

Michigan Map & Compass Outline

Class Length:

1 hour 15 minutes or
2 hours 45 minutes

Class size:

Up to 100 participants
1 Chaperone/group

Class Location:

- Dance Barn
- Horse Barn

Materials:

Large demonstration compass, 2 compasses per trail group, Clipboards with class setups, Spare copies of setups, Extra pencils, Pencil sharpener

Class Set-up:

Gather the class materials and take them to your class location. Make sure clipboards have a clean form on them. Take compasses out and inspect to make sure they are all in good condition. Check the dials to make sure all of the numbers are very visible. Place two compasses with each setup/clipboard. Place one sharpened pencil with each clipboard. Put all other class materials other than demonstration compass away. Depending on number of participants designate starting points by circling spaced out numbers.

Safety Precautions:

Meet with the chaperones and explain the class. Give them a map of the loop they'll be walking and explain check points. Rules of the class:

- At least one adult MUST accompany each trail group and the group must stay together
- All groups must be given a specific time to be back at the starting location, regardless if they're finished
- Make sure they understand that they will never be off a main trail
- Let them know that if they are truly lost, they can use their cell phones to call the office, or any camp phone, dial "0"

Greeting & Splitting the Group: (5 minutes)

Make the groups as small as possible depending on the number of chaperones they bring, the smaller the group the more chances for the participants to lead the group on each bearing. Splitting the group up can be tricky sometimes. Parents want to be in the same group as their child, so pre-think the best way to facilitate the splitting.

Introduction: (20 minutes)

If possible, hand out 1 compass to each student so they can practice. Begin by asking the class how many of them have used a compass. Explain all of the different parts of a compass, how to set a bearing, and how to properly read and follow them, "Dial it in, Plug it in, Put Red Fred in the Shed"

Activity 1 – Bearing Check/I Spy: (5 Minutes)

One at a time, list off a specific degree and have the students dial it in, plug it in, and point in the direction they think that degree is. Go around and help correct those that are point in the wrong direction. Do this exercise a few times. After a couple, have everyone close their eyes and pick an item off in the distance. Play I Spy: "I Spy something at 120 Degrees" – the students open their eyes, dial it in, plug it in and guess what you spy.

Activity 2 – Finding degrees/bearings in reverse: (5 Minutes)

Point at an item in the distance. Have the student's brain storm to figure out how to get the exact degree of that item. They'll have to point their directional arrow at the item and rotate their dial until "Red Fred" lines up to be "In the Shed".

Activity 3 – The Course: (40 or 90 Minutes)

Show them to their starting point and make sure they have a time source and know when to be back. Remind them that they should always be on a trail. After all of the groups are on the course you may have a significant period of downtime make use of it by doing projects.

Conclusion: (5 minutes)

Review compass parts and how to use. Ask them what they learned.

Class Tear Down:

Verify you have all the compasses you started with! Return all materials to program closet. Recycle all used materials. Inform Wilderness Coordinator or Program Manager if additional copies are needed.

Map & Compass

Class Length:

1 hour 15 minutes – 2 hours 45 minutes

Class size:

Up to 100 participants

Class Location:

- Dance Barn
- Horse Barn

Materials:

- Large demonstration compass
- 2 compasses per trail group (refer to information below)
- Clipboards with class setups
- Spare copies of setups
- Extra pencils
- Pencil sharpener

Objectives:

- Learn how to find bearings/direction on a compass
- Navigate through a series of bearings confidently
- Explore camp along the way!

Class Set-up:

- Prior to setting up you should know the number of expected participants. Gather the class materials and take them to your class location.
- Make sure clipboards have a clean form on them and then place the clipboards in order of how you will be handing them out to avoid any confusion later when you're trying to get the trail groups on their way. Unless the group is very small or there is a pre-arranged number of trail groups you should put out all setups to be prepared for up to 10 trail groups.
- Take compasses out and inspect to make sure they are all in good condition. Check the dials to make sure all of the numbers are very visible. Look for large bubbles.
- Place two compasses and a sharpened pencil with each setup/clipboard.
- Put all other class materials other than demonstration compass away in a tote or crate so participants don't accidentally (or intentionally) pick them up.

Safety Precautions:

This is one of the few classes where we turn participants loose on our 1300+ acres without a Tamarack staff member to guide them. Because of this, it is **IMPERATIVE** that the safety rules for this class are very clear for both students and adults. Here are the safety rules that apply to all versions of this class:

- At least one adult **MUST** accompany each trail group. **NO** group is ever sent out without an adult to ensure their safety. Period.

- Groups must stay together with their parent(s). It is not okay for the group to split up and lose sight of each other- that defeats the purpose of sending them out in groups.
- All groups will be given a time to be back at the starting location. Before sending the groups out, make sure each group has a way to tell time: watch, cell phone, etc. Double check with each group as you send them out to make sure that they know the time to be back. Make them tell it to you.
- Make sure they understand that they will never be off of a camp trail. Under no circumstances should they ever have to walk through brush- this means they're off the trail and need to recheck their bearing.
- Let them know that if they are truly lost or have an emergency they can use their cell phones to call or pick up any camp phone and dial "0" to reach the office. If they are doing a program after office hours they can still get connected to the Outdoor Ed. duty phone through the automated after hours menu.
- Let the groups know that if severe weather strikes while they are on the course that their priority is to get the students to shelter (this may not be necessary depending on the forecast). If they have access to a phone they should call the office and give their location, numbers, and get further instructions. If they are unable to call, they should stay in shelter until we find them or until the weather clears.

Greeting & Splitting the Group: (5 minutes)

When initially greeting your group, do so away from the area in which they will be sitting.

Introduce yourself and identify the adult in charge of the group. Ask if they have already been split into trail groups (smaller groups that will travel the course together). Many come with assigned groups. If they don't have assigned trail groups, make sure that the group understands that each smaller trail group will need at least one adult to accompany it.

