Extention for Dynamic Duo

Teachers can bring Reynold's Number into a discussion about how plankton move. Use the demonstration to help with understanding.
Teachers can also discuss neutral buoyancy.

Teacher demonstration:
Objective:
Introduce viscosity and Reynold's number.
Demonstrate how water's viscosity affects how plankton move.

Materials:
Two of the cut soda bottles
Corn syrup
Two marbles

Fill one cut soda bottle with corn syrup and one with water.
Drop a marble at the same time into each of them.
Discuss with students how it might be different trying to swim in corn syrup. Compare this to plankton swimming in water. Because they are so small, water is like corn syrup to them.
You can extend this further by dropping dense objects with different shapes and comparing the speed at which each falls to the bottom.

Questions:
1. How do you think swimming in corn syrup would be different?
2. How do you think water affects plankton and how they swim?

Videos demonstrating object swimming in corn syrup.
http://www.youtube.com/watch?v=4h079P7qRSw
http://www.youtube.com/watch?v=2kkfHj3LHeE&feature=related
http://www.youtube.com/watch?v=s_5ygWhcxKk&feature=related

Questions after viewing the videos:
1. Why was the "fish" not moving forward in the second video?
2. How did the design of the "fish" in the third video help it swim in the corn syrup?