

UNIT ONE

MiCHiGaN
geography



Name: _____

WHAT DO GEOGRAPHERS DO?

A geographer is a person who studies the Earth and its features. Geographers study all kinds of places. Some places include communities, states, and countries. Not everything a geographer does is about just land or water, but also how people impact those places. They study the physical and human characteristics on a geographic scale. Human geographers study how humans interact with the Earth and its features over time. Physical geographers study the different patterns of landforms, climates, vegetation, soil, and water. Local governments and human interaction can change the way a land and waterways look. Today many geographers use many tools and routines in their studies. A geographer looks at pictures, surveys, maps, and speaks with people to conduct their research on the area they are studying. Once they have done their research, they often create maps, graphs, or diagrams that show the geographic data they have collected. Geographers can also advise and assist governments in environmental studies.

1. What does it mean to be a geographer?

2. How are human and physical characteristics different?

3. How do you think a geographer could help a local government?

4. How can a geographer use what they have studied? How can they present their data to others? Highlight where you find this in the text.

5. Do you think that geographers are important and are needed? Why or why not?

Name: _____

WHERE IS THE LOCATION?

If someone asks you where a place is located, you need to know how to respond to them. Giving someone the location of a place or thing depends on how much information they would like to know. Location is where something is found. Something can be anything – from the table across the room to where Disney World is located. If someone wants to know the exact address of a place, they are asking for the absolute location. Disney World, for example, is located at 3111 World Drive, Orlando, FL, 32830 USA. You use absolute location when use phones and computers to get directions to a place. If you don't have to be as specific, you can use the relative location of a place. For example, the table is located across the room and to my left. Little Caesars is three blocks away on the right. Michigan is located east of New York. We use direction words such as north, south, east, and west to give the relative location of a place. While looking at a map or a globe, you can find the relative locations of other states and countries to Michigan. Next time you're traveling somewhere, ask yourself what your relative location to home is.

1. What does location mean?

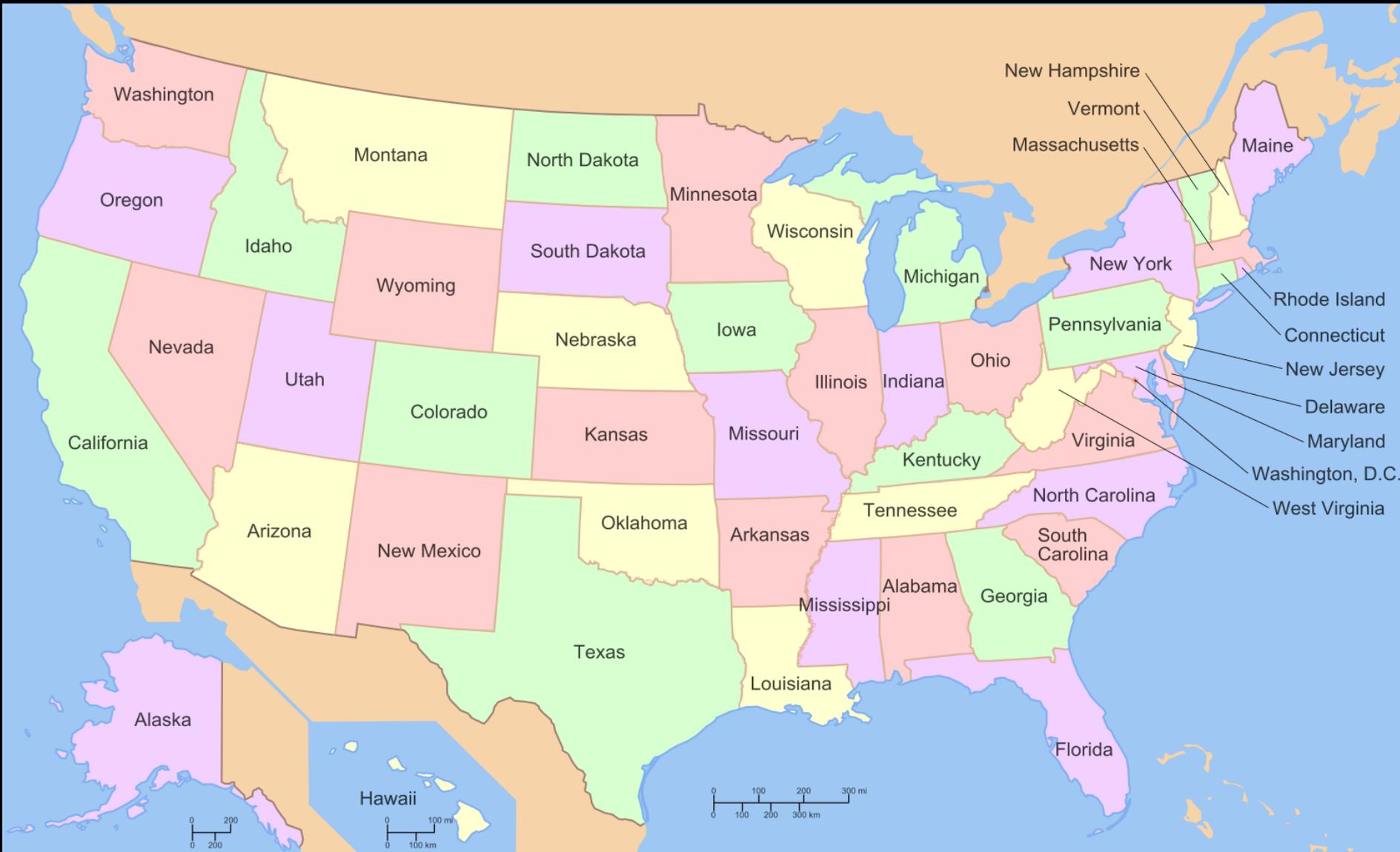
2. What is the absolute location of your school?

