

## Great Lakes/ Great Ships

### Language Arts/Social Studies

#### Lesson Three

**Goal:** The student will become familiar with Great Lakes' ships and shipping while practicing memory skills and reading.

#### Michigan Benchmark(s)

Reading: Word Recognition and Word Study

Word Recognition (R.WS.06.01) "The student will explain and use word structure, sentence structure and prediction to aid in decoding and understanding the meanings of words encountered in context."

Vocabulary (R.WS.06.07) "The student will in context, determine the meaning of words and phrases including regional idioms, literary and technical terms, and content vocabulary using strategies including connotation, denotation, and authentic content-related resources."

Science:MS Reflecting on Scientific Knowledge (R)

II.1.3 Show how common themes of science, mathematics, and technology apply in real-world contexts.

II.1.4 Describe the advantages and risks of new technologies.

**Background Information:** This lesson is an introduction to the many ships that sail the Great Lakes. The sizes, construction, uses and flags of 52 different ships will be introduced as the students play through either of the variations. No previous knowledge of maritime transportation is needed to play.

**Hook:** Ask students how many of them have a boat, or have ever been boating. Discuss briefly. Now ask them if they understand the difference between a boat and a ship. (A ship is a very large boat. A boat is small enough to be carried aboard a ship.) Explain that today's lesson is to help them learn all about the ships that travel our Great Lakes. Mention to the students that it is a game.

#### Maritime Matrix

This version is student directed small group work. It can be played quietly, by an entire class, if enough cards are available. Approximate time required: 45 minutes.

#### Materials:

**Six decks of Great Lakes Shipping Cards** published by Duluth Shipping News

Each deck divided into suits, and two sets of each suit (hearts, diamonds, etc.) used for each team of four students. Larger classes require two more decks.

**Worksheet** 2 copies of specific suit for each group, one per team.

**Pencils**

**Room Arrangement:** For the student directed game, Maritime Matrix, desks should be arranged in groups of four, two facing two.

#### Rules of Play:

Teams of two students face each other, shuffle and lay all 12 cards (One suit, Ace through King) face down in front of them. One student on each side is the 'reader' the other is the writer'. Each side needs one worksheet of questions matching the suit they are playing. Both students names should be recorded on their team's sheet.

Play begins by both readers flipping a card. The highest card chooses first.

Team A flips any card face up. Team B chooses a card to turn up in an attempt to match the team A's card. Teams may consult quietly about which card to turn, but they may not deliberate more than 10 seconds, and they may not vocalize.

If the card is not a match, both are turned down, and team B goes next.

If the card matches, the reader of the successful team read the information of the card. Both teams locate the correct statement on their worksheet for that card and record the name of the ship. The team that matched the card, and read the information circles their answer and thereby earns one point.

Play now moves to the opposite team.

Teams continue to flip cards until all cards are matched and all worksheets are filled in.

The team with the most circles wins.

Teams can now continue by switching suits, and matching worksheets with another team.

#### Assessment:

Teachers may assess their students' involvement by the interest shown in the game, and by the number of points earned by each student on the worksheets if desired.

#### *Captain's Conundrum*

This version is a whole class game. The class must be divided as evenly as possible, into two teams. The teacher directs the game. It can be played for a specific time (for example 15 minutes), or until a predetermined number of points is earned.

#### **Three decks of Great Lakes Shipping Cards** published by Duluth Shipping News

Each team is dealt one complete deck, evenly to all students, jokers removed. The teacher may use questions from the Maritime Matrix worksheets for the game, or make up his/her own from the third deck.

Room Arrangement: Students should remain at their own seats, facing the front, but the room should be divided as evenly as possible. Mainstreamed students may need their cards enlarged, or may need to be dealt fewer cards to play successfully. Meet with their Teacher Consultant for appropriate accommodations.

#### Rules of Play:

Cards are dealt evenly, one deck for each team. Students turn their cards (usually three or four) face up and read through the information given. Each student is the resource for that information, and may share it with the class only when called on.

Teacher begins by reading a question from a worksheet, or drawing a card from his/her deck and making up a question about that ship from the reading material. Students quickly reread their ships' information, and stand if they are sure they have that ship's card on their desk.

