

Anti Ageing Lemon

You will need:

- Adult help
- An apple
- A lemon
- Chopping board

Let's make it!

A fun and easy experiment...is anti ageing a reality? Ask an adult to cut the apple in half and to cut a slice of lemon. Put the apple halves next to each other in a shady spot. Take a slice of lemon and rub into one of the halves of apple make sure you rub all the white bits of the apple. Leave the other half on the side. Now just wait...hmmm about 30 minutes. After 30 minutes, check on your progressWhat? One half of the apple is covered with brown dark spots but the other half (which you rubbed with lemon) is clear and looking fresh!

How?

When an apple is cut open, an enzyme called polyphenol oxidase is released from the cells of the apple and reacts with the oxygen in the air. This reaction causes the fruit to turn brown, similar to rust forming on metal. Almost all plants contain polyphenol oxidase, and it is believed plants use this enzyme as part of a defence mechanism. When a plant is damaged, the browning of the affected area is thought to discourage animals and insects from eating the plant any further. It also might help the plant heal because the browning creates an antibacterial effect, preventing germs from destroying the plant even more. Lemon juice helps keep the apple from browning, because it is full of ascorbic acid (Vitamin C) and it has a low (acidic) pH level. Ascorbic acid works because oxygen will react with it before it will react with the polyphenol oxidase. However, once the ascorbic acid gets used up, the oxygen will start reacting with the enzyme and browning will occur. In other words lemon is anti-ageing! At least for plants!

