



Let's Make Object Float& Sink



 Point

Control buoyancy!

Materials

Fish shape soy sauce cruet
Plastic bottle(1.5L)
Water
Weight(5mm nut)
Permanent maker



Way

How to make Cartesian diver

1 Fit nut into soy sauce cruet mouth with twist.



2 Suck in water into soy sauce cruet.



3 Drop the soy sauce cuet in a container (beaker) filled with water.
□ Then regulate the water inside soy sauce cuet so that the tail of the container slightly protrudes in the surface.



4 Fill a bottle with water until its lid, put the soy sauce cuet and close tightly.



Let's Move Cartesian diver

- 1 Wrap the bottle with your both hands.
- 2 Push the bottle tightly and loosen your hand.



 **Development**

Try to make Cartesian diver using small container on your vicinity. What if you put 2-3 soy sauce containers at the same time, what will happen to the water inside the soy sauce container?

 **Information**

Device Adjustment Water Gauge!!

◆ **In case it sink, adjust or reduce water in the container by loosening the nut a little..**

◆ **There is air in part inside soy sauce cruet. Soy sauce cruet floats near surface of the water because of buoyancy. When you push strongly outside, air bulk get smaller. Because of that pressure conducted to air in part through water. Then buoyancy get smaller, soy sauce cruet float.**

◆ **Cartesian diver using soy sauce container and nut is from the experiment of teacher Morii Kiyohiro in Hyogo prefectural Hyogo high school.**