

SCIENCE
CHALLENGE

09

BRIGHT AS A NEW PENNY



THE
JAMES
DYSON
FOUNDATION

BRIGHT AS A NEW PENNY

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Designed by Roy,
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The brief

Clean a penny using cola.

The method

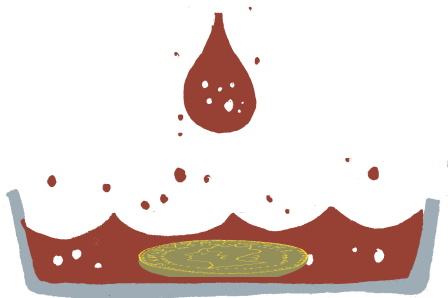
1. Place the penny in the container.
2. Add enough cola so the penny is covered.
3. Leave overnight.
4. In the morning, you should find that your penny is clean.

Materials

Shallow container

Cola

A penny – the older and dirtier the better



How does it work?

Pennies have a copper coating. As the copper gets older, it reacts with the oxygen in the air and begins to form a copper-oxygen compound. This compound is what makes the penny look dull.

Meanwhile, cola contains phosphoric acid. This acid breaks down the copper-oxygen compound chemical bonds allowing a fresh, unoxidized layer of copper to be exposed.

