Introduction:
The S/V Denis Sullivan is the only recreation of a 19th century Great Lakes Cargo Schooner and Wisconsin’s Flagship. Build your own S/V Denis Sullivan Schooner with recyclable materials found in your home.

Think About It:
What does a schooner look like? A sailboat with a minimum of 2 masts that can have up to 7 with the foremost slightly shorter than the mainmast. A schooner usually has fore-and-aft rigged sails, but may also have square-rigged sails.

Do Ahead of Time:
☐ Gather all supplies
☐ To Take It Further: Fill testing container with enough water so that the boat can float freely and cannot touch the bottom without sinking

Materials:
☐ Recyclable Materials:
  • Body (Hull) of the schooner: aluminum foil, egg cartons, plastic bottle, cardboard, etc.
  • Sails: Paper, Tissues, Paper Towel, etc.
  • Mast and Bowsprit: Skewers, Chopsticks, Pen, Pencils, Straws, etc.
☐ Pencil/Pen
☐ Paper for drawing design
☐ Scissors
☐ Tape/Glue

Directions:
1 Collect building materials and supplies.
2 Before building, fill in the blanks on the S/V Denis Sullivan on next page. Label the following parts of the schooner: (*Answer Key can be found at the bottom of the Activity Sheet)
   a. Sails (Upper and Lower)
   b. Raffee Sail
   c. Jib Sails (Head Sails)
   d. Pilot House
   e. Hull
   f. Mast
   g. Bowsprit
3 Design and draw a schooner with pencil and paper.
4 Construct the body (hull) of the schooner.
5 Draw and cut out the sails using scissors. Make at least 3 sails, one for each mast, and at least one sail for the bowsprit.
6 Attach sails to the mast using tape or glue. At least one sail per mast.
7 Attach masts to the body (hull) of the schooner using tape or glue.
Label the Parts of S/V Denis Sullivan:

a. Sails (Upper and Lower)
b. Raffee Sail
c. Jib Sails (Head Sails)
d. Pilot House
e. Hull
f. Mast
g. Bowsprit
Schooner Design

Answer Key:

- MAST
- RAFFEE SAIL
- SAILS (UPPER & LOWER)
- PILOT HOUSE
- HULL
- BOWSPRIT
- JIB SAILS
Build Your Own S/V Denis Sullivan Schooner Continued

**Take It Further!**
Test your schooner to see if it can float!

**Materials Needed:**
- A place to float a small boat
  - Clear, plastic container filled halfway with water
  - Large kitchen bowl filled halfway with water
  - A sink or bathtub filled partway with water
  - Test your schooner to see if it can sail by blowing gently at the sails!
  - Test your schooner to see if it can hold cargo?

**Materials Needed:**
- Small objects to use as weights
  - Try to find an object that you have a lot of that can get wet, such as:
  - Pennies, dimes, or other coins
  - Marbles
  - Buttons

**What's Happening:**
Vessels on the Great Lakes were used for trade, some as military vessels and others to supply military outposts. These first sailing vessels were square rigged, brigs, and barks (the same type used on the oceans). However, with the wind directions constantly changing and land always nearby, ships needed to be more maneuverable in the Lakes and the transition form square rigged, brigs and barks to schooners began during the 19th century.

The schooner is a sailing vessel with at least 2 masts (the foremast is slightly shorter than the mainmast) and were rigged with fore and aft sails. Sometime schooners may also have square rigged sails. The schooner of the Great Lakes would also have a raffee, a square-rigged fore topsail and triangular in shape. This rigging allowed the vessels to sail within 60 degrees of the wind. These schooners were cheaper to build, more maneuverable, and easier and more efficient to sail. Schooners could also be run with a smaller crew and therefore reduce operating cost. The schooners were built to carry cargo such as furs, lumber, copper, iron ore and salt to various ports along the Great Lakes.

Show us your Schooner!! Email us at AtHome@discoveryworld.org and show us pictures of your sailboats.