When forming the groups smaller is better, however many adults are uncomfortable leading the children in this program alone. If the adults being comfortable and happy mean having larger groups then that is okay. Let them know that you will split the groups however they would like. Once the groups are established then send them to be seated- always together with their group including their assigned adult(s). If teaching from the Allen Amphitheatre, make sure and tell them to sit near the bottom.

Introduction: (20 minutes)

Begin by asking the class how many of them have used a compass and how many of them have used a compass to find bearings. Ask them if they know what a compass bearing is. If someone knows, have them define it. If not define it for them: a bearing is a direction relative to north based on a compass reading. In a conversational manner discuss the following points:

- No matter where you are in the world, you are always in the center of a circle. A circle has 360 degrees and each one of these degrees marks a direction that you can go.
- The degree numbers always correspond to the same directions: North is 0 or 360 degrees, East is 90 degrees, South is 180 degrees, and West is 270 degrees. (use your arms to indicate the directions as you name them.)
- If you know where North is, you can make good estimates as to where the other directions are.

Point to where North is, then ask them where different degree numbers are. Have them all point the right direction based off of the degree you give them and the direction you indicate as North. Ask them if they understand how degrees can indicate direction.

The Compass

Inform the class that a compass is a tool that can consistently tell us a precise direction if used correctly. Use the large demonstration compass to identify the major parts of a compass for the class. If you like you can ask for a volunteer or two to point out the corresponding part on the smaller version that the students will be using. The major parts of a compass are:

- Base Plate- The rectangular base plate forms the base of the compass structure
- Dial- The circular piece on the base plate that has degree and direction markings- it spins!
 - If you like you can point out the “shed” on the dial that marks North
- Magnetic Needle- Inside the dial, the red end of the needle always points north (Red Fred)
 - Ask the students if they want to follow Red Fred. Only if they want to always walk North!
- Direction of Travel Arrow- The arrow on the base plate that is labeled “Read Bearing Here”. This is the arrow that tells you where you want to go.

If time and maturity allow you may discuss magnetic North (that the compass needle points to) vs. North on a map. Explain that on short distance the difference doesn’t affect your trip- only on long distances will you be “off course”.

How To Find A Bearing

Let the students know that they are going to learn to find a bearing using three very simple steps. Using a very simple phrase as well as a hand motion or some other reminder helps solidify the step in the students’ minds. Demonstrate with the big compass as you tell them the steps:

- **Dial It In-**
 - *(Point index finger on one hand, draw a circle above your head as you draw out the word “dial” and point at the students as you say the words “it in” quickly. Have them repeat phrase and motion.)*
 - Step one is to turn the compass dial until the degree number you are trying to find is lined up with the directional arrow on the base plate. This is telling the compass where you want to go.
- **Plug It In-**
 - *(Have the students sing the phrase in the tune of the Glade air freshener commercial: “Plug It In, Plug It In”. You don’t even need to sing it for them. Usually after you tell them the name of the step you can tell them to sing the song and they’ll automatically do it- if they’re not already.)* Step two is to hold the compass so the base plate is flat, then “plug it in” to your belly button with the directional arrow pointing straight away from you. Tell the students that the compass is plugged in and that means that when they move the compass, their body moves with it, and when their body moves the compass moves with it. Demonstrate swinging side to side while keeping the compass “plugged in”.

- **Put Red Fred in the Shed-**

- *(Hand motion similar to those from the Y.M.C.A. dance. When you say the word “Red” your right arm goes up to form ½ of the “Y” shape. When you say “Fred” your left arm goes up to complete the other half of the “Y” shape. When you say the word “shed” you keep both arms over your head. Bringing both hands together in a point (from the elbows up) in an “A” shape- or a shed shape, if you will. Have them repeat phrase and motion.)* Step three is to SLOWLY turn their body (keeping the compass plugged in) until the red end of the needle overlaps the “shed” marking on the dial i.e. the red needle is lined up with the North marking on the compass dial.
- NOTE: you’ll have to manually keep the red needle of the demonstration compass oriented North as the wood is not magnetized.

Once these steps are complete you can point to the direction indicated by the directional arrow. Reiterate that you follow the arrow on the base plate NOT Red Fred. Ask them to repeat the steps (complete with motions and singing) back to you, asking “What’s step 1?”, “What’s step 2?”, “What’s step 3?” Ask them if they think they can find a bearing. Several or all of them will say yes. Have one student from each group come to the front and line up to do a demonstration. Give each student a compass and get a bearing from the “audience”. Have this group go step by step with everyone finishing each step before progressing as a group to the next step. Check each student at each step to make sure they are correctly performing the steps. Things to look for:

- directional arrow pointing in toward their body
- not correctly dialed in
- not holding the compass flat
- turning the compass without turning their body (even after plugging in)
- pointing (at the end) where Red Fred is pointing, not where the directional arrow is pointing

Depending on the aptitude of the students and the pace of the class, you may have these students do another bearing. They should do no more than two, and then you should have them hand their compass off to another member of their group. Have the new demonstrators do one or two bearings, and then have them hand the compass off to an adult in their group. This never fails to amuse the kids greatly and terrify at least one adult in the group. Tell the kids they need to give the adults the hardest bearing ever. The adults may need as much coaching as the kids. Have the adults hand the compasses back to you after they’ve successfully found the bearing.

