

How not to sink!

(Ukraine)

Background

When swimmers are in trouble in the water they will often frantically put their arms above their head which causes them to sink.

You will need:

- ✓ syringe
- ✓ drinking straw
- ✓ weights
- ✓ wire
- ✓ hot glue gun

Follow these steps:

1. Heat the end of the syringe and then pinch with a metal tongs to seal.
2. Add a weight inside the syringe (or some sort of heavy mass)
3. Push wire through the plastic top of the syringe, making it into an S shape.
4. Cut the straw into two equal lengths and heat and seal each end.

5. Fix one end of each sealed straw to the wire, one on each side.
6. As you rotate the wire the straws should move up or down.
7. Insert the plug (from the plunger) into the top of the syringe. Once you have checked that it is working seal top with hot glue.
8. Place it in large beaker of water and observe what happens with arms up (straws up) and arms down (straws down).

So what happened?

The syringe will float when the arms are down and will sink when the arms are up. More mass above the water reduces buoyancy.

