for stream velocity

Meander

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a river

EROSION & DEPOSITION occur at

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a stream.

2. Between the \_\_\_\_\_\_\_\_\_\_\_\_\_ & the \_\_\_\_\_\_\_\_\_\_\_ of a stream

3. Stream changes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

I can illustrate where erosion & deposition takes place on a meandering river

B B’

**NOT THE SAME IMAGE AS IN THE VIDEO**

**LABEL** where erosion & deposition are occurring on lines B-B’, C-C’ & D-D’

C C’

**DRAW** the cross sections (or side views) of what the bottom of the stream would look like at C-C’ & D-D’ (B-B’ was already done for you)

Sorted Sediments: Particles \_\_\_\_\_\_\_\_\_\_\_\_\_ in \_\_\_\_\_\_\_\_ ( or \_\_\_\_\_\_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_\_)

Graded Bedding \_\_\_\_\_\_\_\_\_\_\_\_ Horizontal Sorting: \_\_\_\_\_\_\_\_\_\_\_

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

( \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 ( \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

Picture: Picture:

**Oxbow Lake**: Curved section of \_\_\_\_\_\_\_\_\_\_\_ channel that have been \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by the river

**Watershed**: Area of \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ by any one \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D D’

I can describe the two main ways running water sorts sediments (write definitions & DRAW the pictures)

I can define features made by a river

**V-shaped Valley**: \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ by stream or ri**V**er

**Natural Levee:** Gently \_\_\_\_\_\_\_\_\_\_\_\_\_ deposits created by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Floodplain**: Nearly \_\_\_\_\_\_\_\_\_\_ land where sediments gets deposited \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Delta**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of sediment where a river \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of water

**Lesson: Erosion by Mass Movement, Wind, & Waves**

I Can…/Main Ideas Notes

Mass Movement – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ done directly by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

*Examples*: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2 Major Forces:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Deposition by Mass Movement: sediments are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wind Erosion: \_\_\_\_\_\_\_\_\_\_\_\_\_ regions, such as deserts, & \_\_\_\_\_\_\_ or ocean \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ most common

Deflation: – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of landscape by \_\_\_\_\_\_\_\_\_\_\_\_\_\_ sand & \_\_\_\_\_\_\_\_\_\_\_\_\_\_ sediments.

Sandblasting: **(AKA \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)**

 – Winds blow \_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_ grains against rocks & other objects

Sand Dunes: – Pile, \_\_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_\_\_ of sand deposited by \_\_\_\_\_\_\_\_\_\_\_\_\_

- **WIND** blows \_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ SLOPE

I can describe erosion by gravity & features that are created.

I can describe erosion by wind & features that are created.

Deposition by Wind



I can describe erosion by waves & features that are created.

Breaking Waves: Waves which become \_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_ water toward the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Waves usually arrive at an \_\_\_\_\_\_\_\_\_\_\_\_ to the shore.

REFRACTED or BENT concentrating \_\_\_\_\_\_\_\_\_\_\_\_\_ on parts of the shore that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ out into the \_\_\_\_\_\_\_\_\_\_\_\_

Longshore Current: Current that move **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_** to shore due to \_\_\_\_\_\_\_\_\_\_\_\_\_\_ advance of waves

Sandbar: A \_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_ of sand, often just \_\_\_\_\_\_\_\_\_\_\_ or just \_\_\_\_\_\_\_\_\_\_\_\_\_ water level

Beach – Narrow portion of the \_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_ between the \_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_ tide lines

Barrier Island- -Long \_\_\_\_\_\_\_\_\_\_\_\_\_ island, \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the shore

Increase Erosion

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ projects
2. Road buildings & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Overgrazing and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Decrease Erosion:

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Restore \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ vegetation
3. Set limits on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Highways with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Stream/Beach – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Glacial – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gravity – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wind Blown - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I can describe how people effect erosion

I can describe general characteristics of material deposited by the main types of erosion