



Kids STEAM-to-go

PROTECTIVE FABRICS

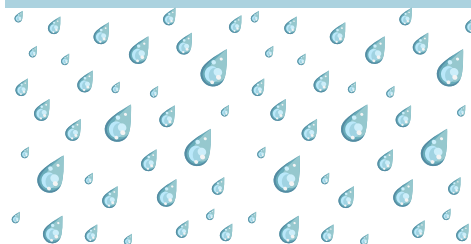
February 2021



Materials List

- Mini spray bottle
- Mini drop bottle
- Assortment of fabrics

*If completing this experiment indoors, a protective layer over any furniture is recommended (not provided)



Some fabrics repel or resist water, which can be useful for a variety of situations. In these experiments, explore what happens to different fabrics when they come in contact with water in different ways.

Directions:

1. Set up a work space that you don't mind getting wet.
2. Fill the dropper bottle and spray bottle with water.
3. Spread out the different types of fabric. Included fabrics are shown below...
4. Test your scientific thinking with the experiments listed on the back.



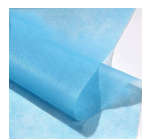
Canvas
(paint drop cloth)



Obstal Vinyl
(tablecloth)



Nylon
(thin disposable tablecloth)



Polypropylene
(non-woven, breathable,
waterproof fabric)



Cotton



Felt



Stayton Public Library

Part 1:

Objective: Explore what happens when water touches different fabrics

Question:

What happens when water touches different fabrics?

Check your background knowledge

What do you already know about what happens when water touches different surfaces?

Make a prediction

What do you think will happen with the water is dropped on the fabric?

Experiment

Drop water onto each fabric individually. What happens? Take note of your observations.

Review your results and draw conclusions

What did you discover?

Part 2:

Objective: Explore what happens when water touches different fabrics in different ways

Question:

Does it make a difference how fast the water moves or what size the droplets are when water touches fabrics?

Check your background knowledge

What happens when you spray water compared with when it's dropped?

Make a prediction

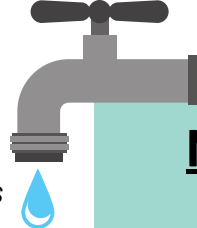
What do you think will happen when the water is sprayed on each fabric?

Experiment

Spray water onto each fabric individually. What happens? Take note of your observations.

Review your results and draw conclusions

What did you discover?



Modifications & Extensions

For a younger crowd...

While using the spray and dropper bottles, children are working the muscles in their hands that support writing. Even if that is all they are interested in doing, they are still learning about what their body can do!

For more advanced learners...

The fabrics included in this kit are examples of just some of the fabrics on the market today that may repel or resist water. Can you find others? What other kinds of materials are used for the purpose of protecting against the effects of water?

And more...

Can you think of other exploration questions you might like answered?

How could you adjust your experiments to find out the answer to your new question(s)? For example...

What happens if you keep spraying/dropping water?



Titles to Explore



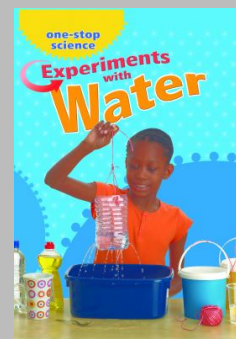
Super simple things to do with water :
fun and easy science for kids

by Kelly Doudna



FUNDamental experiments: Water

by Ellen Lawrence



Experiments with water

by Angela Royston