

Name: _____



Important Note: All items with an asterisk (*) are REQUIRED!

C. Concepts Layer

4 Points Each

Maximum 28 Points

Objective: To document the changes in topography and landforms from Parkers Prairie to Glacial Lakes.

***Choose 1:**

Use the blank map to draw the topography changes from Parkers Prairie to Glacial Lakes. Write a paragraph in your journal and be able to explain in detail the topography changes that you observed.

___ Map drawing

___ Paragraph and oral defense

Use the topography maps to trace the path of our trip to Glacial Lakes State Park. Write a paragraph in your journal and be able to explain in detail the topography changes that you observed.

___ Map tracing

___ Paragraph and oral defense

Objective: Be able to orally explain what glacial lobes went through Minnesota and what kind of rock and soil material they carried.

***Choose 1:**

___ Read the "Minnesota at a Glance" article titled *Quaternary Geology*. Take notes related to the glacial lobes.

___ Look at the Quaternary map of Minnesota on the wall in the classroom. Take notes related to the glacial lobes.

Objective: To draw and/or explain how glaciers erode and deposit land formations

***Choose 1:**

___ Do the ice cream lab and answer the questions in your journal.

___ Watch the video clip and take notes in your journal.

*Listen and take notes or look up the following and take notes. Be able to explain these in an oral defense:

___ *Till

___ *Outwash

___ *Moraine

___ Watch the video, *Rise and Fall of the Great Lakes*. Take notes on changes in Minnesota that take place through time. Be an active listener and participant in the discussion.

B. Investigation Layer **Groups Choose 1** **Maximum 24 Points**

Objective: To observe changes in landforms and vegetation on the trail to the high point at Glacial Lakes State Park.

___ *Write and/or draw at least 10 observations of changing landforms and vegetation as you walk the trail at Glacial Lakes State Park.

Objective: To design and present an investigation related to glaciers at Glacial Lakes State Park

***Choose 1:**

Design an investigation at Glacial Lakes State Park related to glacial lobe deposits.

Design an investigation at Glacial Lakes State Park related to glaciers and the landforms there.

Design an investigation at Glacial Lakes State Park related to glacial deposits and vegetation.

___ *Question

___ *Procedure

___ *Data

___ *Conclusion

___ *2 Further Questions

A. Critical Thinking **Choose 1** **Maximum 8 Points**

Objective: To analyze and report on a real-world topic related to glaciers.

Select a question below and read one of the articles available in the classroom on that topic. Get together with others that read the same article (limit 4 in a group) and use the whiteboard to report out the main points of the article and your opinion on the topic question below.

***Choose 1:**

What's the latest on melting glaciers and why should we care?

How are gravel and glaciers related? Why are these products important in Minnesota?

How would recreation OR agriculture be different in Minnesota if we had never been glaciated?

___ *Whiteboard report out

___ *Opinion, backed up with reasons