3. What is relative location and what words describe the relative location?

4. How are absolute location and relative location different? When is it important to use one or the other?.

5. If a neighbor asked you how to get to **WGM** from their house, would you use absolute location or relative location? Why?

THE UNITED STATES OF AMERICA



Name _____



My State is Where?

Using a United States map and direction words, tell the relative location of Michigan from the following states.

1. Kentucky _____

2. California _____

3. Rhode Island _____

4. West Virginia _____

5. Washington _____

6. New Hampshire _____

7. Illinois _____

8. South Carolina _____

9. Iowa _____

10. Mississippi _____

Name: _____

MICHIGAN LAKES & LANDFORMS

Michigan is a very unique state. Unlike many other states, Michigan is made up of two peninsula's. The Upper Peninsula and the Lower Peninsula. A peninsula is a landform that is surrounded by water on three sides. Michigan is surrounded by four of the great lakes – Lake Michigan, Lake Superior, Lake Huron, and Lake Erie. It is also bordered by Lake St. Clair, a smaller lake that is not part of the Great Lakes. The “thumb” of Michigan is also a small peninsula itself because it is surrounded by water on three sides. The Saginaw Bay is the area of water on the inside of the “thumb.” A bay is a body of water that is blocked off by land that connects to a larger body of water. Michigan is also home to over 11,000 lakes and more than 300 named rivers. There are two mountain ranges in Michigan, the Porcupine Mountains and the Huron Mountains. The tallest mountain in the state is Arvon Mountain, which is part of the Huron Mountains in the Upper Peninsula. There are several sand dunes throughout the state, the most popular being Sleeping Bear Dunes which is located near Traverse City. Sand dunes are hills of sand that were formed by winds usually near a beach or desert.

