



Myself – Fingerprints, Dominant eye, Blind Spot

EQUIPMENT	'Lead' pencils White paper Sellotape Marker pen Hand lens
PREPARATION	Collection of materials
BACKGROUND INFORMATION	Everybody's fingerprints are different. This science fact greatly helps the police. Everyone has a dominant eye – it can be the right one or the left one. (The brain might get confused as to where an object actually is, or see on the double, if we did not) Every eye has a blind spot – the place where the optic nerve joins the retina. You are not normally aware of this with two eyes, as this phenomenon does not happen at the same time with the two eyes.
SKILLS	Investigating and experimenting
ACTIVITY	To investigate some scientific facts about oneself: <ul style="list-style-type: none"> To take fingerprints To find which is your dominant eye To investigate the blind spot of your eye
SAFETY	Wash hands after fingerprints activity



Myself continued

A Taking your own fingerprints

Using the pencil scribble quite thickly on white paper

Rub your finger all over the scribble, making it very smudgy.

When your finger is black press it firmly to the sticky side of a piece of sellotape. Press it hard so that the ridges are transferred to the sellotape.

Now stick the sellotape onto white paper and you should see your finger print.

Look at the print with your hand lens.

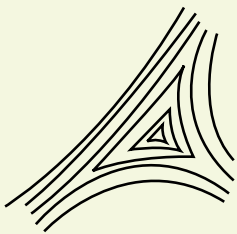
Look for loops (L), splits (S), ridges (R), cusps (C)

Mark these on your fingerprint.

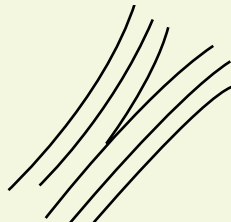
Take a print from a friend and mark it in the same way.

How can you tell the same person did not make these prints?

Do the lines of the print ever cross?



Cusps



Ridges



Loops



Splits



Myself continued

B To find your dominant eye

Pick out a vertical object or line in the distance e.g. a lamppost (outdoors) or the edge of a door or window (indoors). Hold a finger or pencil vertically in front of you and line it up with the vertical object. Now close each eye in turn. Which eye do you think is the dominant one?

(The eye which sees the finger or pencil in the same place as when your two eyes are open is the dominant one.)

C To discover the blind spot of your eye

1. Hold the cross and spot diagram at arm's length with the cross on the right.
2. Close your right eye.
3. While looking only at the cross, bring the page slowly towards your face.

What happens?

(At a certain point the image of the spot will disappear because the light from it is falling on the blind spot of your left eye.)

