



Fingerprinting



Job 1

The first job is to take a latent (hidden) fingerprint.

Press your right thumb on a sheet of glass or plastic film. Gently shake some talcum powder over your thumbprint, and blow off the excess.



Make sure you don't blow talcum powder into your eyes or anyone else's eyes.



Smooth a piece of sticky tape over your thumbprint, then peel it off carefully.

Stick the tape onto a labelled piece of black card. Hand it in to the Police Officer.



You have natural oils on your skin. These leave a faint image of your fingerprint on everything you touch. The talcum powder sticks to these oils, and the sticky tape lifts the talcum powder off the surface. This takes the fingerprint with it, and lets the forensic scientists compare the fingerprint with villainous prints back at the lab.

Job 2

The second job is to make your **Fingerprint Record Chart**.

Collect a blank Record Chart and ink pad from the Police Officer.

Roll your right index finger **lightly** on the ink pad, then roll your inked finger onto the correct space on your Chart.



You may have to practise this technique until you can produce a clear fingerprint.

Repeat this method for each finger on your right hand. Wash your hand!

Job 3

Closely examine each fingerprint, and identify its pattern using the information sheet. Record this information on your chart.

Job 4

The last job is to work out whose prints belong to whom.

Collect a labelled latent print.

Look carefully to see if the labelled print is yours.

If it's not your print, work closely with your colleagues to work out which labelled print belongs to you.

Were you the villain?



