

This activity will have your young scientists learning about the concept of absorption. Through an investigative activity, they will get to play with water and find out what kinds of materials absorb and what kinds don't.

### Materials/Setup

- Styrofoam trays or cookie sheets or flat cake pans
- Wax paper
- Napkin
- Saran wrap
- Construction paper
- Toilet paper
- Aluminum foil
- Cotton balls
- Sponges
- Anything else you might have around that would either absorb water or repel it

### Activity Location

- This activity works best in a location where messes can be made! It probably shouldn't be done in a carpeted room and it would be ideal to have access to a sink during the activity.

### Action

1. Set up stations for the participants that have several different types of material to investigate.
2. Start the activity by asking the students where they see water in their every day lives? (lakes, rivers, their bathtubs, rain, snow, etc)
3. Explain to them that today they are going to investigate how different materials are affected by water.
4. At times we see water pooling on sidewalks or in parking lots (and it's really fun to splash in them). Or their bathtub – why/how does the water stay in their bathtub? Explain that the material the water is landing on either lets the water through (is porous, absorbs water) or holds the water and stops it from escaping (is non-porous, repels water).

5. Ask the participants to make predictions about which materials they think will absorb the water and which ones will repel it. Older students could use a worksheet to record their hypotheses and then their observations (found on page 3)
6. Guide the students through their testing. Have them drip some water onto each material and see what happens. Does the water repel? Does the material absorb the water?

### **Conclusion/Wrap up**

Explain that materials that are made of polymers (plastics) have long chains of molecules that are packed tightly together. The tiny little water molecules can't get through and so the plastic holds the water in (like saran wrap or Ziploc baggies). This is the reason why your bathtub holds water or the street pavement holds water. The material doesn't have any little holes (pores) to allow the water to get through.

# WATER SCIENCE

## Materials:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

## Hypothesis (circle one)

- |                      |       |
|----------------------|-------|
| Material #1 – ABSORB | REPEL |
| Material #2 – ABSORB | REPEL |
| Material #3 – ABSORB | REPEL |
| Material #4 – ABSORB | REPEL |

## Results:

- 1
- 2
- 3
- 4

