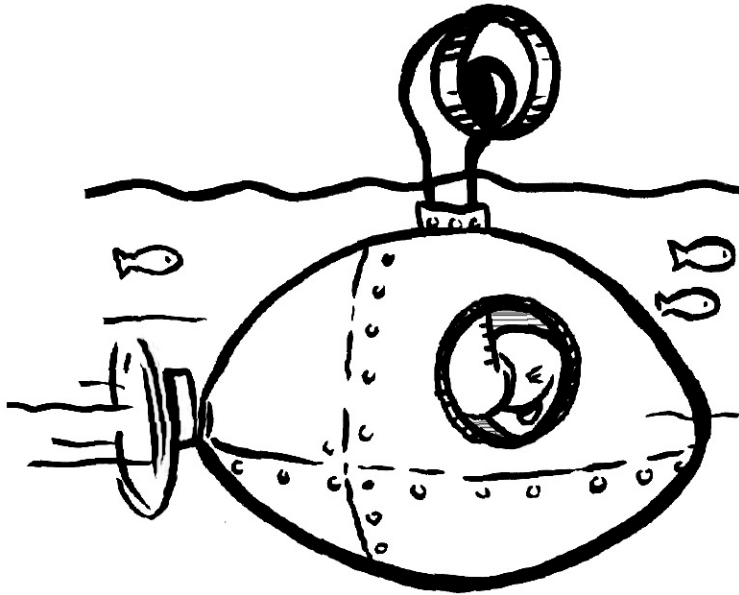


SUBMABEANS



Materials

(for one student or group)

- Clear drinking glass
- Fresh ginger ale or other light-colored soda
- Several soybeans

DIRECTIONS

Do soybeans float?

Directions:

1. Fill a glass half-full with soda.
2. Drop a few soybeans into the glass, one at a time. Observe them for a few minutes. What happens?

Observation:

When the soybeans are first dropped in the soda they sink, until bubbles attach to the beans and make them more buoyant (able to float). Buoyancy is the lifting force that causes objects to float in both air and water.

Carbon dioxide gas is dissolved in the soda. This gives the soda its fizz. The carbon dioxide bubbles that stick to the beans act like tiny balloons, lifting the beans to the surface. Once there, the bubbles expand and eventually pop, releasing carbon dioxide into the air. If enough bubbles pop, the beans sink then start all over again.

Extensions:

There are many variables you can try. Compare soybeans that have been soaked overnight; rice; raisins; corn kernels and other objects.

What results do you get when you use other liquids?

How might you explain your observations?