Maps & Orienting a Map

Ask the students if there is another tool that is typically used with a compass. A map! While you’re getting a camp map from the table, ask them if they can name a few different types of maps such as: road maps, topographic maps, and geopolitical maps. Show them the camp map and discuss how maps show landmarks, whether they be highways on a road map, hills on a topographic map, or capital cities on a geopolitical map. Have them name some landmarks that may be on our camp map. Discuss how together a map and compass can tell you where you are, where you want to go, and let you know which way you need to travel to get to your destination. Do a quick demonstration on how to orient a map:

- Line up North on the dial with the directional arrow on the base plate of the compass.
- Hold the map flat and lay the compass on it with the directional arrow on the compass pointing North as indicated by the map.
- Put Red Fred in his shed by turning the map AND compass together. The map is now oriented North and the map now looks like the lay of the land.

For older or more advanced groups this may be a good time to show them how to find a direction of travel to a destination. For younger or beginner groups this activity works better after they have returned from the course as they understand the concepts better having just successfully used bearings. To find a direction of travel (shoot an azimuth):

- Find your starting point and your destination point on the map.
- Put the compass over the map with the tip of the directional arrow on the destination point and your starting point along the directional arrow line (like connect the dots).
- Keeping the compass base plate firmly on the map, turn the dial until Red Fred goes in the shed.
- The number on the dial that is lined up with the directional arrow is your bearing and direction of travel to get from your start point to your destination point.

Activity 1 – Baring Check/I Spy: (5 Minutes)

One at a time, list off a specific degree and have the students dial it in, plug it in, and point in the direction they think that degree is. Go around and help correct those that are point in the wrong direction. Do this exercise a few times. After a couple, have everyone close their eyes and pick an item off in the distance. Play I Spy: “I Spy something at 120 Degrees” – the students open their eyes, dial it in, plug it in and guess what you spy.

Activity 2 – Finding degrees/bearings in reverse: (5 Minutes)

Point at an item in the distance. Have the student’s brain storm to figure out how to get the exact degree of that item. They’ll have to point their directional arrow at the item and rotate their dial until “Red Fred” lines up to be “In the Shed”.

Activity 3 – The Michgain Map & Compass Course: (40 or 90 Minutes)

Currently Tamarack offers Short, & Long Hike Map & Compass courses. If more copies are needed, the files for the setups/bearings for these courses are all located on the O:/Outdoor Education drive on the office computers. The instruction for these courses is identical up to this point. How you proceed from here only varies by course:

Short Course (1 hr to 1 ½ hr) & Challenge Hike (2 hrs to 2 ½ hrs)- Both courses follow the same trails.

- The course is a loop
- Some groups will be going clockwise on the loop while others go counterclockwise
- Each group will start at a different point on the loop to help put space between them
- They start at the point indicated by their cover sheet and continue through all the numbers and back to number 1, until they get to their original starting number i.e. they’re done with the course when they get back to the point from which they started

Read an example clue to demonstrate to everyone that they are using a combination of compass bearings and landmarks to navigate the course. Ask if there are any questions as to how the course works. At this point, just before you start breaking off and starting the groups, you should give them a time that they need to be back to the starting area. **ALWAYS MAKE THIS TIME 15 MINUTES BEFORE YOU ACTUALLY WANT THEM BACK.** Coordinate with the adult in charge to determine if there are any preferences as to when/how to end the course. Some things to consider:

Day groups- Verify the time that they need to be on a bus or getting ready to leave prior to starting the program. Often times their end time is actually their departure time. You should do this when you run any program, however it is especially important for Map & Compass courses as you don't have complete control over when everyone is actually going to be done. You need to allow enough of a buffer to round up groups that may have lost track of time or underestimated how long the course is.

Residential Groups- Speak to the group leader as to their preference regarding how the end of the class is handled. Some groups like everyone to meet back and process (which is generally what we prefer). Some groups prefer to let groups go back to their village for some free time as they finish. **If they're going back to the village as they finish be sure and let them know that they need to come back to the class location and leave all their course materials. This lets us know exactly how many groups have returned safely.** Occasionally, if we are having an exceptionally busy day they may not have a choice. Just tell them to leave their course materials so we know they're back and then they can enjoy any time they may have after their done with the course. Always present it in a positive light- they don't need to know we're stretched thin for the day.

Gather materials as the groups return. Give them the clipboard with student materials and the compasses to different students with the instructions that they are to rotate responsibilities. Impress on the adult(s) that enforcing the rotation of roles is part of their responsibilities. Either walk the group to its starting point or get them to a point where you can give them very clear directions or sight the starting point in the distance. Point out the start and end clues to the adult on their course materials. Make sure they understand how the course works. Ask the entire group what time they need to be back by and make sure someone has a way to tell time. Get the groups out as quickly as possible so no one is waiting around too long. Everyone should be out on the course within 5 minutes of each other. See below for more information regarding how to send out groups.

Processing the Class

Groups never arrive back to the Amphitheatre (or other starting point) at the same time. This means that you have the luxury of beginning the processing for this class with smaller groups. As other groups arrive you can include them in the discussion. It is a very natural way to process as you are essentially having a discussion with the groups about what they experienced on the course and asking them to share their stories with others. Some questions you can use to prompt a discussion are:

- Did everyone take turns with the compasses and setups?
- Were there any other major roles that people had during the course?
- Do you feel comfortable using a compass to find a bearing now?

- Could you use a compass well with a “regular” map (road map)?
- Did you have any problems or were you confused at any point?
- Did you ever have to use common sense/logic to figure anything out?
- What did you see along the way that was cool?

Other Information:

Spacing of Groups

One thing that groups will consistently mention if it’s not done properly is the spacing of the trail groups. The facilitator needs to send groups out onto the course with as much distance between them as possible. There are two main things to consider when sending out groups: who to start first/last and where to start them from.

Who and When- Taking notice of the energy level and needs of your trail groups can help you determine the order they should be sent out in. Trail groups that are high energy and ready to go should absolutely get sent first. These groups will get out onto the course quickly and will get some distance between themselves and the rest of the groups before they slow down. Trail groups that are low energy, have someone with mobility issues, or have kids that need use the bathroom should be sent towards the end or last. If they’re sent first then chances are that groups sent after them will catch up to them easily and they’ll continue the course as one larger group.

