

ACTIVITY 2: READ ABOUT A CAR FERRY

This activity aims to provide students a better understanding of just how much weight boats can hold when they're able to displace enough water because of the size of their design.

They will read about the S.S. Badger, a car ferry on Lake Michigan that has been in operation for decades moving large cargo between Wisconsin and Michigan across the lake.

In this activity, students will use a **Think Pair Square Protocol** for discussing the article that they will read individually.

First, distribute the article entitled "[SS Badger: The last of Lake Michigan's car ferries](#)" by Melissa Walsh from *Great Lakes Now*, giving students time individually to read the article, and ask them to jot down 3 things they learned in the article.

Then, have students pair up with a partner to discuss the article and which 3 points they noted from it.

Next, have two student pairs join up, standing near each other to form the four corners of a square, to discuss the article and what they talked about in their pairs.

Last, have each group come up with a summary statement about the most important point from their discussion and ask for a volunteer in each group to share that most important point with the whole group.

As student groups share out their most important point, record their ideas on the board and have students copy the list of student ideas down into their notebooks.

Inform them that they will be using some of the information from this article and discussion in a later activity to design their own boat to hold cargo.

After the shareout is complete, ask students to return to their groups and discuss one last question based on the article:

How did the structure and function of car ferries change over time?

After giving the groups some time to discuss this question, open up the conversation to the entire class to discuss the merits of different possible solutions for the problem of algal blooms and harmful algal blooms.

Further Reading on the Subject:

*An additional article further discussing the Design Thinking Process is included in this lesson as an optional extension activity to for students to read and discuss with one another, again, using the **Think Pair Square Protocol**.*

Teaching Tip: Use the Student Handouts to help students organize their thinking in writing around each of the lesson protocols.