1. What is a peninsula and what are the major peninsulas of Michigan?

2. Where is the tallest mountain in Michigan located? What is its name?

3. Are all of the great lakes connected to Michigan? What lakes are?

4. How many lakes and rivers are in Michigan? Which body of water has more?

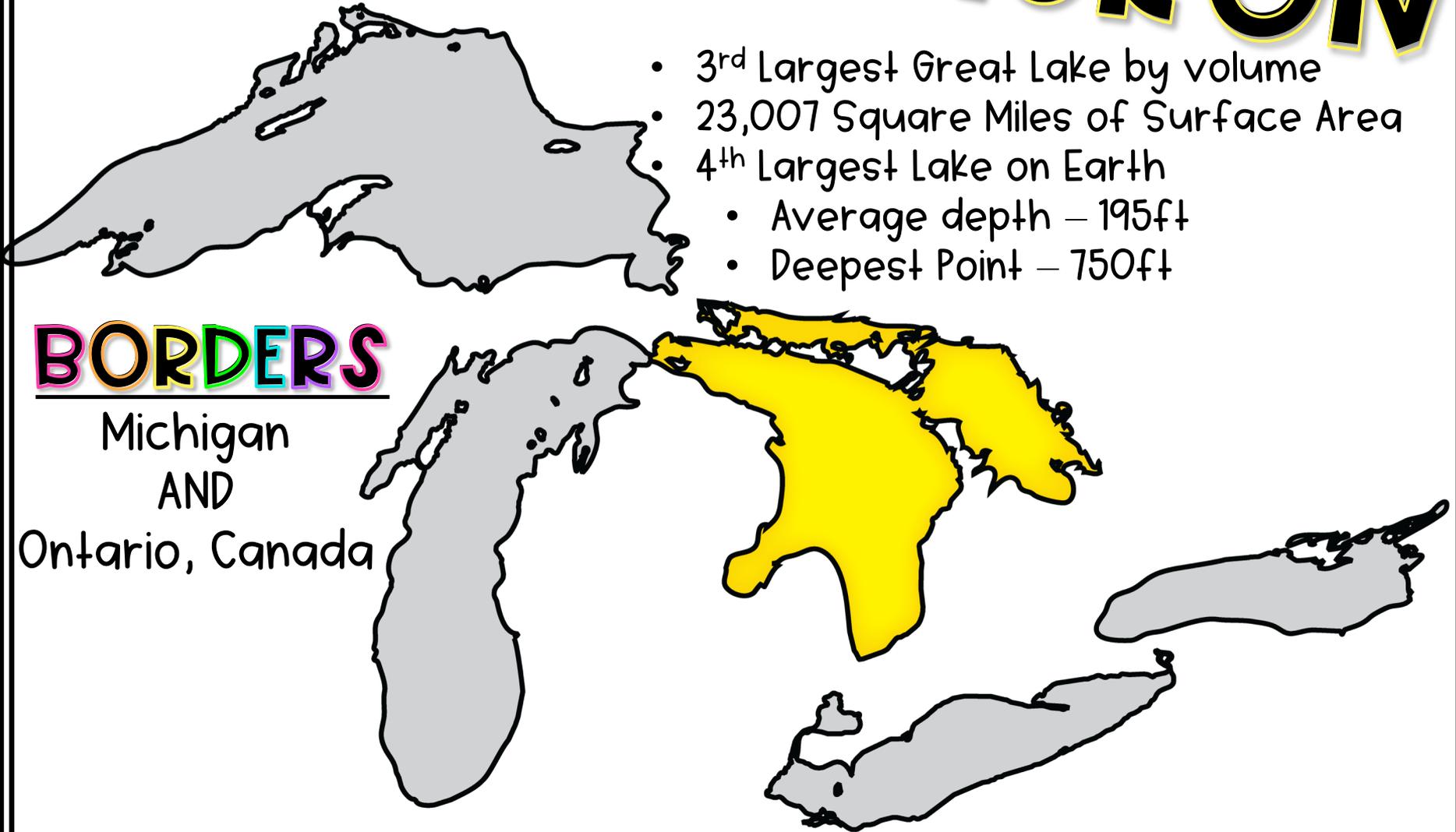
5. What are the two Great Lakes that are closest to your school? Are there any other bodies of water close by?

LAKE HURON

- 3rd Largest Great Lake by volume
- 23,007 Square Miles of Surface Area
- 4th Largest Lake on Earth
 - Average depth – 195ft
 - Deepest Point – 750ft

