BIF’s Journey to Dearborn

By Candace Kawatsu, Detroit Public Schools

Grade/Subject: 3rd grade; Social Studies

Duration: Three 45 minute periods

Materials Needed
Per teacher
Power point: BIF’s Journey to Dearborn
The Edmund Fitzgerald: Song of the Bell
Cleveland Cliffs, Inc. Michigan Operations. DVD: Steel Starts Here.
www.clevelandcliffs.com
Shoebox-sized plastic tub of water

Per student
highlighters
map of Michigan
Music and lyrics of “Wreck of the Edmund Fitzgerald” by Gordon Lightfoot
http://www.gordonlightfoot.com
4-inch square piece of aluminum foil
5-10 taconite pellets

Room Arrangements No special room arrangement is required. Flat area to hold plastic tub of water

Lesson Overview
The students will watch two short DVD, one about how iron ore is mined in Michigan’s Upper Peninsula and the other about the Edmund Fitzgerald. They will listen to a story and song about the Edmund Fitzgerald. Next the students will watch a teacher created power point presentation connecting iron ore mined in the UP to Ford trucks made in Dearborn. Lastly, the students will make boats from aluminum foil and test to see how many taconite pellets they will hold before sinking, and trace the shipping route bringing iron ore route from Minnesota and the Upper Peninsula to Detroit automobile factories on their Great Lakes maps.

Michigan Grade Level Content Expectations (GLCEs) Addressed:

Grade 3 Social Studies
3 – H3.0.1 Identify questions historians ask in examining the past in Michigan (e.g., What happened? When did it happen? Who was involved? How and why did it happen?)

3 – G1.0.1 Use cardinal directions (north, south, east, west) to describe the relative location of significant places in the immediate environment.
3 – G1.0.2 Use thematic maps to identify and describe the physical and human characteristics of Michigan.

3 – G4.0.1 Describe major kinds of economic activity in Michigan today, such as agriculture (e.g., corn, cherries, dairy), manufacturing (e.g., automobiles, wood products), services and tourism, research and development (e.g., Automation Alley, life sciences corridor, university communities), and explain the factors influencing the location of these economic activities. (E)

3 – G5.0.1 Locate natural resources in Michigan and explain the consequences of their use.

3 – G5.0.2 Describe how people adapt to, use, and modify the natural resources of Michigan. (H)

3 – E1.0.3 Analyze how Michigan’s location and natural resources influenced its economic development (e.g., how waterways and other natural resources have influenced economic activities such as mining, lumbering, automobile manufacturing, and furniture making). (H, G)

Grade 3 Science

E.ES.03.41 Identify natural resources (metals, fuels, fresh water, fertile soil, and forests).

E.ES.03.51 Describe ways humans are dependent on the natural environment (forests, water, clean air, Earth materials) and constructed environments (homes, neighborhoods, shopping malls, factories, and industry).

E.SE.03.31 Identify Earth materials used to construct some common objects (bricks, buildings, roads, glass).

Focus Question: How is iron ore mined out of the earth in Michigan’s upper peninsula, transported to the Detroit area, and transformed into part of a truck?

Learning Objectives:
After this lesson, students will be able to:
1. Locate where iron ore is mined on a map of Michigan.
2. Identify an earth material used to make trucks.
3. Name three products that are made out of iron ore.
4. Use cardinal directions to describe the locations of the Tilden Mine, Marquette, the Soo Locks, Lake Superior, Lake Huron, the Detroit River and Dearborn.
5. Trace the iron ore route from Marquette to Dearborn.

Vocabulary:
cargo
freighter
iron ore
taconite

Advance Preparation:
- Request DVD Steel Starts Here and a sample of processed iron ore pellets from Cleveland Cliffs.
- Obtain one Michigan map per student.

Background
The Edmund Fitzgerald was bound for Detroit loaded with iron ore when it sank in a severe storm about 10 miles north of Whitefish Point in Lake Superior on November 10, 1975. Iron ore is one of Michigan’s natural resources. About 70% of the U.S. iron ore is mined in Minnesota and 20% is mined in Michigan’s Upper Peninsula. The iron ore is transported by ship from Duluth, Minnesota and Marquette, Michigan down through the locks at Sault Ste. Marie, to cities on the lower Great Lakes. Iron ore is used in a multitude of manufacturing processes, including the manufacture of steel to make automobiles and trucks. The Ford Motor Company’s Rouge River assembly plant’s location on the Rouge River was important in expanding the automotive industry.

**Procedure:**

1. Have students listen to the Gordon Lightfoot song “The Wreck of the Edmund Fitzgerald.” Provide copies of the lyrics so students can read as they listen. Discuss the story of the Edmund Fitzgerald.

2. Read the book *The Edmund Fitzgerald: Song of the Bell.* Display a map of the Great Lakes and trace the planned route of the Edmund Fitzgerald from Duluth to Detroit, and on to Cleveland.

3. Watch *Shipwreck: The Mystery of the Edmund Fitzgerald.* Pass around taconite pellets for students to examine. Explain that taconite was the Edmund Fitzgerald’s cargo.

4. Watch DVD *Steel Starts Here.* Discuss products that contain iron ore. Students list three products made out of iron ore.

5. Watch power point presentation *BIF’s Journey to Dearborn.*

6. Trace the iron ore freighter’s route from Marquette to the Rouge Plant. I had students decorate erasers to use for boats. Have students highlight important locations on their maps: the Tilden Mine, Whitefish Point, the Soo Locks, and the Rouge Plant.

7. Have students make simple boats from a 4-inch square piece of aluminum foil. Fill a small shoebox-size plastic tub with 3 inches of water. Have students test their boats to see how many pieces of taconite they will hold.

8. Have students write a paragraph describing BIF’s journey from the Tilden Mine to Dearborn using cardinal directions.

**Assessment of Student Learning**

- Observe students as they trace the freighter’s route on the map.
- Read their paragraphs to make sure they described the route accurately.

**Extensions**

1. “Identify Parts of a Great Lakes Freighter” using a ship poster and labels. (See

2.


4. Field Trips:
   - Discovery Cruise on Detroit River by Zug Island (contact Michigan Sea Grant)
   - Dossin Great Lakes Museum and lunch on shore to watch for freighters
   - Rouge Factory Tour in Detroit to see how iron ore is made into steel and then into automobiles & trucks.

References


Cleveland Cliffs, Inc. Michigan Operations. DVD: *Steel Starts Here*. www.clevelandcliffs.com


www.severs://talna.chttpom/media-center/photo-gallery.html
