

Name: _____

Surface Processes

Date: _____ Period: _____

Earth Science

Packet: Glaciers

CLASS NOTES

- Glacier - _____

- Glacier Movement:
 - As snow and ice accumulate the glacier moves forward under its own _____ and the pull of _____
 - Sometimes called a “river of ice” glaciers act like fluids and flow in a plastic-like motion
- Types of Glaciers:
 - Continental Glacier - _____

 - Valley Glacier - _____

- Glacial Features:
 - U-Shaped Valleys - _____

 - Till - unsorted sediments deposited by a glacier
 - Erratics - _____

 - Drumlins - _____

 - Eskers - _____
 - Terminal Moraines - _____

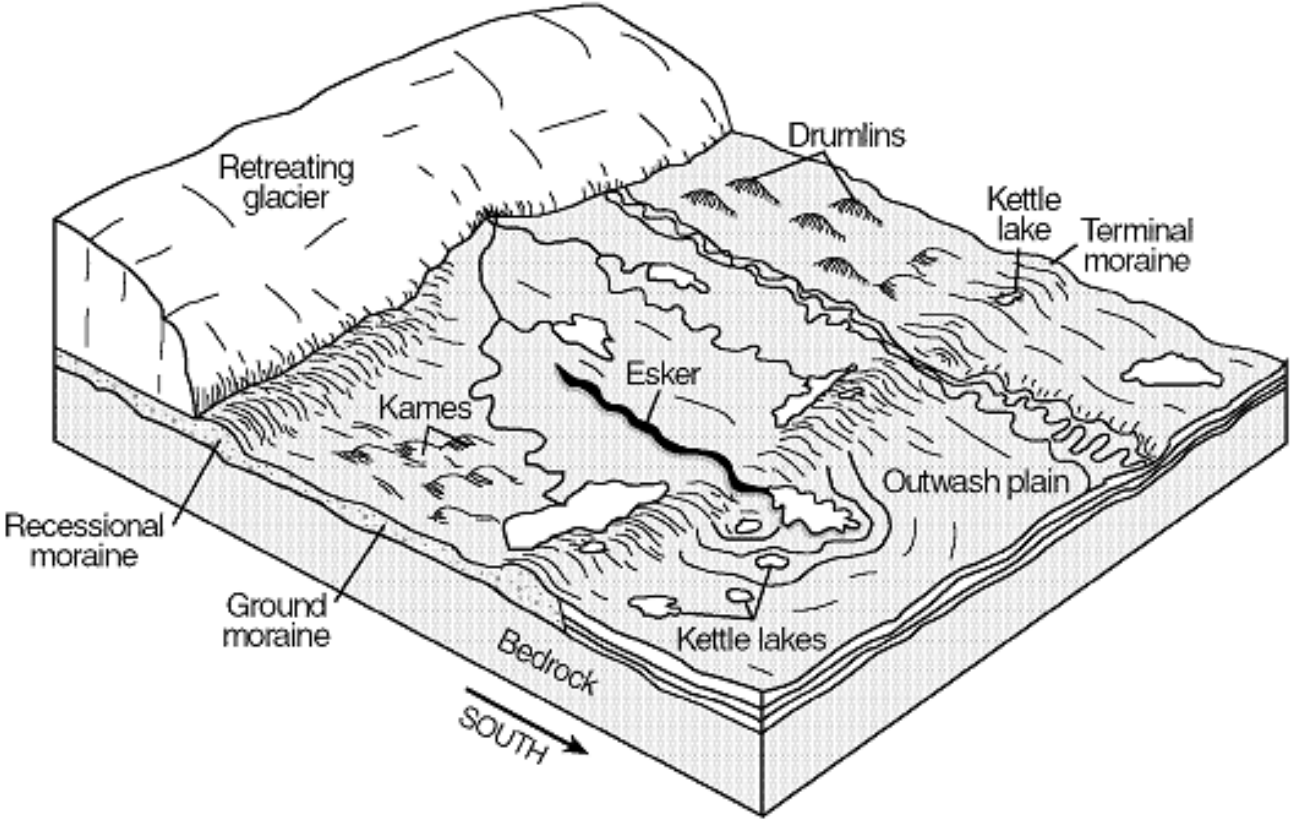
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- Glacial Features [continued]:
 - Glacial Grooves - _____

