

Rescue Mission



Oops, we're missing the hook we use to grab the capsule. Your challenge is to design a hook, pull the capsule from the water, and carry it to dry land.

What to DO

1 Get what you need.

- 3 film canisters with snap-on lids
- Pot, bucket, or dishpan
- Paperclips
- 12-inch length of thread
- Towels
- Plasticine, clay, or poster putty

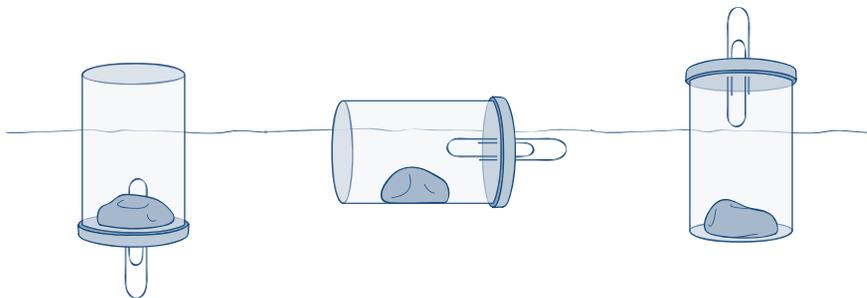
2 Make an ocean.

Fill a container with enough water to float the film canisters.

3 Assemble your capsules.

Make the space capsules (i.e., film canisters) float in different ways by doing the following:

- Remove the lids. Stick a large lump of clay inside each canister, as shown in the diagrams below.



- Poke a hole in each lid with a pen or pencil. If this is too hard for you, ask an adult to help you. Push a paperclip through each hole so it sticks straight up from the lid. To get a paperclip to stay upright, you may need to bend it a bit. Snap the lids back on.

4 Design your rescue hook.

Make a hook, using another paperclip and the thread.

5 Test your design.

Float your capsules. Hold the end of the thread. Try to snag each capsule's paperclip and deliver it to the tabletop or the floor. Did you get all three quickly and easily? If yes, hooray! If not, redesign your rescue hook and retest it.



Chew on This

You've probably heard the saying: If at first you don't succeed, try, try again. Inventors and engineers are always looking for ways to improve their designs.

Take Thomas Edison, who invented the light bulb. He tried over 1,000 different materials to use for the part of the light bulb that glows (the filament). A friend asked him how he could keep going after so many failures. "Failures?" replied Edison. "They're not failures. I learn something each time. I haven't failed 1,000 times. I've just found 1,000 things that don't work."

The process you used to design and refine the rescue hook is very similar to the one engineers and inventors use.

Dig Deeper

- * Try these variations to make the rescue more challenging:
 - Let only a tiny bit of the paperclip stick out of each capsule's lid.
 - Have a friend make gentle waves with a spoon or blow gently on the dangling hook while you try to rescue the capsule.
 - Adjust the clay or add pennies to make capsules that float (or sink) in different ways.
 - Make five different capsules. Try to rescue them all in a minute or less.
 - Make a multi-pronged hook and rescue two capsules at once.
- * Build a rocket that can actually blast off. Get the Film Canister Rocket challenge from the ZOOM Web site at pbskids.org/zoom/activities.



Watch FETCH! on PBS KIDS GO! (check local listings) and visit the FETCH! Web site at pbskidsgo.org/fetch.

This is mission control signing off to say, "Rescue mission accomplished! Great job!"



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Fold

Fetch!

Rescue Mission

I'm Ruff Ruffman, the host of FETCH! The FETCHers have just returned from a dangerous space mission. They made a few adjustments to the FETCH! satellite that sends me all my favorite shows—like FETCH! But anyway, the FETCHers had to land their space capsule in the middle of the ocean. I need you to go and rescue them (and the capsule)!

GOOO
FETCH!

