

Ms. Ness: Cass Lake-
Bena

Mrs. Collis: AIMS

Mrs. LaVine: Red Lake

LEARNING OBJECTIVE: STUDENTS WILL DESCRIBE HOW
MN LAKES FORMED AND SOME USES BY NATIVE
AMERICANS



Five E Lesson Plan Template

Topic/Concept: Students will be able to describe how MN lakes formed and some uses of lakes by Native Americans. (Pre-lesson: Students should bring in/e-mail pictures of a lake in MN.)

Engage	<p>How can I get students interested in this?</p> <p>What is it like to walk on th ice in the winter?</p> <p>Did you know that we are standing on thousands of feet of ice?</p>
Explore	<p>What tasks/questions can I offer to help students puzzle through this?</p> <p>Students will explore with a group a series of pictures and discuss/describe what they see.</p> <p style="text-align: right;">http://mrbdc.mnsu.edu/minnesota-river-basin-glaciation</p>
Explain	<p>How can I help students make sense of their observations?</p> <p>Summarize the group descriptions as a class. (Using a scale of glaciers) (Northstar Mapping)</p> <p>As a group we will discuss MN topography and how that led to the formation of the lakes and rivers in MN as the glaciers retreated.</p>
Elaborate	<p>How can my students apply their new knowledge to other situations?</p> <p>Use pictures or the lake itself to describe/see evidence of how the lake formed. Use student photos or backgrounds to discuss how the lake is used by Native Americans</p> <p style="text-align: right;">Extension: Why do some lakes and rivers allow certain resources and not others? For example: Manoomin, iskigamizigan, fisheries, wild edibles, bison.</p>
Evaluate	<p>How can I help my students self-evaluate and reflect on the learning?</p> <p>Exit ticket using Socratic</p>

Standard(s): MN Science Standard 7.1. Benchmark 7.1.3.4.1 Use maps, satellite images and other data sets to describe patterns and make predictions about natural systems in a life science concept.

Materials: Maps of MN glaciers and topography, photos from students

Critical Response Protocol



Please answer these questions with your elbow bump as you move through the website:

1. What do you notice?
2. What does it remind you of?
3. What emotions do you feel?
4. What questions does it raise for you?
5. What meaning or understanding is intended or conveyed in this work?

You will have 3 minutes.

<http://mrbdc.mnsu.edu/minnesota-river-basin-glaciation>

Group discussion

What are some things that you and your elbow buddy discussed?

Using NorthStar [Mapper](#) discuss as a group the topography of MN and how this may have helped form lakes as the glaciers retreated.

- Why do we care?
- 

Native American Uses

Students will bring in photos or describe the lake by field study and share some uses of the lake.

(Share history of Native American uses of the lake. This may vary depending on location in MN)

(potential to invite elders, go wild ricing or help with processing, sugar bush...)

Manoomin, iskigamizigan, fisheries, wild edibles, bison.

Assessment

Please use your phone or computer and log in to
Socrative.com

Use room code # **8AA6E292**

Describe how the lake was formed and some Native American uses of the lake.



Resource Link List

Glacial Advance and Retreat Simulation

<https://ees.as.uky.edu/sites/default/files/elearning/module13swf.swf>

Ice Cream Model – How Glaciers Formed the Minnesota Landscape

<http://serc.carleton.edu/sp/mnstep/activities/26539.html>

What is a Glacier

<http://www.onegeology.org/extra/kids/earthprocesses/glaciers.html>

Crumpled Paper Watershed

http://fergusonfoundation.org/teacher_resources/crumpled_paper.pdf



References

Minnesota River Basin Data Center

<http://mrbdc.mnsu.edu/minnesota-river-basin-glaciation>

NorthStar Mapper

<http://www.mngeo.state.mn.us/chouse/northstarmapper.html>

Minnesota Map Collection

<http://geology.com/state-map/minnesota.shtml>

The Ojibwe People's Dictionary

<http://ojibwe.lib.umn.edu/english/search/fish?x=0>

Minnesota Humanities Center Ojibwe Dictionary

<http://www.minnesotahumanities.org/resources/aaniin>

Dakota Dictionary Online

<https://filemaker.cla.umn.edu/dakota/>

The Nature Conservancy – Morphology and Ecology of Lakes in Minnesota

www.nature.org/ourinitiatives/regions/northamerica/unitedstates/minnesota/fac

[esofconservation/mn-lakes-portfolio-2008-final.pdf](http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/minnesota/facesofconservation/mn-lakes-portfolio-2008-final.pdf)

Minnesota's Glacial Story

<https://www.youtube.com/watch?v=bKhG7maftJA>