

## Clothing Science Experiment

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Topic Title: Fabric wicking ability, fiber, textile materials. Length of project: 1 hour

### **Research. What does society know. Look it up!**

Wicking is when water spreads on fabric. Different fabrics have different absorbencies. Words to search: different types fabric, wicking, absorbencies, water edu

### **Situation. Try something different or document a problem that has now arrived.**

Clothing is made from many fabrics, some natural and some manmade. Knowing the use of a garment will help determine what fabrics can be best used.

### **Hypotheses. Guess what may happen.**

1. The \_\_\_\_\_ fabric absorbs water the slowest.
2. The \_\_\_\_\_ fabric absorbs water the fastest.
3. Other.

### **Equipment. What you need.**

Gather at least four different fabrics and cut to size 2" by 7".

- Fabrics may include; cotton, linen, rayon, wool, silk, acetate, nylon, polyester, acrylic, lyocell.
- Some fabrics are blends, you should note the percent of each fiber.

Marker, paper clip, water, drinking glass for each fabric, timer.

For Option 2: Soap or Oil

### **Methods. Set up a procedure/protocol to test your hypothesis.**

- Draw a line across one end of the fabric strip, approximately one inch from the end.
- Attach a paper clip to the opposite end of the fabric strip.
- Pour at least two inches of water into a glass.
- Submerge the fabric strip into the water up to the line and place the end with the paper clip over the glass edge to hold it.
- Set the timer for two minutes then remove the fabric strip from the water and place on a dry flat surface.

### **Experiment. Conduct the experiment.**

Conduct the experiment to test how water or water mixture reacts to or is absorbed by fabrics.

### **Change one factor and re-do the experiment**

Option 1: Change the fabric factor and use 4 different fabrics

Option 2: Change the water factor by adding soap or oil to make a mixture

Redo the experiment.

**Results/Observations. What happened?**

Record what happened to the water for to each fabric.

How far did the water or mixture travel?

**Conclusion. Apply what you found out.**

How could you use this knowledge?

Which fabrics would you use for different summer sports? winter sports?