

Great Lakes Module Overview

The Great Lakes module is a story about Tyler, a curious 10-year-old boy who contemplates what he wants to be when he grows up. On a series of exciting adventures, he learns about different aspects of the Great Lakes. During a class trip, Tyler experiences 100 million years of history in the Great Lakes region through a simulation machine! He learns that the earth is always changing. He hears the amazing story of zebra mussels on a family fishing trip. He also helps scientists collect water samples from a lake when he goes to work with his aunt. The story culminates with Tyler choosing a future career in science.

Major Themes

Theme: Scientific Inquiry

Featured Vocabulary: Hypothesis, Laboratory, Chemistry, and Biology

Theme: A Changing Earth

Featured Vocabulary: Ice Age, Invasive Species, and Fossils

Theme: Career

Featured Vocabulary: Biochemist, Biologist, and Scientist

Related 4th-5th grade GLCE requirements

Fourth Grade Science GLCEs

E.ST.04.31 Explain how fossils provide evidence of the history of the Earth.

Tyler briefly mentions the Petoskey stone, Michigan state stone, as a fossil of a marine animal that lived 280 million years ago.

Fifth Grade Science GLCEs

S.IP.05.11 Generate scientific questions based on observations, investigations, and research.

S.IP.05.12 Design and conduct scientific investigations.

The main character of the module, Tyler, generates questions and forms an hypothesis based on investigations and research.

Fourth Grade Social Studies GLCEs

4 – H3.0.8 Describe past and current threats to Michigan’s natural resources; describe how Michigan worked in the past and continues to work today to protect its natural resources.

The invasive species, zebra mussels, is a focus of the module. Tyler learns that phosphorous levels are monitored in the Great Lakes region.

4 – G2.0.2 Compare human and physical characteristics of a region to which Michigan belongs (e.g., Great Lakes, Midwest) with those of another region in the United States.

The module features information about the Great Lakes region, which can be compared to another region of the U.S.

4 – G5.0.1 Assess the positive and negative effects of human activities on the physical environment of the United States.

The main character of the module, Tyler, learns about the negative effect of humans traveling by boat from Europe to the Great Lakes region in the 1980s. The result of this activity was the addition of the invasive species, zebra mussels, to the region.

4 – H3.0.9 Create timelines (using decades after 1930) to sequence and describe important events in Michigan history; annotate with connections to the past and impact on the future.

The module focuses on an event in Michigan history that is negatively impacting the Great Lakes region in the present and will continue to have an impact in the future. This event is the introduction of zebra mussels in the 1980s.

Major Characters

Tyler (main character)

Tyler is a 10-year-old boy who decides what he wants to be when he grows up through a series of exciting experiences and adventures.

Tyler’s mom

Tyler’s mom encourages his family to spend time together, and plans a family fishing trip with the extended family.

Tyler’s dad

Tyler’s dad likes to go fishing, and he is the brother of Aunt Lisa.

Aunt Lisa

Aunt Lisa is Tyler’s aunt and Jake’s mom. She works for the Michigan Department of Natural Resources, and she teaches Tyler about zebra mussels.

Uncle Pete

Uncle Pete is Aunt Lisa’s husband and Jake’s father. He likes to go fishing and attends the

family fishing trip.

Bob

Bob is the tour guide that Tyler meets on Mackinac Island.

Ms. Williams

Ms. Williams is Tyler's teacher and chaperone on the trip to Mackinac Island.