

What to Do

1. Cut a small piece of thread. If you use cloth, look for any loose threads to use. Ask a parent to help you cut the thread.
2. Make a wet mount of the slide, following the instructions on page 27. Label the slide so that you know what thread you are looking at. Keep a record of what the materials look like.
3. Place the slide on the stage of the microscope and secure it with the stage clips.
4. Observe your slide using the low-power and high-power objectives.
5. Using your knowledge of fibers, see whether you can tell what fibers make up mixed blends.

What Did You See?

Each fiber had its own distinct appearance. Wool, like the cashmere (goat hair wool) samples, looks broken or scaly. This is because wool comes from sheep and so more closely resembles animal hair. Threads made from plants also resemble one another. Cotton looks like a flattened tube or ribbon, while linen fiber looks like a rounded, thicker version of cotton. Silk is made from the thread of a silkworm. Silk fiber looks like a piece of glass; it is round, even, and solid. Synthetic threads are chemically produced and spun. They also tend to be smooth.

Did You Know?

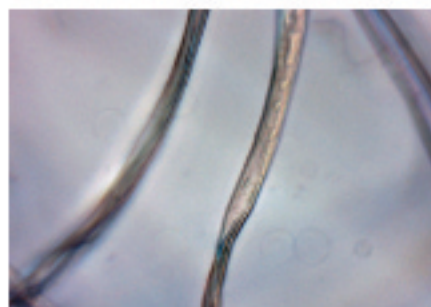
Nylon is a synthetic fiber that has been around since the 1930s. It was the first fiber to be made completely from petrochemicals (the stuff used to make gasoline) instead of natural plant or animal materials. The makers of nylon did take one lesson from nature: to make the fibers: they pushed the melted nylon through tiny holes called **spinnerets** in the same way that silkworms push silk through their spinnerets.



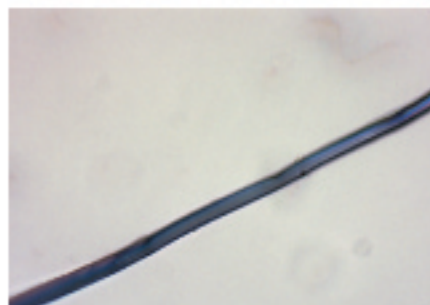
Bamboo x50.



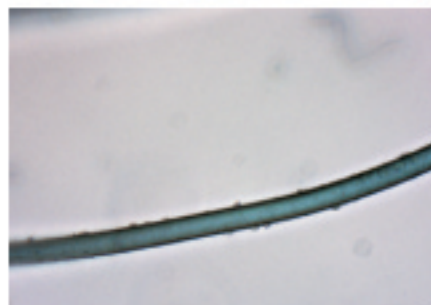
Cashmere x400.



Cotton x400.



Silk x400.



Polyester x400.