

STEM Ahoy! Exploding Chalk Challenge Directions

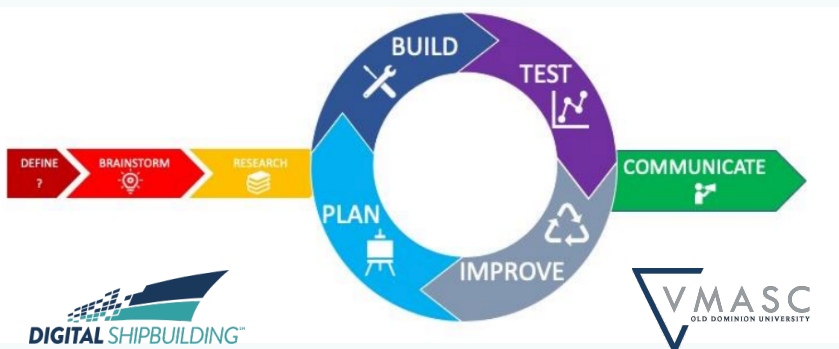
Challenge:

Create a boat design that is powered by soap in water!

Directions

1. Research and read about surface tension and boat designs! What makes soap interact with water? What boat designs work best in water?
2. Gather all materials.
3. Sketch or brainstorm how you will design your boat!
4. Begin by cutting the sheet of plastic or styrofoam into the shape of a boat (Use an adult to help).
5. At the end of the boat, cut a small notch with scissors.
6. (Optional) Decorate the boat with a stick or straw and triangular piece of paper to look like a sail.
7. Fill a container with a thin layer of water.
8. Place your boat in the water.
9. Using a dropper or a drinking straw, put a drop of liquid soap into the notch at the end of the boat.
10. Make observations!
11. When the soap stops working to propel your boat, come up with solutions to make the boat move again!

VDOE Engineering Design Process:



Materials:

- *Suggested Items*
- *Scissors
- *A sheet of clear PVC plastic or styrofoam (I purchased mine on Amazon)
- *(Optional) Colored paper and straw for sail
- *Liquid dish soap
- *Container for water