

Security Biography

Stephanie Kwolek

Stephanie Kwolek liked to design clothes as a girl. It wasn't until high school that she became interested in science.



Stephanie graduated from college and took a job as a chemist. Her job was designing new kinds of textiles. One day, while working in her lab, she noticed something strange in one of her experiments - a mixture that should have been clear and goopy was cloudy and runny.



Rather than throwing her experiment away, Stephanie asked her coworkers to test the strength of the new substance. It turned out to be amazingly strong and was eventually used to make a product called Kevlar.

Today, Kevlar is used to make things like bullet-resistant vests, lumberjacks' suits, helmets, fire hoses, and lots of other equipment to keep people safe and prevent injuries.

To Learn More:

Visit the Tech Lab website at www.oms.edu/tech for links to more information and Online Activities!

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Vernier Technology Lab

Take-Home Activities



Security Technology

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Fingerprint Identification

Can you determine the pattern of your fingerprint?

Materials:

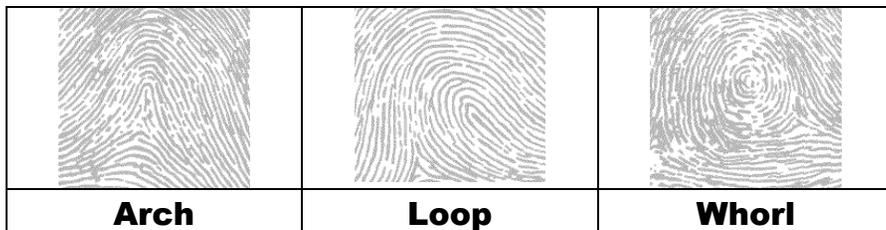
- Paper
- A #2 pencil
- Roll of clear tape
- Magnifying glass

To do and notice:

Follow these directions to make a fingerprint.

1. Rub the pencil on the scratch paper until there is a dark smudge of graphite.
2. Rub one finger on the smudge until the fingertip is covered with graphite.
3. Place a small piece of tape over the fingertip. Press the tape down gently.
4. Carefully remove the tape and stick it on a piece of clean white paper sticky side down. Be sure to label your fingerprint.
5. Look at the fingerprint with the magnifying glass and try to identify what type you have. The pictures below show what each type looks like.

Are your other fingers the same?



Setting the Scene

Can you find the evidence?

Materials:

- A room full of furniture and objects in a random arrangement
- A friend

To do and notice:

1. Look around the room. Try to remember what it looks like.
2. Leave the room. Have your friend move things around.
3. Come back into the room. Figure out which things have been changed.
4. Ask your friend if you missed anything.

Going further:

There are lots of clues in a room. People can't always remember how things are different. Forensic teams tape off crime scenes to keep objects from being rearranged or removed. They take lots of photographs to record how things were.