Where and How- Even though the setups within a course may have starting points that are both near and far from the area you’re teaching the class from, that doesn’t give you the entire picture. A setup may have a starting point far away, but depending on which direction it sends the group they may actually be walking back toward the class area rather than farther away from it. It is very important to know which direction a setup sends a group when planning your order. Your goal is to send groups that start at far away points and continue walking away from the central area FIRST. Work your way to setups that start near the central area next, then setups that start far away and have groups walking back toward the central area LAST. You should alternate between groups who are traveling clockwise and counterclockwise when sending them out, too.

These two main factors combined will help aid you in spacing the groups apart as much as possible. It sounds complicated but after a couple of classes and some guidance from a senior facilitator it becomes second nature. This is so critical that you should make it a point to devote as much setup time as you need to double checking your order and laying out the clipboards accordingly.

Class Materials

Take notice of how many compasses go out and how many compasses come back. Many times a student puts a compass in their pocket and simply forgets that it’s there. They don’t intend to take them, but they do need a reminder to give them back. As each group arrives back, make sure you ask for their compasses. Also, anytime there are people near the table with the class materials, make sure that you have the extra compasses put away. They will pick up compasses that are not intended for them and you can easily lose track of them.

“Missing” Groups

Every so often a group will not return on time, including the 15 minute cushion that you have budgeted for. This is pretty normal and you just need to take a few extra steps to track them down. The first thing you should do is to ask if anyone saw them recently. If no one has seen them near the class area and heading back in, figure out which direction they were going on the course. You can do this by noting which clipboard/setup is missing. Once you know which direction to expect them from, you can send an adult from the group to look in that direction. If the group is supposed to be coming from the office area/direction you can also call the office and see if anyone has seen them (or can see them currently). 9 times out of 10 they will be “found” in the first 5 minutes. Very rarely does someone need to go farther out to find the group (who probably just lost track of time).

Conclusion:

Some ideas that students should walk away from the class with:

- Using a compass correctly is not as hard or intimidating as most people think.
- Navigation using both landmarks and direction helps ensure that you are following the intended course.
- Using a map & compass is a fun activity in itself, but paying attention along the way gives you the opportunity to see and experience some cool things!
- Walking a trail in the woods is less fun when you are distracted by trash, pollution, or other things that detract from the natural environment. (Leave No Trace)
- Doing something simple like taking a bag to collect trash when you’re going for a hike can make a big positive impact on the natural environment and those who use it. (Leave No Trace)

Class Tear Down:

- Make sure to return all materials to program closet.
- Throw out all used materials and replace with new sheets.
- Inform wilderness coordinator or program manager if there is less than 20 sheets left.

Michigan Map & Compass

“Navigate your way through Michigan’s History”

1. Michigan designated the white-tailed deer as the official state game animal in 1997. White-tailed deer have always been an important resource Michigan residents. American Indians and Settlers alike used the deer for their buckskin and their meat, called venison.

What is the type of meat that comes from a White-tailed Deer?

Venison

2. The name Michigan is based on the Chippewa word "Meicigama" (pronounced: mesh-ee-gah-me) meaning great water, and refers to the Great Lake.

From what Chippewa word did Michigan get its name?

Meicigama

3. Michigan designated the Apple Blossom as official state flower in 1897.

What is Michigan’s state flower?

Apple Blossom

4. It is said that "the Robin is the best known and best loved of all the birds in the state of Michigan." The Robin became the state bird in 1931.

Which bird is the best known and best loved of all Michigan birds?

Robin

5. The giant mastodon was appointed the official state fossil of Michigan in 2002. One of the most complete mastodon skeletons ever found was discovered near Owosso, MI.

Where in Michigan was one of the most complete mastodon skeletons found?

Owosso

6. Michigan designated the Isle Royale Greenstone as the official state gem in 1973. The gem is bluish-green with a pattern of star-like crystals that look similar to a turtle’s back.

What is the official state gem of Michigan?

Isle Royale Greenstone

7. The painted turtle was designated the official state reptile in 1995. Some other turtles native to Michigan are snapping turtle, musk turtle, spotted turtle, wood turtle, eastern box turtle, common map turtle, Blanding’s turtle and eastern spiny soft-shell turtle,

What is Michigan’s official state reptile?

Painted Turtle

8. The Brook Trout is an indicator species and can only live in clean water that is free of pollution. Michigan designated the Brook Trout as the official state fish in 1988.

What is our state fish?

Brook Trout

9. Michigan appointed the Dwarf Lake Iris as the official state wildflower in 1998. This rare wildflower is found in very few locations along the shores of Lake Michigan, Huron, and Superior.

What is Michigan's state wildflower?

Dwarf Lake Iris

10. Michigan designated the Petoskey Stone as the official state stone in 1965. A Petoskey stone is actually not a stone, but fossilized coral. Michigan was once covered by a shallow sea full of coral colonies. These beautiful fossils are what remains.

What is a Petoskey stone, if not an actual stone?

Fossilized Coral

11. Michigan designated the Kalkaska soil series as the official state soil in 1990. Kalkaska soil was formed in sandy deposits left by the glaciers that once covered Michigan.

Kalkaska soil was formed in sandy deposits left by what geographical feature?

Glaciers

12. The three most famous nicknames for the state of Michigan are: "The Great Lakes State", "The Wolverine State," "Water Winter Wonderland".

Which of Michigan's nick names is three words, all starting with the same letter?

Water Winter Wonderland

13. Michigan designated the white pine as the official state tree in 1955. The tree has flexible bluish-green needles that grown in bundles of five.

What is Michigan's state tree?

