

Good as new

Have you thought about why a new penny is so shiny compared to an old one? Perhaps it is just dirt or is it something more than just dirt? Is something invisible happening that we can't actually see.

For this week's activity, we thought it would be fun if you could see the powerful effect lemon juice has on pennies.

ADULT SUPERVISION REQUIRED – Before collecting any materials you must get adult permission. Additionally, you must check you are not allergic to any of the resources listed below.

Suggested instructions:

Equipment and resources

- Lemon Juice
- A glass.
- Some paper towels.
- A few old pennies.

Steps:

1. Place an old penny in the glass.
2. Add lemon juice to completely cover the penny.
3. Wait ten minutes and observe any changes.
4. Use the paper towel to wipe away the lemon juice.

Thinking time:

Over time, metals such as copper have a chemical reaction with oxygen which is found in the air that we breathe; this is called oxidation.

Oxidation makes pennies that are made from copper look old and dirty very quickly. Lemon juice contains an acid that effectively removes the oxidation from the penny and makes it look shiny and new again.



Follow up:

- Can you try the same thing again using vinegar and test which is more effective?
- Can you record your experiments in 2Publish and share them with friends? Can you show how the lemon removes the oxidation from the penny using 2Animate to share your understanding.