BORDERS

Michigan
AND
Ontario, Canada



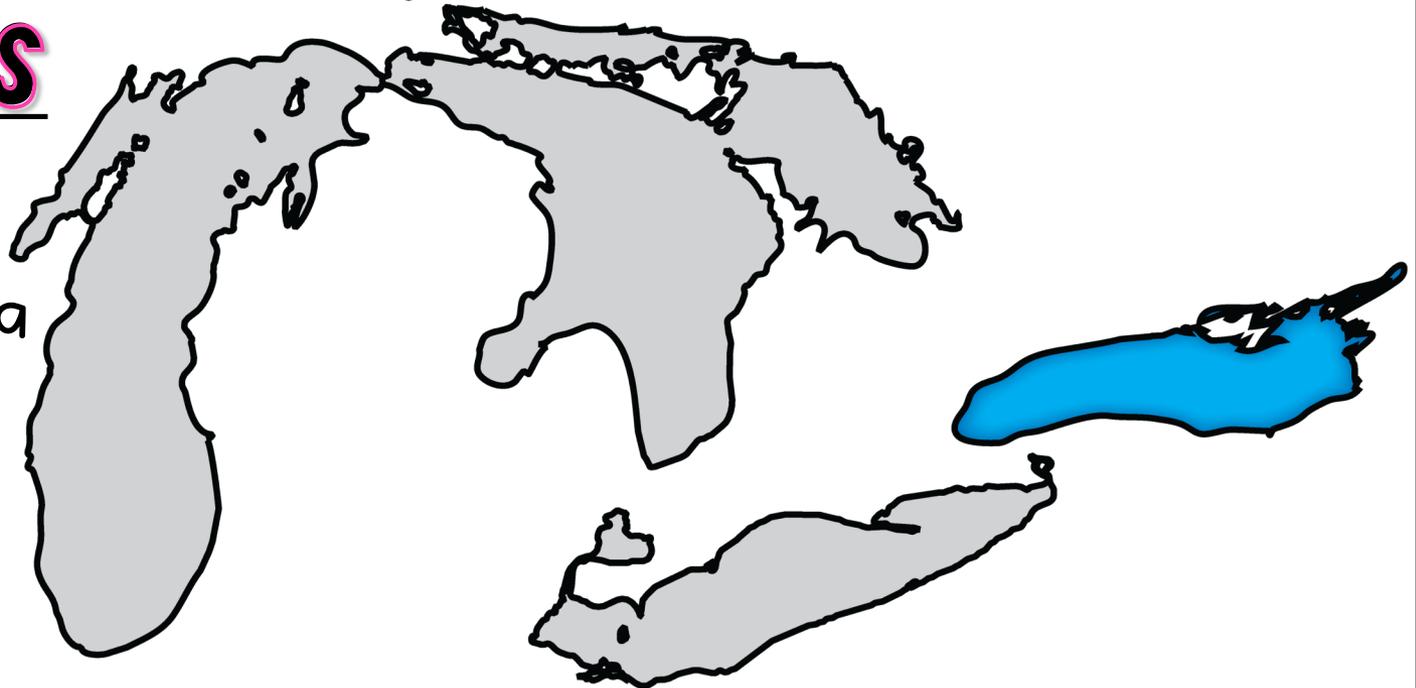
LAKE ONTARIO



- Smallest Great Lake by Surface Area
- 7,340 Square Miles of Surface Area
- 4th Deepest Great Lake
 - Average depth – 283ft
 - Deepest Point – 802ft

BORDERS

New York
AND
Ontario, Canada



LAKE MICHIGAN



- 275,000 Acres of Sand Dunes Along Its Shores
- 22,404 Square Miles of Surface Area
- 2nd Largest Great Lake by Volume
 - Average depth – 279ft
 - Deepest Point – 923ft