White Pine

14. Michigan changed the location of its capital city to Lansing, where the state Capitol was built in 1879.

Where is the capital of Michigan?

Lansing

15. The Mackinac Bridge is one of the longest suspension bridges in the world. The "Mighty Mac" was opened to traffic in 1957 after three years of construction.

How many years did the Mackinac Bridge take to build?

Three

16. The Kellogg Company® has made Battle Creek the Cereal Capital of the World. The Kellogg brothers accidentally discovered how to make flaked cereal, starting the dry cereal industry.

Which Michigan City is considered the Cereal Capital of the World?

Battle Creek

17. The western shore of Michigan is lined by many sand dunes. Dunes form when wind blows sand into a sheltered area. Sleeping Bear Dunes National Lakeshore has 65 miles of Lake Michigan shoreline protected by the National Park Service.

What feature lines the western shore of Michigan along Lake Michigan?

Sand Dunes

18. Michigan is the only place in the world with a floating post office. The J.W. Westcott II is the only boat in the world that delivers mail to ships while they are still underway. They have been operating since 1874.

The J.W. Westcott II is the only _____ Post Office.

Floating

19. With more than 11,000 inland lakes and over 36,000 miles of streams, Michigan has the longest freshwater shoreline in the world.

Michigan has more than 11,000 inland _____.

Lakes

20. Michigan has 116 lighthouses and navigational lights. The Fort Gratiot Lighthouse, established in 1825, is the oldest operating lighthouse on the Great Lakes and was the first and oldest surviving lighthouse on Lake Huron.

The Fort Gratiot Lighthouse resides on which lake?

Huron

21. Standing anywhere in the state of Michigan, a person is within 85 miles of one of the Great Lakes.

While in Michigan, you are always within 85 miles of a _____.

Great Lake

22. Detroit is known as the car capital of the world. Henry Ford took advantage of the assembly line, which enabled his company to create a Model-T every 93 minutes.

Henry Ford's company could create this type of car every 93 minutes.

Model-T

23. Isle Royal National Park shelters one of the largest moose herds remaining in the United States. There is a long-term study on the island where ecologists are studying the relationship between the moose and timber wolves.

Isle Royal National Park shelters one of the largest herds of which type of animal?

Moose

24. The first automobile tunnel built between two nations was the mile-long Detroit-Windsor tunnel built in 1930. The tunnel passes under the Detroit River, connecting Canada and the United States.

Under which body of water does the Detroit-Windsor tunnel pass?

Detroit River

25. Michigan's state motto is "Si quaeris peninsulam amoenam, circumspice" which is Latin for "If you seek a pleasant peninsula, look about you."

In what language was our state motto originally written?

Latin

26. Vernors Ginger Ale was created in Detroit in 1862 by James Vernor and became the first soda pop in the United States.

What was the first soda pop made in the United States?

Vernors Ginger Ale

27. There is enough freshwater in the Great Lakes to completely cover the United States in 9.5 feet of water. The Great Lakes contain 21% of the world's surface freshwater, though they supply only a small portion of our nations drinking water.

The Great Lakes contain 21% of the world's surface _____?

Freshwater

28. The Ambassador Bridge, which connects Detroit in the United States and Windsor in Canada, was named by Joseph Bower. The bridge spans across the Detroit River.

What bridge connects Detroit and Windsor?

Ambassador

29. Michigan sees over 400 species of birds throughout the year. The endangered Kirtland's Warbler calls Michigan's jack pine forests home in the summer, while the endangered piping plover nests for the summer on Michigan's sandy shorelines.

Which endangered bird spends its summers in Michigan's Jack Pine Forest?

Kirtland's Warbler

30. The SS Edmund Fitzgerald was an American Great Lakes freighter that sank in a Lake Superior. She remains the largest to have sunk in this lake.

What is the name of the largest ship to have sunk in Lake Superior?

SS Edmund Fitzgerald

31. American Indians near Mackinac Island found that the island resembled the back of a turtle. Therefore, they named it "Mitchimakinak" [mish-ah-mak-in-ac] meaning "big turtle". The English shortened it to the current name, Mackinac [**mak-uh-naw**]

What was Mackinac Island's original name?

Mitchimakinak

32. Michigan is home to two types of lizards, nineteen types of snakes, and eleven types of turtles. The only venomous species of snake, the eastern Massasauga Rattlesnake, is seen only in the Lower Peninsula.

What is Michigan's only venomous snake?

Massasauga Rattlesnake

33. The Lower Peninsula is often thought to be shaped like a mitten. The Upper and Lower Peninsulas are separated by the Straits of Mackinac, a five-mile span of water that connects Lake Huron and Lake Michigan. The Mackinac Bridge connects Michigan's peninsulas.

What are the two peninsulas of Michigan connected by?

Mackinac Bridge

34. In 1805, the Michigan Territory was formed. When they began petitioning for statehood, there was a dispute over the southern border. Both Ohio and Michigan wanted Toledo in their boundaries, so congress proposed a compromise. The deal granted Michigan statehood and 3/4 of the U.P. Toledo went to Ohio, and we became the 26th state in 1837.

What city did Michigan and Ohio have a dispute over to be within their borders?

Toledo

35. When the first European explorers arrived, the largest tribes were Algonquian peoples, including Ojibwe, Ottawa, and the Potawatomi. The three nations lived peacefully as part of an alliance called the Council of Three Fires. The Ojibwe were the largest.

What was the largest tribe native to Michigan?

Ojibwe

36. The city of Detroit gets its name from the French term for the Detroit River, Le Détroit du Lac Érie [Leh Deh-twah do Lock Ear-ee] meaning the strait of Lake Erie.

What language was Detroit originally named in?

French

37. Michigan has many surrounding states sharing both land and water boundaries including Ohio, Indiana, Illinois, Wisconsin and Minnesota.