First student standing gives the answer. If correct, the team earns one point. The student then reads the entire card to the class. (Optional) If the student is NOT correct the opposing team may have 60 seconds to scan their cards for the correct answer. When found, the correct answer is announced, and the team then earns 2 points (on a steal). If neither team can give the correct answer, the card (or question) goes back into the deck for replay.

This game can be played until all ships are named, or to a predetermined number of points, or for a given period of time.

Score can be kept by a non-competing student, the teacher, or by bringing the correctly identified ship card to the teacher's desk and adding it to that team's 'Fleet'. (Make a pile of cards for each team.)

Assessment: Teachers can assess their students by the interest and enthusiasm they demonstrate while playing. After several plays, teachers may wish to ask their students to write a short paragraph explaining three or more things they have learned about ships by playing this game. Teachers can then assess the written paragraphs.

### **Great Lakes Shipping** Maritime Matrix **Hearts**

- *Federal Hunter*      With its bright red hull, this ship carries grain for Fednav of Montreal. It was built in Japan in 2001.
- *J.A.W. Iglehart*      Once called Pan-Amoco she is considered the 'prettiest ship on the lakes'. She has a pointed bow, and carries cement.
- *Alpena*      Built in 1942 to carry iron ore, she was reduced 120 feet and refitted to carry cement and renamed after a Michigan town.
- *Atlantic Huron*      This ship has been named four times! But her second name is also her fourth! She sometimes carries materials to oil platforms off the coast of Newfoundland.
- *Vlistborg*      This ship is 433 feet long, and carries the flag of the Netherlands. She carries a variety of cargo, such as windmill parts.
- *Saginaw*      A bulk cargo hauler, this ship is 639 feet long, and is Canadian flagged. She was built in 1953, and has been renamed several times.
- *Montrealais*      A straight-decked bulk carrier, this ship has 5 cargo holds, and 20 hatches. She is still powered by a steam turbine engine.
- *Frontenac*      This ship is 730 feet long, and is a straight decked laker. She is pictured passing under the Aerial Lift Bridge in Duluth, Minnesota.
- *Indiana Harbor*      One of 13 thousand foot lakers, this ship usually loads coal or taconite. She was built in Sturgeon Bay, Wisconsin.
- *Samual Risley*      Used for ice-breaking by the Canadian Coast Guard, this cutter was built in 1985.

- *Walter J. McCarthy* Carrying low-sulfur coal, usually to Detroit, this 1000 foot laker makes about 40 round trips from Superior each season.
- *Olympic Merit* This salty hails from Monte Carlo, usually loading grain from the U.S. Midwest to deliver all over the world.
- *Mackinaw* Since 1944, this ship was a faithful icebreaker for the US Coastguard. She was decommissioned in 2006 and replaced by a brand new ship of the same name.

## Great Lakes Shipping

Maritime Matrix

### Clubs

- *Isolda* Built in Japan, this ship is flagged in Poland! This ship, like most salties, requires a tug to maneuver it into port.
- *CSL Laurentien* Belonging to the Canada Steamship Lines, this laker had a new hull added in the year 2001 and was give her present name.
- *Flinterspirit* Only 366 feet long, this Dutch ship is often loaded with barley, which is transported to England to brew Budweiser beer.
- *Canadian Transport* The second ship with this name, she was built in the late '70s to carry coal. She has a sister ship with a similar name.
- *American Spirit* The seventh of 13 one thousand foot lakers. The middle of this ship was built in Toledo, and the rest in Lorain, Ohio.
- *Ira* Built in 1979 in Japan, this ship travels all over the world, carrying all kinds of goods, from steel coils to bulk clay.
- *Roger Blough* Almost a thousand footer, this ship is the 14<sup>th</sup> largest on the Great Lakes. She has a 54 foot boom that can travel out over either side of her deck.
- *Herbert C. Jackson* Constructed in River Rouge, Michigan, this ship has a 250-foot boom that helps her unload a variety of bulk cargo very quickly. She is 609 feet in length.
- *Fairlane* Navy, yellow and white, this ship is a Jumbo! These rather small ships hailing from the Netherlands often carry equipment to major construction sites all over the world.
- *Edgar B. Speer* Built in two pieces, in two different places, this ship usually carries taconite from Two Harbors, Minnesota to Gary, Indiana.
- *Captain Henry Jackman* This ship is named for a schooner captain from the mid-1800s. She carries iron ore and sometimes grain.