BORDERS

Michigan
Wisconsin
Illinois
Indiana



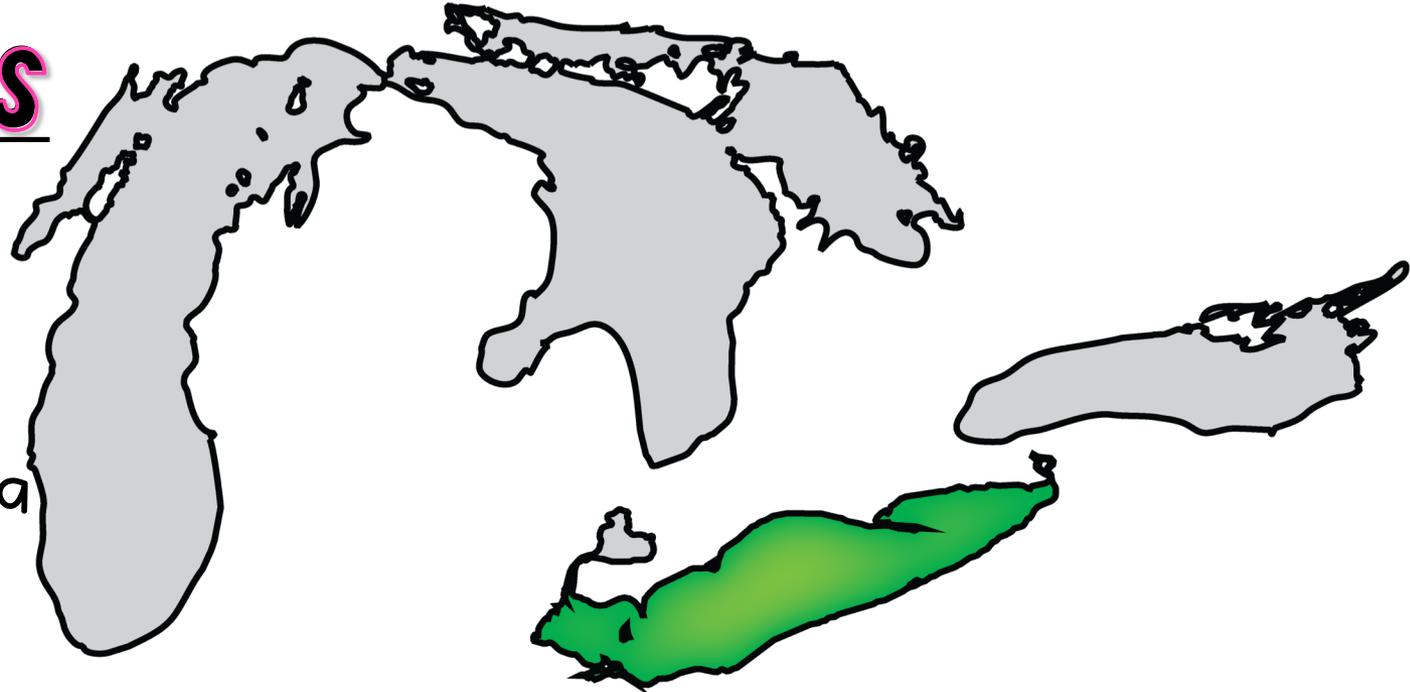
LAKE ERIE



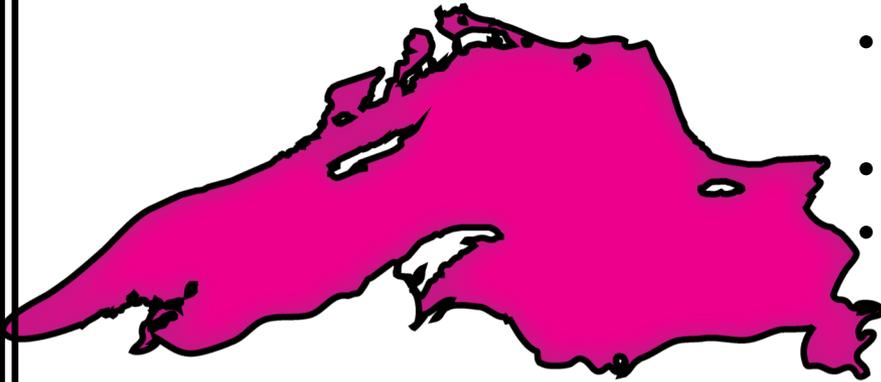
- Smallest Great Lake by volume
- 9,910 Square Miles of Surface Area
- Shallowest Great Lake
 - Average depth – 62ft
 - Deepest Point – 210 ft

BORDERS

Michigan
Ohio
Pennsylvania
New York
Ontario, Canada



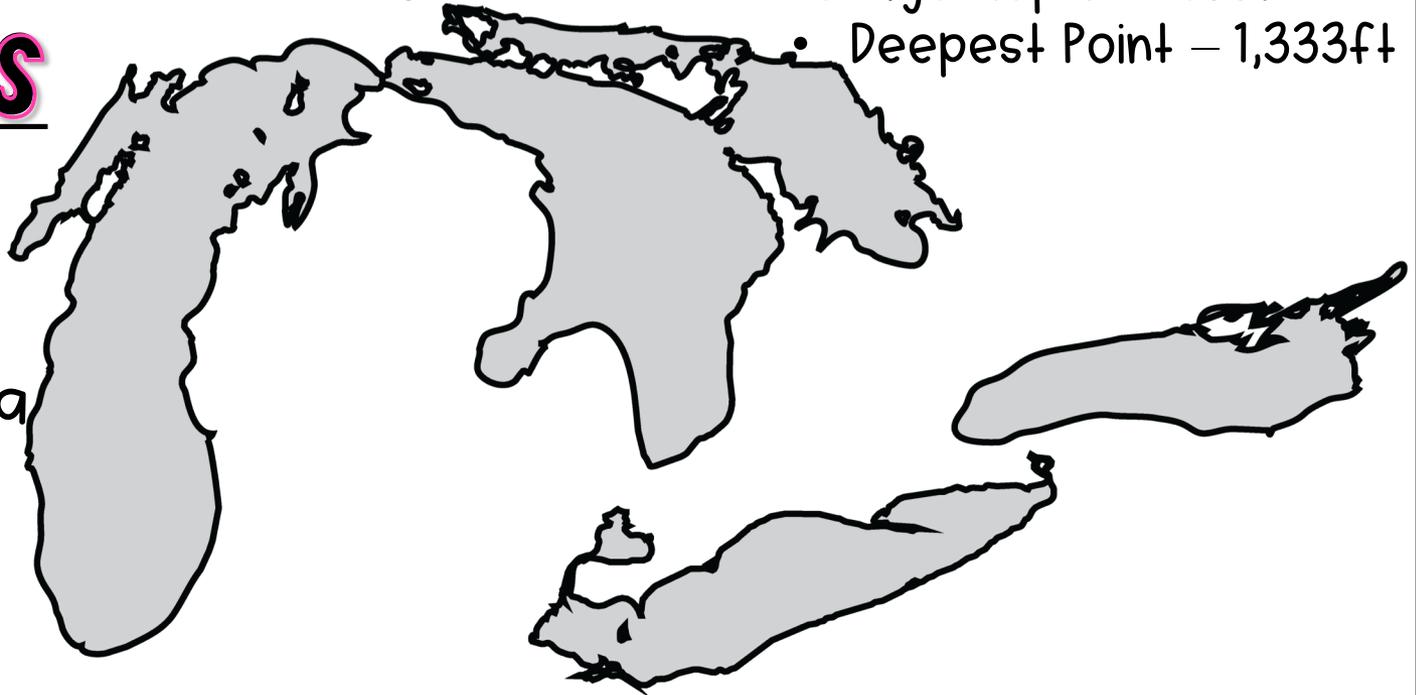
LAKE SUPERIOR



- Largest Fresh Water Lake in the World by Surface Area
- 31,700 Square Miles of Surface Area
- Has enough water to cover North & South America with 12 inches of water.
 - Average depth – 483ft
 - Deepest Point – 1,333ft

BORDERS

Michigan
Minnesota
Wisconsin
Ontario, Canada



Name _____

Label each Great Lake with their correct name. Color the lakes blue and the land green.



Name _____

Match the definitions, examples, and pictures in the correct row.

	DEFINITION	EXAMPLE	PICTURE
PENINSULA			
iSLAND			
MOUNTAIN RANGE			
SAND DUNES			
BAY			



- Mackinac Island
- Isle Royale
- Beaver Island

An area of land that is surrounded by water on all sides.

