# nustem

## FINGERPRINTS

Learn how to take your own fingerprints and dust your house for clues!

## Overview



Have you ever looked really closely at your own fingerprints? Use this simple method to take your own prints using only a pencil, paper, sticky tape, and of course, your fingers!

#### 🖶 Printable version

This page will print, but looks a little funky. Click the button for a PDF version which looks a bit better.

### What you'll need

- A piece of paper larger than your hand.
- Spare scrap paper, if you have any.
- A pencil.
- Sticky tape.
- Scissors to cut your tape.

#### Duration

10 minutes or so.

#### Suitable for ...

Age 3 and up.

♠ More STEM at Home

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- Supervising children when they use scissors.
- Make sure children wash their hands thoroughly after completing this activity.

## What to do

#### Step 1



Use a pencil to draw around your hand on your sheet of paper.

#### Step 2



Draw a rectangle in the corner of your page or on a piece of scrap paper. It needs to be big enough to fit the top part of your thumb in. Colour in the square with your pencil – make sure that you shade it heavily, and that all of the rectangle is covered. they're ready for this activity. You might want to think in particular about:

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#### **STEM Career:** Forensic Scientist

Forensic scientists collect evidence from crime scenes and analyse this in a lab. They work closely with the Police and Crown Prosecution Service. Areas of forensic science include analysing blood, DNA, handwriting and signatures, as well as computer analysis and data recovery.

#### Step 3



Put your thumb onto the rectangle and rub. You need to make sure that you get a covering of pencil on your thumb.



Carefully place a piece of sticky tape onto your thumb with the sticky side touching your thumb.

Step 5



Remove the tape and stick it to the thumb on the hand on your paper.

#### Step 6



Colour in your pencil rectangle again or make a new rectangle, ready to take some more prints.

Step 7



Using each finger, follow the steps again, until you have a record of all your fingerprints.

You might want to wash your hands now!

Then take a close look at all of your prints.

## Things to discuss

Can you see patterns on your fingerprints?

Can you see similarities and differences between your fingerprints?

Can you take the fingerprints of other people in your home?

Are they similar to yours or different?

There are three main types of fingerprint: loop, whorl and arch, which types do you have?



## How it works

Fingerprints are caused by ridges on the skin of the hands and feet. Every human has their own, unique, set of fingerprints (and toe prints!).

Fingerprinting is useful for forensic scientists who work with the police to identify suspects of crime. They dust for fingerprints at the scene of a crime and compare prints to a database.

Some animals also have fingerprints: a koala's fingerprints are very similar to a humans!

## Other things to try

#### Dust your house for fingerprints

#### You will need:

- a small amount of talcum powder or icing sugar,
- a plate or bowl,
- a makeup brush or paint brush with very soft bristles
- a glass or mirror with fingerprints on.

#### Step 1



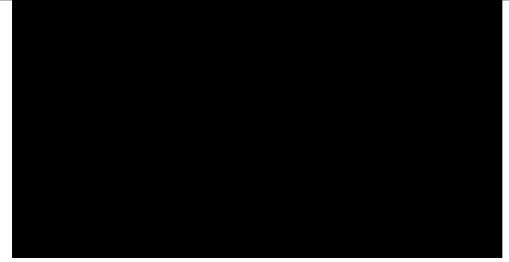
Sprinkle a small amount of powder onto your plate or bowl. Dip the top of your brush into the powder. Tap the handle of your brush to remove excess powder.



#### Step 2

Gently dab your glass or mirror with the top of your brush- don't wipe your brush across the surface. Any fingerprints should appear! Blow the extra dust away carefully. Watch the video below to see how it's done!

You can compare these fingerprints to those you took of your family earlier.



#### Step 3



If you want to lift and keep the fingerprints, you will need sticky tape and scissors and a dark coloured piece of paper.

Cut a piece of tape and stick it lightly on top of your first print. Don't push the tape down as this will spoil the print.

#### Step 4

#### https://nustem.uk/activity/fingerprints/



Stick the tape to your paper. Now you should be able to see the print fingerprint clearly.

Lift any other prints you can see in the same way and stick them to your card.

Compare the prints you lifted with the fingerprints you took of your family members earlier.

Can you find a match?

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### Step 5