Cotton Comparison

Supplies/Materials:

- 3 types of fabric (same size piece is best): 100% cotton, 50/50 cotton blend, 100% synthetic
- Container with water
- Eyedropper

Procedure:

1. Write down your prediction for which fabric you think will absorb water the best
2. Use the eye dropper to place 5 drops of water on the fabric
3. Write down what happens. You can use words and/or draw a picture of what the water drops look like on the fabric
4. Repeat with each type of fabric

My Predictions:

Which fabric do you think will absorb the best?

My Observations:

100% cotton	**50% cotton/50% synthetic**	**100% synthetic**

My Conclusions:

Which fabric absorbed water the best?

Explore More:

Look at the tags on clothing in your drawers or closet:

- What are types of fabric do you find are the most common for shirts? Pants?
- How do the different types of fabric feel? Stretchy? Soft?
- Where were your items of clothing made? (Keep in mind the countries listed are usually where clothing was sewn, not necessarily grown/produced).

Natural Fibers

A variety of animals provide natural fibers for cloth. Wool comes from sheep, llama, alpaca, guanaco, and vicuña. Angora rabbits provide angora fiber and Angora goats provide mohair. Cashmere comes from Kashmir goats. The large white moth caterpillar, commonly called the silkworm, provides the finest silk. The fur and skins from animals such as mink, beaver, muskrats, and rabbits can also be found in clothing. Although leather is not a fiber, it is widely used as a fabric. Cattle hides are the source of most leathers, but the hides of pigs are also extensively used in soft leather goods.

Plants give us natural fibers for fashions too. The world's most important non-food crop is cotton. So many things are made of cotton that it would be hard to go through a day without using or wearing cotton cloth. Cotton has been found in tombs in India dating back to 3,000 BC.

Linen, made from fibers of the flax plant, is one of the world's oldest fabrics. Lesser-known natural fibers such as ramie, jute, and hemp have many uses, varying from finely woven fabrics to rope.

Synthetic Fibers

Since the late 1800s people have had synthetic fiber options to choose from. These fibers are made by chemists, and they fall into two broad groups depending on their source. One group of fabrics is made from natural materials, such as cellulose, which are chemically converted into compounds that can be made into fiber. Most cellulose used for making synthetic fiber comes from softwoods or the short fibers sticking to cottonseeds. Rayon and acetate are cellulose-based fabrics.

The second group of synthetic fibers is formed solely from chemical compounds, most of which are by-products of the oil-refining process. These fibers can be woven into cloth and are often mixed with natural fibers. They are resilient, although some are easily damaged by high temperatures. Petroleum-based fabrics include Kevlar®, nylon, polyester, acrylic, polypropylene, olefin, and spandex.