

Develop, Classify and Identify Your Own Fingerprint

Part A: Develop Your Own Fingerprint

In this exercise students will see how easy it is to develop a fingerprint.

You will need:

- One thimble full of Xerox toner powder (can be gotten from photocopier)
- 1 square of toilet paper per student

Method:

Ask students to wipe their right thumb across their forehead or the crease of their nose to transfer oils and sweat.

Roll the thumb onto the square of toilet paper several times in different locations.

Deposit a thin line of Xerox toner powder along the toilet paper close to where fingerprints were placed and gently blow the toner across the toilet paper towards the fingerprints. **Caution: DO NOT INHALE TONER POWDER**

Cover the fingerprints with clear tape to preserve the prints.

Students may be surprised that you can make fingerprints on so delicate a surface!

Part B: Identify and Classify Your Own Fingerprint

In this exercise students will use inflated balloons to identify individualizing details within fingerprints. They will have to match and identify a fingerprint. Types of fingerprint patterns are shown on the following page. You can print this up to give to the students for reference.

You will need:

- white, round, party balloons (two per student)
- Several ink stamp pads

Method:

Ask students to press their right thumb firmly into the ink pad and transfer inked thumb firmly to surface of flattened white party balloon. Do this on two balloons.

Allow the prints to dry and blow up both balloons to an 8 inch diameter and tie them off.

This will allow the print to be magnified, allowing students to see 100X magnified details of friction ridges without aid of a magnifier.

Ask students to keep one of their balloons and place the other balloon into a pile in middle of the classroom.

Students will use their knowledge of fingerprint pattern types (from following page):

- Whorls
- Arches
- Loops

and scrutinize the individualizing third level detail on the balloon they have kept. They should also determine the classification category of their fingerprint.

Then have your students locate and identify the balloon with their fingerprint on it from those in the center of the classroom.

PATTERN TYPES

ARCH



TENTED ARCH



LOOPS



WHORLS

