

# Teacher COPY:

## ***Natural History Research Project***

Let's begin our natural history research project by visiting the Great Lakes Aquarium in Duluth, MN!

The Aquarium models a number of habitats from the Great Lakes and around the world. With exhibits featuring hundreds of species, there are research topics galore.

As you tour through the aquarium, assist students in digging into the content of the exhibits. NOTE: Exhibits are not listed in order on the teacher sheet, but they are on the student sheet! (Sorry – ran out of time!) As you tour, encourage students to take notes about what interests them. They will need help honing specific content related to what interests them.

Have a wonderful time!



### [Shipwrecks Alive! New July 2014](#)

Explore the fascinating world of sunken ships and the diverse wildlife ecosystems they attract and sustain.

*Possible research prompts:* shipwreck habitats; comparing shipwreck habitats (Lake Superior/South Pacific/Mediterranean Sea); causes of shipwrecks through history.

TEACHER IDEAS and OBSERVATIONS:



### [Amazing Amazon](#)

The Amazon River, the largest freshwater river in the world, is home to a rich diversity of species. Learn more about how this habitat impacts your life wherever you live.

*Possible research prompts:* Amazon River and Atlantic Ocean ecosystem compare/contrast to Flagg River and Lake Superior ecosystem

TEACHER IDEAS and OBSERVATIONS:

[Isle Royale](#)



Get a glimpse of fish that live in the waters around Isle Royale, the largest island in Lake Superior. In another of these large tanks see fish found in the warm bays and estuaries around Lake Michigan and Lake Erie.

*Possible research prompts:* layers of the water column in Lake Superior and where different fish live; research on one species of fish; compare fish types among Lake Superior/Lake Michigan/Lake Erie; different fish need different temperatures to live (cold water vs. warmer water fish); “native fish” vs. “introduced fish”/fisheries management; commercial fishing industry; fish adaptations; fish families.

TEACHER IDEAS and OBSERVATIONS:

[Freshwater Forest](#)

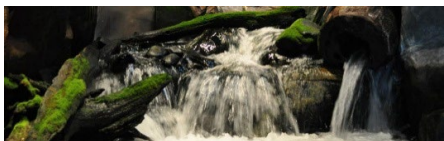


This exhibit demonstrates the important role our forest play in protecting and enhancing water quality. Complete with a fishing boat and climbing tree, it was developed to celebrate the centennial of the Superior National Forest.

*Possible research prompts:* how forests are important to lakes and rivers; how humans can *use, impact* and *sustain* lands and waters through *forest management, recreation, and/or stewardship*.

TEACHER IDEAS and OBSERVATIONS:

[Baptism River](#)



Steep volcanic rocks make a cold fast moving aquatic habitat in this unique North Shore river.

*Possible research prompts:* compare the habitats/geology/ecosystem/fishes of the Baptism River to the Flagg River; compare North Shore rivers to South Shore rivers; trout species; fly fishing.

TEACHER IDEAS and OBSERVATIONS:



[Aviary](#)

The aviary is home to a variety of wetland birds and reptiles that may be found on the south shore of Lake Superior in places such as Pictured Rocks National Lakeshore and Kakagon Slough.

*Possible research prompts:* how estuaries are important to birds and reptiles; adaptations of birds or reptiles found on the south shore of Lake Superior; conservation efforts for the piping plover.

TEACHER IDEAS and OBSERVATIONS:

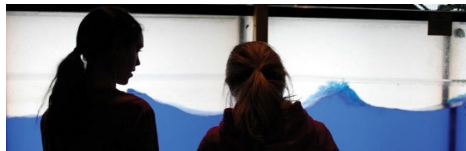


[St. Louis River](#)

The largest river flowing into Lake Superior is home to a variety of temperate fish species.

*Possible research prompts:* compare the habitats/geology/ecosystem/human history of the St. Louis River to the Flagg River; what is unique about the rivers of Lake Superior’s south shore; fishes of the St. Louis River; shipping industry.

TEACHER IDEAS and OBSERVATIONS:



[Wow of Water](#)

Get your hands wet exploring the wonders of water!

*Possible research prompts:* locks; shipping; Lake Superior watershed; hydroelectric dam; wastewater treatment; water molecule; seiche; weather patterns of Lake Superior; “wave action”; pollution.

TEACHER IDEAS and OBSERVATIONS:

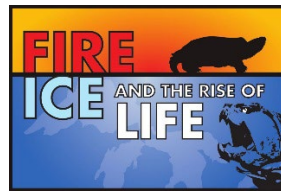


□ [Aquatic Invaders](#)

Home to intruders such as goldfish, sea lamprey and round gobies. Get a closer look at invasive species found in the Great Lakes.

Possible research prompts: how invasive species of fish, plants, and invertebrates compete with native species; how invasive species hitch rides to new locations; how invasive species change native ecosystems; study invasive species: goldfish, sea lamprey, round goby, zebra mussels, purple loosestrife, Eurasian milfoil, rusty crayfish, etc.

TEACHER IDEAS and OBSERVATIONS:



□ [Origins – Fire, Ice and the Rise of Life](#)

Explore the geologic, natural and cultural history of the Lake Superior region. Get nose to nose with a snapping turtle, admire chambered nautilus and ponder the fossil record.

*Possible research prompts:* prehistoric animals of the Great Lakes Basin: Snapping Turtle, South American Lungfish, Chambered Nautilus, Arctic Grayling, Wide variety of fossils including the cast of a Dunkleosteus skull found in Ohio; glaciers; how Lake Superior was formed over billions of years by volcanoes and glaciers; pre-historic and paleo-peoples of the Great Lakes Basin.

TEACHER IDEAS and OBSERVATIONS: