

Great Plankton Sink Off

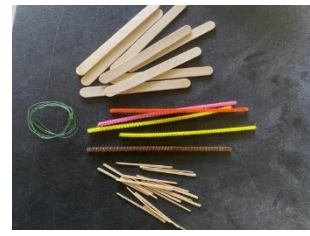
Description of activity:

Plankton include both plant-like (phytoplankton) and animal-like organisms (zooplankton). All plankton float in the water and are carried by currents. Different species of phytoplankton have various adaptations that help them float in the water; including spikes, rounded bodies or tiny tails called flagella. The Great Plankton Sink Off is an activity designed to test how a plankton's body shape influences how it moves in the water. The goal is to see which shape will sink at the slowest rate.

Part One: At home tests

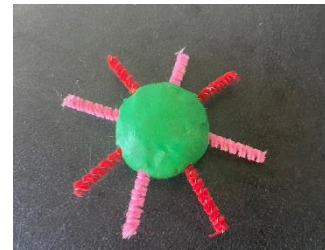
Materials:

- Clay
- Any small objects you have available (paper clips, pipe cleaners, tooth picks, tin foil, popsicle sticks)



At home, experiment by creating different plankton body shapes with whatever craft materials you have available. Then test how long each takes to sink. These tests can be done prior to the plankton program so that you can make a hypothesis about the educators' virtual experiment based on your own experiment results. Or, you can watch the program first, then use what you learn to create your own plankton at home.

1. Create your plankton shape. To the right is an example of one of the shapes made by aquarium educators. Be creative and try any shape you want! The goal is to get your plankton sinking as slowly as possible. You could test different materials as well. For instance, what happens if you use the same shape but make it out of aluminum foil instead of clay?



2. Fill your sink or bathtub and place your plankton into the water. A large container such as a pitcher might work as well. The place/container you choose does not matter. Continue to use the same place/container for all of your tests, however, so you can compare the sinking speeds between plankton shapes.
3. Time how long it takes for your plankton to sink to the bottom. Any plankton that do not sink at all are disqualified.
4. Try modifying your shape and see how this changes the speed of sinking.

Part Two: Virtual Sink off

The day of the virtual sink off, June 23, you will be able to use your at-home plankton experimenting to make educated guesses on which educators plankton design will win! In this live virtual sink off you can test your knowledge about plankton and physics.

Aquarium educators will have created several different plankton shapes. You can vote on which of the different designs most closely resembles the plankton you made at home, and also guess which will sink the slowest. We will then put the educators' plankton in the sinking chamber (Image 3) and time how long it takes to sink to the bottom.



Activity sheet developed by Marine Education Fellow, Madeline McDonald