A mount, hill, or ridge of loose sand that is piled up by wind.



- Saginaw Bay
- Keneenaw Bay
- Grand Traverse Bay



An area of land that is surrounded by water on 3 sides.

- Sleeping Bear Dunes
- Silver Lake Dunes
- Saugatuck Dunes

A body of water blocked off by land that connects to a large body of water.

Huron Mountain Range



- Lower Peninsula
- Upper Peninsula
- Leelanau Peninsula

A line of mountains that are connected to each other.



Name: _____

CLIMATE & VEGETATION

Did you know that Michigan is the 2nd most popular state in the United States for growing Christmas trees? Michigan is home to many crops and forests that are used for goods, but some forests are also protected from being cut down. Forests cover more than 50 percent of the entire state of Michigan! Michigan is known for growing fruits like apples, blueberries and cherries. Traverse City is famous for its cherries! Michigan is also ranks 13th in the nation for growing corn. Michigan's climate has a large impact on the amount and types of vegetation that can be grown. Michigan experiences a temperate climate – that means that there is a wide range of temperatures throughout the year and is more likely to experience seasonal changes than much warmer, tropical climates. Due to Michigan experiencing the changes in temperature and defined seasons, vegetation varies according to season. Very little tends to grow in the cold, winter months when compared to the warmer, sunnier months. Vegetation also covers 20% of our entire planet!

1. What are two of Michigan's most popular food crops?

2. How much of Michigan is covered in forests?

3. Why do you think that Michigan ranks so high on Christmas tree growth?

4. How would you describe a temperate climate to someone who has never heard of it before?

5. How do you think that Michigan's food crops and forests are impacted by climate?

Name _____

MICHIGAN'S CLIMATE

Michigan has a temperate climate – that means that the seasons are well defined and are experienced at different points in the year. In temperate climates, there are wider temperature ranges throughout the year.

SPRING

SUMMER

FALL

WINTER

Write About It

Write About It

Write About It

Write About It

Draw It

Draw It

Draw It

Draw It

Name: _____

MICHIGAN HUMAN CHARACTERISTICS

All human characteristics are all things on Earth that were made by people. Michigan is filled with incredible and unique human characteristics. The Mackinac Bridge that connects the Upper and Lower Peninsula opened in 1957 and is 26,372 feet long – that is almost 5 miles! The Mackinac Bridge is the 20th longest bridge in the world. The Soo Locks in Sault Ste. Marie allow ships to pass from Lake Superior to the lower Great Lakes. They were first built in 1855 and have allowed ships to move from lake to lake carrying goods to other places. Michigan has over 3,000 miles of shoreline that are home to 247 lighthouses to guide and aid ships along dangerous waterways. The oldest lighthouse in Michigan, Fort Gratiot Lighthouse, was first built in 1825 where Lake Huron and the St. Clair River meet. Did you know Detroit is known as the Motor City? That is because Detroit has been known as the heart of the automotive industry since the 1920's. It was in the 1950's, when Detroit had over 265,000 automotive jobs, that it became widely known as the Motor City.

1. What are human characteristics?

2. Where is the oldest lighthouse in Michigan located?

3. Where are the Soo Locks located and what do they do?

4. Why is Detroit known as the Motor City? When did this nickname become popular?

5. What are 3 other popular human characteristics in Michigan that you know of?

Name: _____

MICHIGAN NATURAL RESOURCES

Geographers study places to find out ways that people have interacted with the environment around them. When people interact with their environment, they are using the natural resources that are available. Natural resources are things that are found in nature that can be used by people. Michigan is filled with many great natural resources that are used for a variety of things that are sold and used for goods and services. Michigan is surrounded by four of the great lakes, but also includes over 11,000 lakes and rivers that are used for shipping goods on boats, fishing, and for transportation. There are over 19.3 million acres of forests in Michigan. The trees in the forests are used for lumber that can be used to build homes, furniture, and much more. Michigan is also home to the largest amount of natural gas underground storage wells in the entire country! Natural gas is used to heat many homes, stoves, and water heaters. Many minerals can be found in our state including copper, iron ore, and limestone. These minerals are used in most buildings and structures in some way.

1. What is a natural resource?

2. What natural resources are found in Michigan?

3. Why are the Great Lakes an important natural resource for Michigan?

4. Do you think that Michigan forests should be cut down so the wood can be used for lumber? Why or why not?

5. What other natural resources are in Michigan and how can they be used with goods and services?

Name _____

Michigan's Natural Resources

	How We Use It	Positive Consequences	Negative Consequences
SOIL			
TREES			
MINERALS			
WATER			
GAS/OIL			

Name: _____

HUMAN & ENVIRONMENT INTERACTION

In order to understand the impact that people have on the environment, geographers study the ways that people use natural resources, where they decide to live, and how they adjust to the climate they live in. In Michigan, people have to build homes and buildings that can handle our temperate climate. Many cities are also located near waterways. People can use waterways as a method of transportation for goods and services. However, when people interact with the environment, there are always positive and negative consequences. For example, there have been many factories in Michigan that were once used to produce goods that people need. Those goods are the positive consequences of that factory. When the factory closed and the building is abandoned, that is known as a brownfield. Sometimes these brownfields are left with toxic chemicals and are untouched until the building collapses. Brownfields, toxic waste, and air pollution are all negative consequences of human and environmental interaction.