- *Sundew* Named after an insectivorous plant, this decommissioned Coast Guard cutter is now a museum in Duluth, Minnesota, where she served her last 24 years.
- *Presque Isle* With the same name as a county in Michigan, this ship is two ships in one. Half barge and half tug, this type of construction is very practical.

## **Great Lakes Shipping**

Maritime Matrix

### ***Diamonds***

- *Middletown* Built and used in World War II, this ship was hit by a Japanese bomber. She survived to carry many different cargos to many Great Lakes ports today.
- *Columbia Star* A US-flagged thousand foot freighter, this ship usually carries coal or taconite throughout the Great Lakes region.
- *Alder* This Coast Guard cutter is a buoy tender, the last of the Juniper line built in Marinette, Wisconsin. 225 feet long she is used for ice breaking and search and rescue as well as caring for the lights of Lake Superior out of Duluth, Minnesota.
- *Cason J. Callaway* This ship has had the ‘extreme make-over.’ She had her steam engine upgraded, a 264-foot self-unloading boom added, and her navigational system automated, keeping her at work on the Great Lakes since her construction in 1952.
- *Bluewing* This ship, named for a waterbird, was built in China. She is a salty, working for the Canadian Forest Navigation Company.
- *Calioe Patronicola* Usually loaded with grain in the Great Lakes, this Greek ship is one of five sister-ships all named using the word *Olympic*. (Except for her!)
- *Columbus* This ship has a swimming pool on its top deck!
- *Philip R. Clarke* Pictured entering the shipping canal in Duluth, Minnesota, this 767 foot bulk cargo freighter was built in 1952.
- *Paul R. Tregurtha* The largest of the freighters working the Great Lakes. This ship has a 260 foot self-unloading boom, and usually carries coal from Superior to Duluth.
- *Agawa Canyon* 646 feet long, this Canadian ship is named after a geographic feature 100 miles north of Sault Saint Marie.
- *Canadian Leader* Her original French name meant the ‘Will of the Wisp’. This ship usually takes grain to ports on the Saint Lawrence River, then back-hauls iron ore.
- *Oglebay Norton* A one-thousand foot laker, this ship was built in 1978. She carries mainly coal and iron ore to ports only on the Great Lakes.

- *Canadian Navigator* Built originally as a salty in England, this ship has been made longer two times since then.

## **Great Lakes Shipping**

Maritime Matrix

*Spades*

- *Algonorth* First named the Temple Bar, this ocean-going bulk carrier now is 729 feet long.
- *Algooso* Named after a former ship which was much smaller, only 346 feet, the current ship is 730 feet long and built in 1974. She is Canadian-flagged.
- *Arklow Bridge* This green-hulled salty was built in England, but is operated by an Irish company.
- *Arthur M. Anderson* Carrying the common loads of coal, taconite and limestone on the Great Lakes waters, this ship was the last to see the Edmund Fitzgerald before it sunk near Whitefish Bay in 1975.
- *Adam E. Cornelius* With double stacks black, red and white striped, this ship is easy to recognize. Her owner is the American Steamship Company.
- *Edwin H. Gott* One thousand four feet long, this laker was named for an engineer, who then became president, then chairman of the board of the United States Steel company.
- *Mesabi Miner* Named in honor of Minnesota's miners, this ship carries taconite and coal.
- *Manistee* This ship has been sailing under various names since 1943. Each time it is overhauled, it has been renamed. Its present name is a city in Michigan, and was given to the ship in 2004.
- *Mackinaw* Shown during her launch on 4/2/05, this ship replaced her predecessor of the same name, this Coast Guard cutter will serve in many capacities, including environmental protection.
- *Algolake* Built in 1977, this Canadian-flagged ship is 730 feet long with a self-unloading boom which helps her unload bulk cargo of coal or iron ore quickly and efficiently.
- *Kentucky* A red and green cutie, this G-tug is one of 50 operating on the Great Lakes. Most are named for states, and all are painted the same color.
- *BBC Germany* This salty is a container ship. This type of ship rarely enters the Great Lakes, but may also haul heavy equipment or grain which is its usual mission on the Sweetwater Sea.
- *Atlantic Pendant* This salty has three holds with three hatch covers. She was built in China in 2003.