How many states border Michigan?

Five

38. Grand Haven is a city on the shore of Lake Michigan. Singing sand can be found on its beaches. The sand makes a whistling sound as you walk upon it.

What sings on Grand Haven's beaches?

Sand

39. Invasive species have negative ecological, economic, social and public health impacts. They often out-compete native species for resources, damage habitats, and prey on native species. A few invasive species you can find in Michigan are: Autumn Olive, Garlic Mustard, Mute Swan, Zebra Mussel, Asian Carp, and Emerald Ash Borer. The Emerald Ash Borer larvae feeds on the inner bark of Ash trees, starving the tree of water and killing the tree.

What invasive species in Michigan is responsible for the destruction of Ash trees?

Emerald Ash Borer.

40. In 1805, the U.S. Congress created the Michigan Territory, with Detroit as its territorial capital.

When the Territory of Michigan was created, what town was its original capital?

Detroit

41. The Huron Mountains are located in the Upper Peninsula, along Lake Superior. Their highest peak is Mount Arvon, which is the highest point in Michigan. Mount Curwood, Michigan's second highest, is also a part of the Huron Mountains.

What is this highest point in the state of Michigan?

Mount Arvon

42. Frankenmuth's name is a combination of two German words. "Franken" refers to the Province of Franconia, where the original settlers were from. The German word "Mut" means courage, so, Frankenmuth means "courage of the Franconians."

In the name "Frankenmuth", what does the German Word "mut" mean?

Courage

43. Lake Erie is the southernmost, shallowest, and smallest Great Lake. An Iroquoian tribe called it "Erige," meaning cat, because of its often violent and unpredictable nature.

What does Lake Erie's name mean?

Cat

44. American Indian tribes were living in the Michigan region when the first European, Étienne Brulé of France, arrived in 1618. The first permanent settlement was established in 1668 at Sault Ste. Marie.

Who was the first European that arrived in the Michigan region?

Étienne Brulé

45. While Michigan ranks first among the states in production of motor vehicles and parts, it is also a leader in many other areas, including cereals, tools, hardware, refrigerators, and furniture. These industries spread after the birth of major companies like La-Z-Boy® in Monroe and Kellogg's® in Battle Creek

In which Michigan City did La-Z-Boy® originate?

Monroe

46. The Henry Ford is the largest indoor-outdoor museum complex in America. As part of the complex, Greenfield Village includes buildings from the 17th century to present. The museum shows how Americans have lived and worked since the founding of the country. Greenfield Village has demonstrations of farming, sewing, cooking, pottery, glass-blowing, and tin working.

What part of the Henry Ford Museum includes buildings from the 17th century to present?

Greenfield Village

47. Every May, Holland, MI hosts the Tulip Time Festival. Currently six million tulips are used throughout the city for the event. Tulips are planted along city streets, in city parks and outside many public buildings.

When is the Tulip Time Festival held?

May

48. The Detroit Institute of Arts (DIA) has one of the largest art collections in the United States. The museum's collection consists of over 65,000 works. Pieces were commissioned from Diego Rivera, Samuel Yelling, and Leon Hermant in the design of the building.

What is the Acronym for The Detroit Institute of Arts?

DIA

49. There are over 20 American Indians tribes currently living in Michigan, including: Chippewa, Mascouten, Potawatomi, Menominee, Meskwaki, Mitchigamea, Noquet, Odawa, and Ojibwe.

There are over ___ American Indian tribes currently living in Michigan.

Twenty

50. In the War of 1812 between the U.S., Great Britain, and local American Indians, parts of Michigan were captured by the British. In 1813, Michigan was reclaimed by U.S. troops. The Treaty of Ghent ended the war and defined the boundary between the U.S. and Canada which surrounds Michigan.

Who was Michigan taken by in the war of 1812?

British

51. Michigan is surrounded by 4 of 5 Great Lakes; Huron, Michigan, Superior and Erie, with Ontario neighboring Erie to the east. A simple word that can be used to remember these names is HOMES, with each letter representing a Great Lake.

What lake does the letter 'H' represent in the acronym HOMES?

Huron

52. Although our home is referred to as the "Wolverine State", there are no wolverines left in Michigan. The last time one was seen in the wild was in 2010.

What animal was last seen in Michigan in 2010?

Wolverine

53. There are 83 counties in the state of Michigan, 43 of which get their names from words out of American Indians languages.

How many counties are there in Michigan?

Eighty Three

54. Michigan has 56,954 square miles of land, 1,194 square miles of inland waters, and 38,575 square miles of Great Lakes water.

What does Michigan have 56,954 square miles of?

Land

1. Michigan designated the white-tailed deer as official state game animal in 1997. It has always been a very important resource to people living in Michigan, and Native Americans and settlers relied on the white-tailed deer for buckskin and food.
2. The name Michigan is based on the Chippewa Indian word "Meicigama" (pronounced: mesh-ee-gah-me) meaning great water, and refers to the Great Lake.
3. Michigan designated the apple blossom as official state flower in 1897.
4. The robin was designated the official state bird of Michigan. It was said that "the robin is the best known and best loved of all the birds in the state of Michigan."
5. The giant mastodon was designated the official state fossil of Michigan in 2002. One of the most complete mastodon skeletons ever found was discovered near Owosso, Michigan.
6. Michigan designated Isle Royale greenstone as the official state gem in 1973. This gem is a bluish-green stone with a pattern of star-like crystals that look similar to a turtle's back.
7. The painted turtle was designated the official state reptile of Michigan in 1995. Some other turtles native to Michigan are Blanding's turtle, snapping turtle, musk turtle, spotted turtle, wood turtle, eastern box turtle, common map turtle, and eastern spiny soft-shell turtle.
8. Michigan designated the brook trout as the official state fish in 1988.
9. Michigan designated the dwarf lake iris as the official state wildflower in 1998. This rare wildflower is found in very few locations along the shores of Lake Michigan, Huron, and Superior.
10. Michigan designated the Petoskey stone as the official state stone in 1965. Petoskey stone is actually not a stone, but fossilized coral. Michigan was once covered by a shallow sea full of coral colonies. These beautiful fossils are what remain.
11. Michigan designated the Kalkaska soil series as the official state soil in 1990. Kalkaska soil was formed in sandy deposits left by the glaciers that once covered Michigan.
12. There are three famous nicknames for the state of Michigan: "The Great Lakes State", "The Wolverine State," and "Water Winter Wonderland".
13. Michigan designated the white pine as official state tree in 1955.