Fingerprint Record Chart

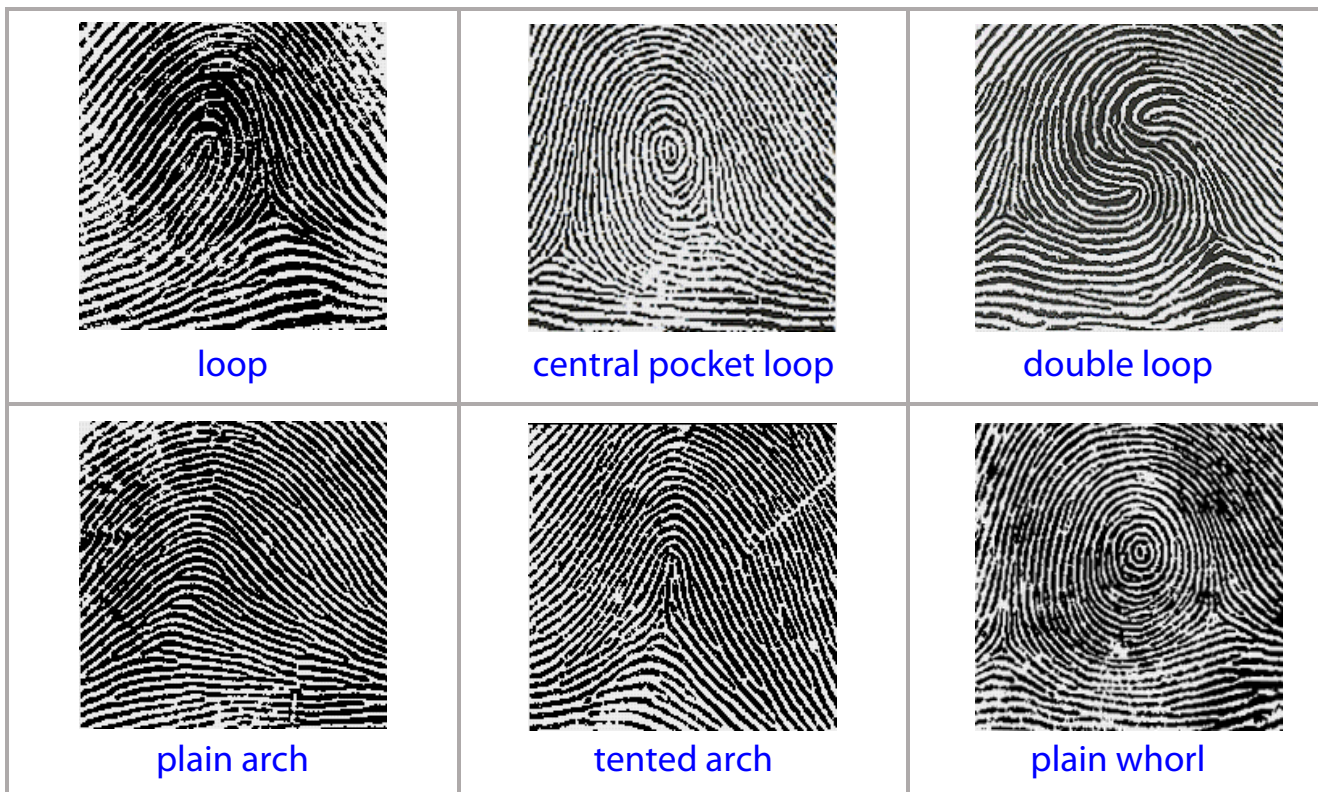
Name _____

Thumb	Index	Middle	Ring	Little

Fingerprint Record Chart

Name _____

Thumb	Index	Middle	Ring	Little

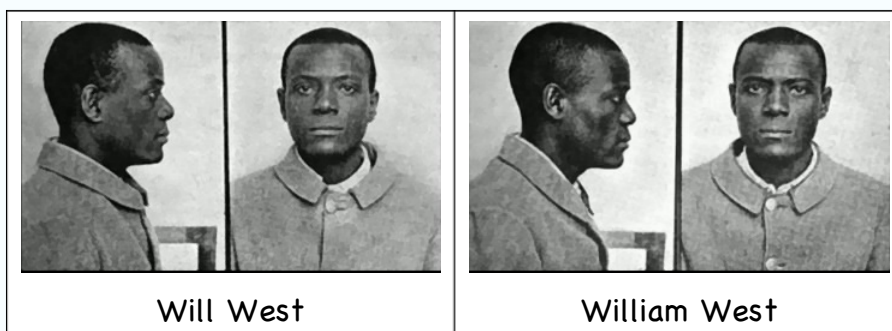


Some features of fingerprints

A tale of two prisoners

Scientists have not always used fingerprinting to identify criminals. Instead, they used the 'Bertillon System'. This recorded the sizes of body parts.

In 1903, a prison in Kansas in the US received a prisoner called Will West. He looked similar to another prisoner called William West, who was serving a life sentence for murder. The two men had almost the same Bertillon measurements and similar names. However, their fingerprints were different. As a result of cases like this, fingerprinting became the standard way to identify people.



Look at the two prisoners – can you tell them apart?

If not, what could you do to identify the two men?

Fingerprinting

Teacher Guide

Contents

- Activity notes
- Student checklist
- Technician notes

Activity notes

This is easy to do, if a bit messy. Only a little talcum powder is needed to get a good result for the latent prints. Make sure that the reverse side of the black card is named, not the front as that would be a bit too easy! Designate a teacher or responsible student as the 'Police Officer'.

When the students use the ink pad, they should take care to roll their fingers across the paper, otherwise they will only achieve a black smudge.

We found that it was surprisingly easy to work out whose prints belong to whom (unless they were cheating, of course). If you want to avoid cheating, the 'Police Officer' should code the latent prints.

Fingerprinting

Technician notes

Per pair of students:

- 1 × black ink pad (washable ink)
- 1 × roll of clear sticky tape
- 2 × pieces of black card, approx. 10 cm × 10 cm
- 1 × sheet of clean glass (use propanone for cleaning)
- 1 × talcum powder
- 2 × hand lenses
- 2 × Fingerprint Record Sheets

Propanone 

Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness. Repeated exposure may cause skin dryness and cracking.

Wear eye protection. Avoid naked flames and other sources of ignition. Dispense in a fume cupboard. Ensure laboratory is well-ventilated. Avoid skin contact and do not inhale the vapour.

Fingerprinting

Student checklist

Check that you have the following things.

- black ink pad
 - clear sticky tape
 - black card (one each)
 - sheet of clean glass
 - talcum powder
 - hand lens (one each)
 - Fingerprint Record Sheets (one each)
-

Fingerprinting

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