
PUPIL WORKSHEET — Detect Static Electricity

Young Einstein Science Kit

1. What you are investigating

You are going to use a simple detector to **see static electricity**.

When a charged balloon comes close to the metal plate, the thin metal leaf moves.

This shows that **like charges repel**.

2. Equipment

- Balloon
 - Wool cloth / jumper
 - Static electricity detector (metal plate, rod, leaf, plastic box)
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3. Predict

Before you start, write your prediction:

What do you think will happen when the charged balloon is brought near the metal plate?

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.....

4. Method

1. Rub the balloon on your hair or clothing to **charge it up**.
 2. Hold the balloon close to (but not touching) the metal plate.
 3. Watch the **metal leaf** carefully.
 4. Move the balloon away again.
 5. Try different distances and different fabrics.
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5. Observe

Write or draw what you see:

What happened to the metal leaf when the balloon came close?

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.....

What happened when the balloon moved away?

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.....

6. Explain

Use these words to help you:

charge, repel, attract, electrons, static, metal, balloon

Why did the leaf move when the balloon came close?

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.....

Why does the balloon not need to touch the metal?

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.....

7. Real-life links

Static electricity is used in many modern technologies.

Match the use to the explanation:

Technology

What static electricity does

Car paint spraying A. Charged particles stick to the right places

Laser printers B. Charged paint is attracted to the car body

Air purifiers C. Dust is trapped by charged plates

Write the correct letters:

Paint spraying: ____ Printers: ____ Air purifiers: ____

8. Challenge Questions

1. Why does hair stand up when you rub a balloon on it?

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2. Why does a balloon sometimes stick to a wall?

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3. Why is the detector inside a plastic box?

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9. Key Ideas to Remember

- Rubbing creates **static electricity**.
 - A charged balloon can move charges in metal **without touching**.
 - **Like charges repel** → the leaf moves away.
 - Static electricity is used in **painting, printing, and cleaning air**.
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