

The Water Cycle

Did you know you can make a water cycle in a bag? Just follow my instructions below on how to make your own.

You will need:

- You will need a sandwich bag- its needs to be clear and be able to seal shut
- Permanent marker pen
- Water
- Blue food colouring
- Tape

How to make:

Step 1

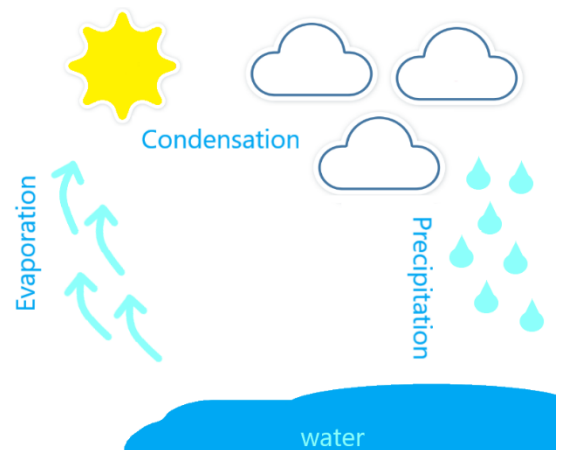
Draw a water cycle illustration on the bag with the permanent marker.

Step 2

Fill half a up with water and add a few drops of food colouring in until it's a nice blue colour. Give it a mix. Then add this water to your bag. Depending on the size of your bag you might want to add a little more water. Then seal your bag up nice and tight so no water can escape.

Step 3

Find a window that gets lots of sunlight and tape your bag up on it. Make sure it is nice and tight, you don't want it to fall off. Now you just need to wait and see what changes happen with your bag. Keep checking back on your bag regularly to see if anything different has started to happen.



The sun shines through the bag and heats it up. The water gets hot and turns into a gas, this is called **evaporation**. In our bag the evaporated water sticks to the bag, but outside of the bag the evaporated water would go into the atmosphere. When the evaporated water hits the bag, it turns back into a liquid called **condensation**. This water then slowly runs down the bag back into the water at the bottom. When it slides down the bag, we would call it **rain or precipitation**.

Oil Spill Clean Up

Oil spills are a form of pollution that can happen on land or in the sea. They happen when oil leaks from tankers and ships. This oil can be dangerous to animals and sea life.

After a spill some people are then responsible for containing the spill from spreading further, treating and saving wildlife and cleaning up the spill so that none of it is left on the land or sea.

For this activity we are going to recreate an oil spill and experiment to work out what materials and techniques are best to contain and clean it up. This activity can get messy and oil can mark clothing, so make sure to dress your little ones appropriately.

You will need:

- Container with water
- 4 spoons of vegetable oil mixed with a few drops of food colouring
- Feathers to represent birds
- Washing up Liquid
- Materials to experiment with: cotton balls, sponge, plastic spoons, cardboard, kitchen roll

Set up

Add the oil mixture into the centre of the water. Place some feathers amongst the mixture.

Experiment

Using a small amount of each of the materials, test them against the oil and see what they do. Decide which of the categories each of the materials fit into:

Booms - These are barriers which stop the spread leaking further into the water.

Skimmers - These remove oil from the surface of the water

Absorbers - are placed on the oil and pick the oil up from the surface.

Dispersants - are usually a liquid that are sprayed onto the surface of the oil and help to break it down into smaller amounts or droplets.

Do you think it would be hard to clean up an oil spill? Which material do you think will work best? Do you have a plan for how you might clean it up out of the water?

Clean up time

Add a few drops of washing up liquid to the water. This will act as a dispersant.

Now retest your materials. Do they act differently? Has anything differently happened?

Once an oil spill is cleaned up there is still more work to do. Wildlife get caught up in the spill and can be injured or sometimes sadly killed by the oil.

The feathers in the bowl represent the birds that have been coated with oil.

Have a go and see how you could clean the feathers of oil. Is there anything from the previous experiment that you think will help break down the oil?