14. The state Capitol was built in Lansing in 1879.
15. The Mackinac Bridge is one of the longest suspension bridges in the world. The Mighty Mac took 3 years to complete and was opened to traffic in 1957.
16. The Kellogg Company has made Battle Creek the Cereal Capital of the World. The Kellogg brothers accidentally discovered how to make flaked cereal and started the beginning of the dry cereal industry.
17. The western shore of Michigan has many sand dunes lining it. Dunes form when wind blows sand into a sheltered area.
18. Michigan is the only place in the world with a floating post office. The J.W. Westcott II is the only boat in the world that delivers mail to ships while they are still underway. They have been operating since 1874.
19. With more than 11,000 inland lakes and over 36,000 miles of streams, Michigan has the longest freshwater shoreline in the world.
20. Michigan has 116 lighthouses and navigational lights.
21. Standing anywhere in the state a person is within 85 miles of one of the Great Lakes.
22. Detroit is known as the car capital of the world. Henry Ford took advantage of the assembly line, which allowed his company to create a Model-T every 93 minutes.
23. Isle Royal National Park shelters one of the largest moose herds remaining in the United States. There is a long-term study on the island where ecologists are studying the relationship between the moose and timber wolves.
24. The first automobile tunnel built between two nations was the mile-long Detroit-Windsor tunnel under the Detroit River.
25. Michigan's state motto is: "Si quaeris peninsulam amoenam, circumspice" which is Latin for "If you seek a pleasant peninsula, look about you."
26. Vernors ginger ale was created in Detroit and became the first soda pop made in the United States, and was created by James Vernor in 1862

27. There is enough freshwater in the Great Lakes to completely cover the United States in 9.5 feet of water. The Great Lakes contain 21% of the world's surface freshwater, though they supply only a small portion of U.S. drinking water.
28. The Ambassador Bridge, which connects Detroit in the United States and Windsor in Canada, was named by Joseph Bower.
29. Michigan sees over 400 species of birds throughout the year. The endangered Kirtland's warbler calls Michigan's jack pine forests home in the summertime, while the endangered piping plover nests in the summer on Michigan's sandy shorelines.
30. SS Edmund Fitzgerald was an American Great Lakes freighter that sank in a Lake Superior. She remains the largest to have sunk in this lake.
31. Native Americans near Mackinac Island found that the island resembled the back of a turtle. Therefore, they named it "Mitchimakinak" (Pronounced: mish-ah-mak-in-ac) meaning "big turtle". The English shortened it to the present name: "Mackinac."
32. Michigan is home to two types of lizards, nineteen types of snakes, and eleven types of turtles. The only venomous species of snake, the eastern Massasauga Rattlesnake, is seen only in the Lower Peninsula.
33. The Lower Peninsula is often thought to be shaped like a mitten. The Upper Peninsula is separated from the Lower Peninsula by the Straits of Mackinac, a five-mile span of water that joins Lake Huron to Lake Michigan. The two peninsulas are connected by the Mackinac Bridge.
34. In 1805, the Michigan Territory was formed. This lasted until it was admitted into the Union on January 26, 1837, as the 26th state.
35. When the first European explorers arrived, the largest tribes were Algonquian peoples, which include the Ojibwe, Ottawa, and the Potawatomi. The three nations lived peacefully as part of a loose alliance called the Council of Three Fires. The Ojibwe were the largest.
36. The city name of Detroit comes from a French term for the Detroit River, Le Détroit du Lac Érie (Pronounced: Leh Deh-twah do Lach Ear-ee), meaning the strait of Lake Erie.
37. Michigan's surrounding states include Indiana, Wisconsin, Illinois, Minnesota, and Ohio.
38. Grand Haven is a city in the U.S. state of Michigan. Singing sand can be found on the beaches of this city. The sand particles make a whistling sound as you walk upon them.

39. Invasive species have negative ecological, economic, social and public health impacts. They often out-compete native species for resources, damage habitats, and prey on native species. A few invasive plants and animals you can find in Michigan are: Autumn Olive, Garlic Mustard, Northern Snakehead, Mute Swan, Zebra Mussels, Asian Carp, and Emerald Ashborer.
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41. The Huron Mountains are located in the Upper Peninsula, overlooking Lake Superior. Their highest peak is Mount Arvon, which is the highest point in the state of Michigan. Mt. Curwood, Michigan's second highest, is also a part of the Huron Mountains.
42. Frankenmuth's name is a combination of two words. "Franken" is from the Province of Franconia, where the original settlers were from. The German word "Mut" means courage; and so, the name Frankenmuth means "courage of the Franconians."
43. Lake Erie is the southernmost, shallowest, and smallest of the Great Lakes. An Iroquoian tribe called it "Erige", meaning cat, because of its unpredictable and sometimes violently dangerous nature.
44. Native American tribes were living in the Michigan region when the first European, Étienne Brulé of France, arrived in 1618. The first permanent settlement was established in 1668 at Sault Ste. Marie.
45. While Michigan ranks first among the states in production of motor vehicles and parts, it is also a leader in many other areas, including prepared cereals, machine tools, airplane parts, refrigerators, hardware, and furniture.
46. Greenfield Village is the largest indoor-outdoor museum complex in America. The Village has demonstrations of farming, sewing, cooking, pottery, glass-blowing, and tin working.
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48. The Detroit Institute of Arts (DIA) has one of the largest art collections in the United States. The museum's collection consists of over 65,000 works. Pieces were commissioned from Diego Rivera, Samuel Yelling, and Leon Hermant in the design of the building.
49. There are over 20 Native American tribes currently living in Michigan, including: Chippewa, Mascouten, Potawatomi, Menominee, Meskwaki, Mitchigamea, Noquet, Odawa, and Ojibwe.
50. In the war of 1812, Michigan was taken by the British. In 1813, Michigan was reclaimed by U.S. troops.

