

# DIY Watershed

Course/Grade Level: 9-12

Experiment Duration: 30 minutes

Website Link to Experiment:

<https://www.youtube.com/watch?v=-miMpYOL5Is>

Expectations:

Understand how a watershed operates in our everyday surroundings by use of a watershed model made from simple materials.

Sample Data/Tables if Needed:

## Context for Learning

Objective:

- Use common household materials to create a simple DIY watershed
- Understand basic watershed principles and how different absorbent materials can be used to slow down the flow of water

How this experiment relates to wastewater/water treatment:

Keeping our water free from pollutants by using absorbent materials keeps wildlife and communities safe.

## Instructional Delivery

Materials:

1. (1) 8 ½ x 11 printer paper
2. (1) Cookie sheet
3. Tape
4. Colored markers
5. (1) Spray bottle
6. Cocoa powder
7. (1) Bag of cotton balls

Procedures:

1. Place the cookie sheet on the table
2. Crumple up one piece of paper
3. Uncrumple the paper, and tape the edges of the paper to the cookie sheet
4. Taking the colored markers, highlight the crumpled tops of the paper
5. Fill the spray bottle with water, and lightly spray the paper
6. Observe how the water travels from the highest top of the paper and pools at the lowest point of the paper
7. Next, sprinkle the same piece of paper lightly with cocoa powder, this will simulate pollutant in the water
8. Repeat the same process again, spray the paper lightly with water from the spray bottle
9. Observe how the cocoa powder mixes with the water, turning it brown and pooling at the lowest point
10. Empty the existing water out of the paper, so there is no remaining water on the paper

11. Next, place the cotton balls all around the paper
12. Again, sprinkle cocoa powder around the paper and spray the bottle of water on the paper
13. Observe how the cotton balls soak up the cocoa powder water mixture, preventing the water from getting contaminated

### Assessment/Evaluation

#### Questions:

- What are some absorbent materials you can find around your house?
  - Cotton balls, towels, paper towels, tissues
- What are some absorbent materials found in nature?
  - Moss, grass, foliage
- What are things we don't want to find in our water supply?
  - Garbage, waste, pollutants
- Why is it important to keep our water supply clean?
  - To protect wildlife, and to keep the water we use and drink safe so we do not get sick
- What can damage a watershed?
  - Pollution, climate change, invasive species, overuse of water, invasive species
- What happens when a watershed gets too much rain?
  - The bodies of water water level rises, affecting surrounding communities if the water level rises too high
- What happens when a watershed gets too little rain?
  - The bodies of water water level rises, threatening the drinking supply

#### Notes: