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Money laundering

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Money laundering

How to get coins shiny again

Research question

Who does not like a small treasure of coins? But unfortunately, our coins often no longer shine so beautifully. Rather, they are tarnished black and dirty.

What is the best way to clean coins?

You need

- Dirty coins
- Small rags or kitchen towels
- Vinegar
- Toothpaste
- Crushed eggshells (=lime powder)
- Water
- Washing-up liquid
- Mixture of table salt and vinegar

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How to do it

Step by step

Mechanical cleaning

1. Lightly dampen a kitchen towel or cleaning cloth with water.
2. Put a little of the cleaning agent on the cloth and wrap a coin in it.
3. Rub the coin vigorously between your fingers in the cloth for about ten minutes.
4. Wash the coin with water and look at the result.
5. Repeat all steps with another cleaning agents and compare.

Chemical cleaning

1. Fill a glass just under halfway with simple vinegar.
2. Add enough table salt with a tablespoon so that a layer of salt about 0.5 centimeter high can be seen at the bottom of the glass.
3. Stir everything until the salt has dissolved.
4. Drop a couple of coins into the jar and wait for five minutes.
5. After that, take out the coins and dry them.
6. What is the result? Compare it with the other cleaning methods.

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Additional information

For parents and teachers

Context

This experiment can stand alone or complement the "Cosmetics" or "Washing" teaching units. The overarching theme is how to clean surfaces. Common strategies are a) mechanical cleaning or b) chemical pretreatment of certain types of dirt so that they can be better removed in a second step.

Surface cleaning

Not all dirt can be washed off well with surfactants. That is why some cleansers contain cleaning agents that help to remove the dirt mechanically. These are often powdery inorganic substances such as lime. Other cleansers contain acids that dissolve and thus remove lime residues, for example. Dark residues on coins (rust) can also be removed chemically. For this purpose, a mixture of common salt and acetic acid serves as a "rust converter".

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