1. Why do people settle near waterways?

2. What do geographers do to understand human impact on the environment?

3. What are brownfields and how do they impact the environment?

4. Greenhouse gases are caused by carbon dioxide that is often found in pollution. These gases can make the earth warmer. Is that good or bad?

5. What do you think people can do to decrease the negative consequences that humans have on the environment?

Name: _____

MOVEMENT IN MICHIGAN

Geographers often ask how some places are connected to other places. To solve those questions, geographers will study how people, goods, and ideas move. The way people, goods, and ideas move within geography is known as movement. Goods are brought to, taken out of, and moved around Michigan on trains, planes, cars, trucks, and even ships. Large cities where there are many roads, railroads, and airports are known as hubs. The largest hubs in Michigan are Detroit, in the south east, and Grand Rapids, in the south west part of the state. People move around the state for both work and enjoyment, but people also come to Michigan for vacation, family, or business. Ideas also move from person to person through computers, television, radio, mail, signs, and much more! There are both positive and negative consequences to movement. Movement allows people to have different experiences, receive different goods from other places, and learn new things. However, movement can also lead to pollution, and people leaving Michigan to move to another place.

1. What is movement?

2. What are Michigan's largest hubs and where are they located within the state?

3. How do ideas experience movement? What kind of ideas could they be?

4. What are at least four reasons that people would move from one place to another in Michigan?

5. What are some positive and negative consequences to movement within the state of Michigan?

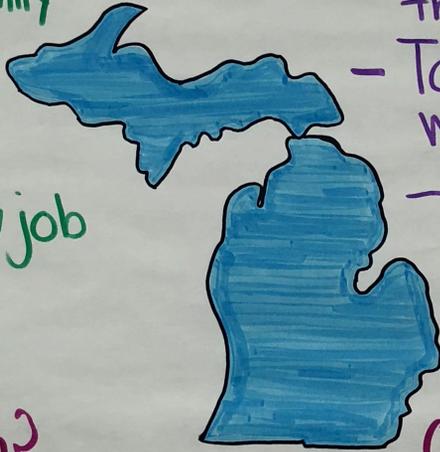
Moving in Michigan

Why do people move in Michigan?

- To travel
- To be with family
- To have a nice life
- To get a new job

Why do people move out of Michigan?

- Be closer to family
- Because they lost their job
- To live in nicer weather
- To have a nice life.



Why do goods move in Michigan?

- Not all foods grow in Michigan
- Different things are made in different places.

Why do goods move out of Michigan?

- So different places can have things that are made here
- Things grown in Michigan can be sold in other places.

How do ideas move in & out of Michigan?

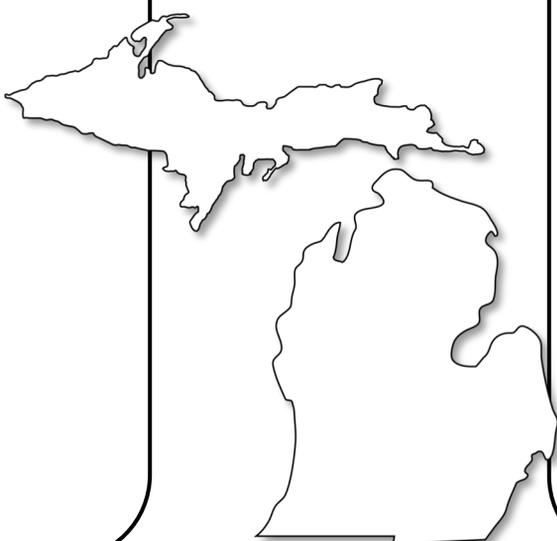
- By people moving around
- TV, radio, internet, newspapers, etc.

Name _____

moving in michigan

Why Do People
Move in Michigan?

Why Do People
Move Out of Michigan?



Why Do Goods
Move in Michigan?

How Are Ideas
Moved In/Out of
Michigan?

Why Do Goods
Move Out of Michigan?

