

THE SCIENCE

BEHIND SHERLOCK



Learn to dust for fingerprints @ Home!

Collect clues like a real detective!

Purpose:

Each person has unique fingerprints that are different from everyone else's. But many fingerprints have designs in common like swirls or loops. Test around your house and see if you can identify which fingerprints belong to who, and what they've been touching!



You will need:

- Colored chalk
- A butter knife
- Cornstarch
- A small paint brush
- Clear tape
- Paper
- A variety of surfaces like a mirror, a kitchen counter, bathroom tile, or a cutting board.

Powder Prep:

Step 1: Start by scraping your colored chalk with the butter knife to make a fine powder.

Step 2: Mix your powdered colored chalk with an equal portion of cornstarch.
(This mixture will be your fingerprint powder.)

Step 3: Now it's time to make some fingerprints to collect!



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Test:

Test a variety of surfaces to see which ones work best. Fingerprints stick to smooth surfaces better than rough surfaces. Give it a try to see which works better. The cleaner the surface, the easier it will be to collect and see your fingerprints. You can try pulling a fingerprint from different types of surfaces like mirrors or glass, a plastic cup, a metal pot, your shirt, the sidewalk, the possibilities are endless!

Let's try and figure out which surfaces work the best!

Sprinkle:

Once you've made some fingerprints (or found some!), use your brush to sprinkle the fingerprint powder over the surfaces that have been touched. Be careful not to touch the brush to your fingerprint; you don't want to smear it. Just hold the brush above your fingerprint close, but not too close, and shake some powder on it. You want to cover the whole print with powder.

Blow:

After you're done sprinkling, lightly blow across the surface to remove any extra powder. Too much powder on the surface will make a messy fingerprint that will be hard to see.

Time to collect your fingerprints!

Tape:

Stick a piece of tape on the powder left on the surface where the fingerprint is. The oils from the skin on your finger left a pattern on the surface. The powder has now taken on the shape of that pattern and when the tape touches it, the powder will stick to the tape in the same pattern of your real fingerprint.

To best see your fingerprint, remove the tape and stick it on the next piece of paper so you can see the chalk. Experiment with which surfaces best hold a fingerprint, and see how long a fingerprint can last before you dust it.

Explore:

Each person has unique fingerprints that are different from everyone else's. But many fingerprints have designs in common like swirls or loops. Test around your house and see if you can identify which fingerprints belong to who, and what they've been touching!



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Track your collected fingerprints here!

#SherlockHolmesDay #SherlockAtHolmes #ComicConMuseum #ComicConMuseumAtHome