51. Michigan is surrounded by the Great Lakes. Huron, Ontario, Michigan, Erie, and Superior. A simple word that can be used to remember these names is HOMES, with each letter representing a lake name.
52. Although our home is referred to as the “Wolverine State”, there are no wolverines left in Michigan. The last time one was seen in the wild was in 2010.
53. There are 83 counties in the U.S. state of Michigan. 43 of them get their names from words out of Native American languages.
54. Michigan has 56,954 square miles of land, 1,194 square miles of inland waters, and 38,575 square miles of Great Lakes water.

Map and Compass Course Marker



Map and Compass Course Marker



1. What did Native Americans and settlers rely on our state mammal for?
Buckskin and food
2. What Chippewa word did Michigan get its name from?
"Meicigama"
3. What is Michigan's state flower?
The apple blossom
4. What is the best known and best loved of all Michigan birds?
The robin
5. Where in Michigan was one of the most complete mastodon skeletons found?
Owosso
6. What is the official state gem of Michigan?
Isle Royale Greenstone
7. What is one turtle you can find in Michigan, other than the painted turtle?
Blanding's turtle, snapping turtle, musk turtle, spotted turtle, wood turtle, eastern box turtle, common map turtle, or eastern spiny soft-shell turtle
8. What is our state fish?
The brook trout
9. What is our state wildflower?
Dwarf Lake Iris
10. What is a Petoskey stone, if not an actual stone?
Fossilized Coral
11. Kalkaska soil was formed in sandy deposits left by what geographical feature?
Glaciers
12. What is one of our state nicknames?
Great Lakes State, Wolverine State, or Water Winter Wonderland
13. What is our state tree?
The White Pine
14. Where is our Capital?
Lansing
15. In what year did the Mackinac Bridge open for traffic?
1957
16. Where is the Cereal Capital of the World located?
Battle Creek, MI
17. What feature lines the shore of Lake Michigan?
Sand Dunes

18. What is the name of the only floating post office?
The J.W. Westcott II
19. Roughly how many inland lakes are in Michigan?
More than 11,000
20. How many lighthouses can be found in our Great Lake State?
116
21. While in Michigan, you are always within what distance of a Great Lake?
85 miles
22. How often could a Model-T be created using the assembly line?
Every 93 minutes
23. What two animals are ecologists studying the relationship of on Isle Royal?
Moose and Timber Wolves
24. What river does the Detroit-Windsor tunnel go under?
The Detroit River
25. What language is our state motto originally in?
Latin
26. What was the first soda pop made in the United States?
Vernors Ginger Ale
27. If the water from the Great Lakes was spread over the United States, how deep would it be?
9.5 feet
28. What two cities does the Ambassador Bridge connect?
Detroit and Windsor
29. What are two endangered birds that can be found in Michigan?
Kirtland's Warbler and Piping Plover
30. What is the name of the largest ship to have sunk in Lake Superior?
SS Edmund Fitzgerald
31. What was Mackinac Island's original name?
Mitchimakinak
32. What is Michigan's only venomous snake called?
The Massasauga Rattlesnake
33. What are the two peninsulas of Michigan connected by?
The Mackinac Bridge
34. In what year did Michigan become a state?
1837
35. What were the three largest tribes native to Michigan?

Ojibwe, Ottawa, and Potawatomi

36. What language was Detroit originally named in?

French

37. What is the fascinating geographical feature that can be found on beaches of Grand Haven?

Singing Sand

38. What is one invasive species that can be found in Michigan?

Autumn Olive, Garlic Mustard, Northern Snakehead, Mute Swan, Zebra Mussels, Asian Carp, or Emerald Ashborer.

39. When the Territory of Michigan was created, what town was selected as its capital?

Detroit

40. What is this highest point in the state of Michigan called?

Mount Arvon

41. What is the meaning of the name Frankenmuth?

"Courage of the Franconians."

42. What does Lake Erie's name mean?

Cat

43. Who was the first European that arrived in the Michigan region?

Étienne Brulé

44. Name two of the states Michigan is surrounded by.

Indiana, Wisconsin, Illinois, Minnesota, and Ohio

45. Aside from motor vehicles, what is something Michigan ranks first in the country for making?

Prepared cereals, machine tools, airplane parts, refrigerators, hardware, and furniture.

46. What are two things you can see while visiting Greenfield Village?

Farming, Sewing, Cooking, Pottery, Glass-blowing, Tin working

47. When is the Tulip Time Festival held?

May

48. When was Michigan's last wolverine found?

2010

49. How many counties are there in Michigan?

83

50. How much land does Michigan contain?

56,954 square miles

51. Name one artist whose work is used in the design of the DIA.

Diego Rivera, Samuel Yellin, Leon Hermant

52. Name two Native American tribes from Michigan.

Chippewa, Mascouten, Potawatomi, Menominee, Meskwaki, Mitchigamea, Noquet, Odawa, or Ojibwe.

53. Who was Michigan taken by in the war of 1812?

The British

54. What lake does the letter H represent in HOMES?

Huron

