

Name: _____

Surface Processes

Date: _____ Period: _____

Earth Science

Supplemental: Glaciers II

Base your answers to questions 1 through 3 on the passage below and on your knowledge of Earth science.

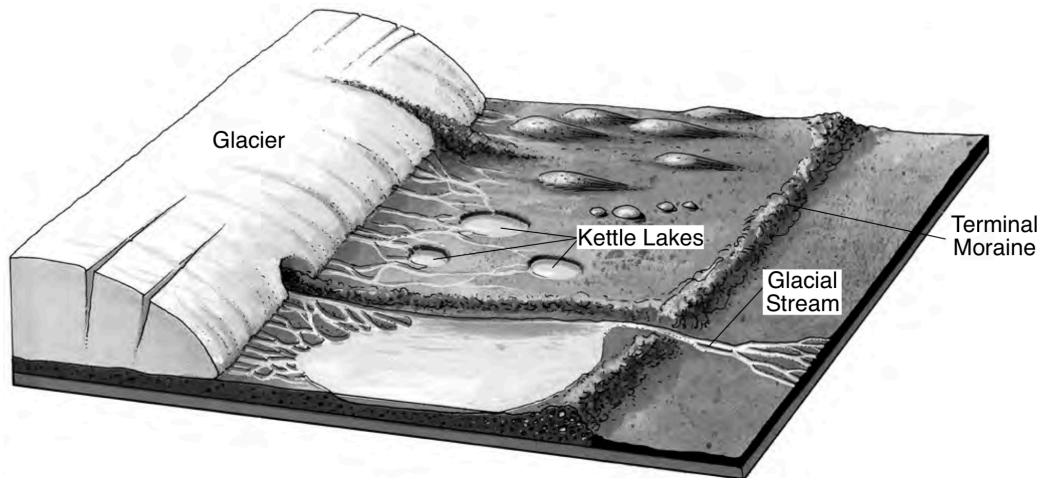
Glacier Movement

Glaciers are thick sheets of ice in motion. Mountain glaciers tend to move down the slopes of mountains from higher elevations to lower elevations, while continental ice sheets move over large areas of continents. The bottom of a glacier is under great pressure due to the weight of the thick sheet of ice. This pressure causes the bottom of the glacier to partially melt, allowing the glacier to move. As the glacier thickens, more pressure is created and the glacier moves faster. Different parts of a glacier can move at different rates, depending on the amount of pressure and friction between the glacier and the underlying bedrock.

1. Describe the relationship between the thickness of a glacier and its rate of movement downhill.
2. Describe the most likely shape of the cross section of a valley formed by a mountain glacier.
3. Compared to sediments deposited by meltwater from a glacier, describe the difference in the arrangement of the sediment deposited directly by a glacier.

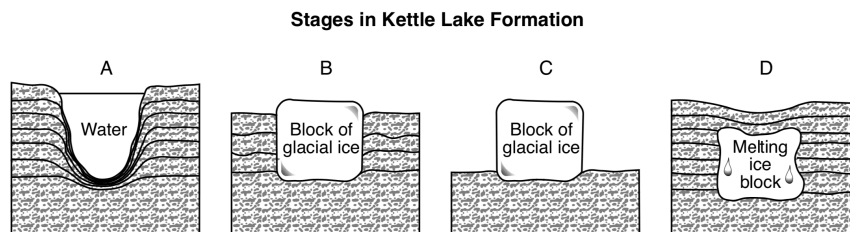
Packet: Glaciers

Base your answers to questions 4 through 5 on the block diagram below and on your knowledge of Earth science. The diagram represents glacial features formed by a continental glacier and its melt water.



4. Describe the arrangement of the sediments found within the terminal moraine.

5. The cross sections below, labeled A, B, C, and D, represent four stages in the development of a kettle lake. The stages are not shown in the correct order. Place the letters in the correct order to indicate the sequence of development of a kettle lake from earliest stage to latest stage.



Earliest Stage → Latest Stage