

SHOE PRINT CASTS

OVERVIEW

In this activity you'll learn how to cast a shoe print.

Footprints and shoe prints can be left on many different surfaces at a crime scene. Investigators categorise the prints into one of three types - patent, plastic or latent. Different methods are used for collecting shoe print evidence depending on the type of print found. A plastic print is a three-dimensional impression left on a soft surface such as mud, sand or dirt. For these prints, casting is the mostly commonly used collection method.

DID YOU KNOW?

Investigators can tell a lot from a shoe print, including the gender and approximate height of the person.

MATERIALS

- Disposable gloves
- Dust mask
- Safety glasses
- Apron, overalls or other protective clothing
- Shoe
- Play-Doh (4 x 112g tubs)
- Bowl, deep plate or tray to use for mould
- Newspaper
- Plaster of Paris
- Water
- Mixing bowl
- Spoon
- Measuring cup
- Crayons
- White paper (for rubbing)

⚠ SAFETY NOTES

Wear appropriate safety gear (gloves, glasses, dust mask and protective clothing) when using Plaster of Paris. Read and follow safety instructions on the Plaster of Paris packaging for its use and disposal.



WATCH THE VIDEO LINK



IDEAL FOR 8-13 YEARS



ADULT INVOLVEMENT RECOMMENDED

METHOD

Collect the shoe print:

1. Put your protective gear on - safety glasses, dust mask, gloves and apron (or overalls).
2. Take the Play-Doh and roll into one large ball.
3. Split off three quarters of the Play-Doh and flatten this into a shape large enough to hold the shoe print. The Play-Doh should be no thinner than 15mm.
4. Press the sole of the shoe firmly into the Play-Doh.
5. With the remainder of the Play-Doh, roll it into a long thin strip. This will be used to create a 'wall' around the Play-Doh containing the shoe imprint.
6. Transfer the imprinted Play-Doh into the mould holding bowl/plate.
7. Place the thin strip of Play-Doh around the printed Play-Doh. Ensure none of the print is covered by the Play-Doh. The 'wall' increases the depth of the print and makes it easier when you pour the Plaster of Paris in (see video for details).



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METHOD (CONTINUED)

Make Plaster of Paris

Note: active adult supervision is required when working with Plaster of Paris.

1. Cover the work surface with newspaper to protect it from the plaster.
2. Make the plaster mixture using the Plaster of Paris, following the instructions provided to create a smooth consistency with no bubbles.
3. Note that the ratio of Plaster of Paris and water should not exceed 1:1 as highly concentrated plaster mixture can be difficult to remove from a mould.
4. Pour the plaster mixture slowly and gently into the cast, covering the entire print.
5. Allow the mixture to set, using the recommended setting time from the Plaster of Paris instructions as a guide.

6. Once set, remove the cast by slowly and gently lifting the Play-Doh out of the bowl.
7. Reveal the shoe print cast by peeling away the Play-Doh.
8. Clean the cast, using paper towel to gently remove any Play-Doh stuck onto the cast.
9. Set the cast aside and leave again for at least 1 hour.

Shoe print rubbings

1. Place a piece of white paper on the cast and rub lightly with the crayon.
2. Continue to rub on the paper until the details of the shoe print can be seen.
3. Compare this to the original shoe. You should be able to match the pattern on the rubbing to the sole of the shoe.

FOR DISCUSSION

- Does the cast rubbing provide enough detail to match the shoe print?
- Is the type of shoe easily more recognisable from the rubbing or shoe print cast?