

Y5 Irreversible Changes

KS2 Y5 Science · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

How can you tell a new material has formed?

Step 1 · Look for fizzing or bubbles

A new gas may be forming

Step 2 · Look for a colour change

e.g. silver iron turning orange-brown rust

Step 3 · Look for heat, light or a new smell

e.g. a flame, or the smell of toast

Step 4 · Try to reverse it

If you can't get the starting materials back, it is irreversible

Answer: Fizzing, colour change, heat or light, a new smell — and not being able to change it back — are clues to an irreversible change.

Check: Careful: boiling water bubbles too, but that is reversible. Use more than one clue.

2. Now try one with the steps

What happens when a candle burns?

Step 1 · The flame melts some wax

Step 2 · The liquid wax travels up the wick and burns

Step 3 · What new materials form?

Answer:

3. Practice

Have a go at each one. There is space underneath to work it out.

1. What is an irreversible change?

2. Is burning wood reversible or irreversible?

3. Name ONE new material made when wood burns.

4. What gas is made when vinegar and bicarbonate of soda mix?

5. Is baking bread irreversible?

6. What does iron need to rust?

7. Give TWO signs that a new material may have formed.

8. Is frying an egg reversible or irreversible?

9. A candle burns. Which part is reversible and which is irreversible?

10. What does burning need from the air?

11. Water boiling makes bubbles. Is it an irreversible change? Explain.

12. A balloon is 20 cm around with 2 spoons of bicarbonate and 30 cm with 4 spoons. How many centimetres bigger is it?

13. Plan a fair test: does the amount of bicarbonate change the size of the balloon? Name ONE thing to keep the same.

14. Why must burning experiments only be done by an adult?

4. Before you hand it in

Any bubbling means a new material.

Check for other clues and ask whether it can be reversed.

When something burns, it just disappears.

Burning changes materials into new ones; nothing simply vanishes.

Melting and burning are the same because both need heat.

Melting is reversible; burning is irreversible.

Rust is just dirt on the metal.

Rusting is an irreversible change — the iron is changed into rust.