 - Kettle Lake - _____

 - Example: Lake Ronkonkoma
 - Outwash Plain - _____

 - Example: Southern Long Island



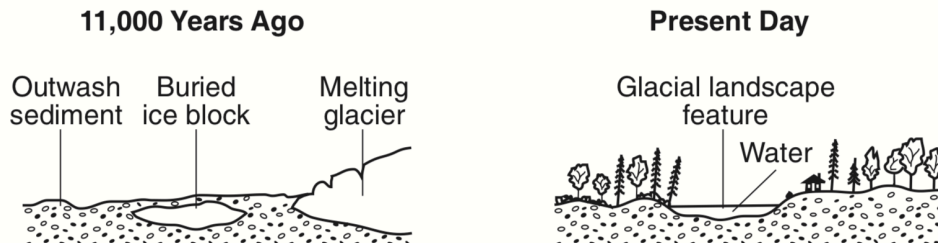
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PART I QUESTIONS: MULTIPLE CHOICE

1. Which force is primarily responsible for the movement of the glacier?
 - a. gravity
 - b. running water
 - c. ground water
 - d. wind
2. For which movement of earth materials is gravity not the main force?
 - a. snow tumbling in an avalanche
 - b. moisture evaporating from an ocean
 - c. boulders carried by a glacier
 - d. sediments flowing in a river
3. Which characteristic of a transported rock would be most helpful in determining its agent of erosion?
 - a. age
 - b. physical appearance
 - c. density
 - d. composition
4. Which geologic evidence would best support the inference that a continental ice sheet once covered a given location?
 - a. polished and smooth pebbles; meandering rivers; V-shaped valleys
 - b. scratched and polished bedrock; unsorted gravel deposits; transported boulders
 - c. sand and silt beaches; giant swamps; marine fossils found on mountaintops
 - d. basaltic bedrock; folded, faulted, and tilted rock structures; lava flows
5. Which erosional agent typically deposits hills of unsorted sediments?
 - a. ocean waves
 - b. glaciers
 - c. winds
 - d. streams
6. A large, scratched boulder is found in a mixture of unsorted sediments forming a hill in central New York State. Which agent of erosion most likely transported and then deposited this boulder?
 - a. ocean waves
 - b. running water
 - c. a glacier
 - d. wind
7. The direction of movement of a glacier is best indicated by the
 - a. elevation of erratics
 - b. alignment of grooves in bedrock
 - c. size of kettle lakes
 - d. amount of deposited sediments

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The cross sections below represent how a present-day glacial landscape feature was formed in Mendon Ponds Park and its appearance at present.



8. Which glacial landscape feature is indicated in the present-day cross section?
 - a. esker
 - b. finger lake
 - c. kame
 - d. kettle lake

9. A drumlin hill is most likely composed of
 - a. cemented sediments
 - b. unsorted sediments
 - c. horizontally layered sediments
 - d. vertically layered sediments

10. A low hill is composed of unsorted sediments was probably deposited by
 - a. the wind
 - b. wave action
 - c. running water
 - d. a glacier

11. An elongated hill that is composed of unsorted sediments deposited by a glacier is called
 - a. a delta
 - b. a drumlin
 - c. a sand dune
 - d. an outwash plain

12. Which feature will most likely form when the partially buried ice block melts?
 - a. drumlin
 - b. moraine
 - c. kettle lake
 - d. finger lake

13. A ridge of sediment in a terminal moraine can best be described as
 - a. sorted and deposited by ice
 - b. sorted and deposited by meltwater
 - c. unsorted and deposited by ice
 - d. unsorted and deposited by meltwater