

# Activity #3 - How Plankton Prevent Sinking

## Objective:

Students construct a model of a plankton to slowly sink to the bottom of a tank.

## Materials:

- buckets of water
- aquarium with water
- stopwatch or watch with second hand
- modeling clay
- toothpicks
- foil
- straws
- styrofoam

## Procedures:

1. Discuss with students what plankton look like and what adaptations help them stay near the surface in the ocean.
2. Students use the materials provided to design a plankton that will remain neutrally buoyant for the longest period of time. Note: the object here is to make a model that does not remain on the surface floating, and does not sink quickly to the bottom.
3. Students are given time to experiment with their models in buckets of water.
4. Ask students to write down each modification they make to their model and give the reasons why.
5. Students take their best models and compete against the clock for the best time.

## Evaluation:

Students draw a picture of their plankton model and describe its features and how well it slowly sank. Award a prize to the plankton which took the longest time sinking

## Extension:

Students record the total time it takes for each model plankton to sink. The rate of sinking is calculated by dividing the distance from the surface to the bottom of the test aquarium by the elapsed time. A simple bar graph of the results from each student or team of students can be made and discussed.