Name: _____

REGIONS & MICHIGAN

Regions are areas that have at least one characteristics that makes it different from other areas. The land may be flat instead of having tall mountains or food may grow in an area where there are dry desserts in other areas. Regions can come in all shapes and sizes. The state of Michigan is part of several different regions. Michigan is part of the Midwest region of the United States. The Midwest is mainly flat land that has fertile soil that is good for farming. The Midwest is often called the "Breadbasket" of the United States because a lot of crops like corn and wheat are grown there. Michigan is also a part of the Great Lakes region. This region contains all states that border the Great Lakes, but also the province of Ontario, Canada. The state of Michigan itself also can be divided into several regions. The Upper Peninsula and Lower Peninsula can be a region, the Central Lowland and Super Upland are also regions. The Central Lowland contains all of the Lower Peninsula and the eastern half of the Upper Peninsula. This region is mainly flat with very few hills. The west part of the Upper Peninsula is the Superior Upload region. This region has lots of natural resources, is very rocky, and is home to the Huron and Porcupine Mountains.

1. What is a region?

2. What regions is Michigan a part of?

3. Why is the Midwest known as the "Breadbasket" of the United States?

4. What is the Great Lakes region and what states or provinces are part of it?

5. What are Michigan's two regions and how is one region different from the other?

REGIONS OF THE UNITED STATES

The United States is divided into sections with similar characteristics.



MIDWEST REGION

The region of the United States that includes Michigan.



GREAT LAKES REGION



The region of the United States and Canada that surround the Great Lakes

NAME _____

GREAT LAKES REGION

Color the States & Province of the Great Lakes Region



NAME _____

GREAT LAKES REGION

Label each state and province. Color the States & Province of the Great Lakes Region



MICHIGAN GEOGRAPHY

project

Students will create a poster using provided images to create and present the information they have learned about the geography of Michigan in this unit.

Items students must present on their poster:

- Where is Michigan located? (10 points)
- What region of the United States does Michigan belong in? (10 points)
- How can Michigan be divided into regions? (10 points)
- What are some important natural characteristics of Michigan? (10 points)
- What are some important human characteristics of Michigan? (10 points)
- What are some important natural resources of Michigan? (10 points)
- How have people changed the environment of Michigan? (10 points)
- How have people adapted to the environment in Michigan? (10 points)
- What goods move in and out of Michigan and why? (10 points)
- Design & creativity (10 points)



**CREATE
YOUR HEART
HEART OUT**



Michigan

Ironwood

Marquette

Sault Ste. Marie

Iron Mountain

Petoskey

Alpena

Traverse City

Cadillac

Bay City

Saginaw

Muskegon

Flint

Grand Rapids

Lansing

Pontiac

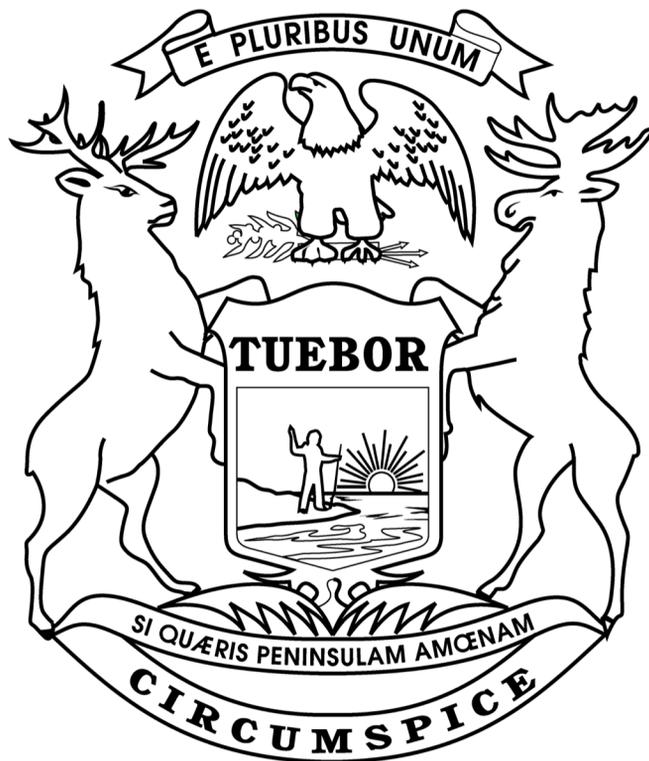
Kalamazoo

Ann Arbor

Battle Creek

Detroit

Benton Harbor



MICHIGAN GEOGRAPHY project

Name _____

Michigan location	_____	/10
US Region	_____	/10
Michigan Regions	_____	/10
Natural Characteristics	_____	/10
Human Characteristics	_____	/10
Natural Resources	_____	/10
Environmental Change	_____	/10
Environmental Adaptation	_____	/10
Goods Moving In/Out	_____	/10
Design/Creativity	_____	/10
TOTAL	_____	/100

Notes:

MICHIGAN GEOGRAPHY project

Name _____

Michigan location	_____	/10
US Region	_____	/10
Michigan Regions	_____	/10
Natural Characteristics	_____	/10
Human Characteristics	_____	/10
Natural Resources	_____	/10
Environmental Change	_____	/10
Environmental Adaptation	_____	/10
Goods Moving In/Out	_____	/10
Design/Creativity	_____	/10
TOTAL	_____	/100

Notes:
