



FINGERPRINTS

- The lenses can be used to magnify and compare the different patterns seen in fingerprints.
- Ridges form on our fingertips before we are born and form patterns which we call fingerprints. They do not change, they only grow with us.
- Since they don't change, scientists can compare fingerprints to see if a person was at a crime scene. They do this by looking at the patterns and comparing them to known samples.
- There are three basic patterns; loop, arch, and whorl.



Loop

Arch

Whorl

Use **Results Sheet 10** and follow the directions:

1. Take a pencil and smudge the lead on a spare sheet of paper.
2. Starting with your left little finger, rub it on the smudge until covered.
3. Take a piece of clear tape and place it on the flat pad of your finger, being careful to not get any creases in the tape. Gently press down.
4. Carefully peel the tape off your finger and place it in the left little finger box on your results sheet. Look at the photos above - what pattern is it?
5. Repeat the process for the rest of your fingers and thumbs.
6. Compare: Do any of your classmates have the same pattern as you or are they different? If you have a sibling, compare their fingerprints to yours; are they the same or different?
7. Do you or any of your classmates have fingerprints other than the three main patterns? Do you have any other unique features? (e.g. a scar)

TIPS AND INTERESTING FACTS

- Cut ten pieces of tape so you don't have to worry about it later and add to the pencil smudge when you need to.
- Loops can point to either your thumb or your little finger. There are some rare patterns other than those above. These are called accidental patterns and can be a combination of two or more patterns.
- Identical twins do not have identical fingerprints! This is because our genetics only have a small part to play in the formation of fingerprints. Small environmental changes in the womb (for example, if the fingertips are resting on anything) lead to slightly different patterns.