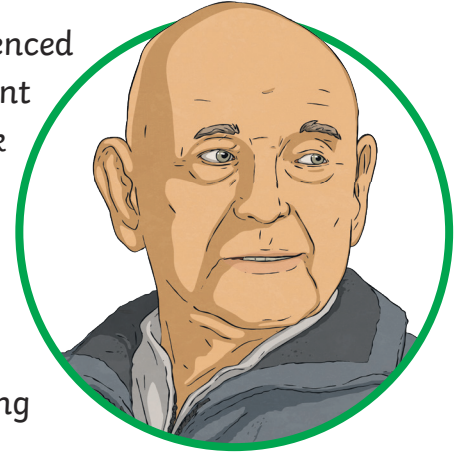


# Blackout Materials Investigation

During the Second World War, most people living in Britain experienced bombing raids or the Blitz. The B-17 bomber that crashed in front of Tony Foulds in Endcliffe Park, Sheffield, was on its way back from Denmark to complete a bombing raid. In Britain, people had to protect their homes during a bombing raid by creating a 'blackout'. This meant that there could be no light at all coming from the house.



Let's investigate the best way to create a blackout using different materials.

## You will need:

- Light box (or simply a sealed box)
- Torch
- Different colour materials (newspaper, cloth, card, paper)

Put the torch inside the light box and see how much light escapes from the box.

Cover the box with different materials. Can you stop light from getting through?

Materials that prevent light from travelling through are **opaque**. Materials that allow light to pass through are **transparent**. Materials that allow some light to pass through are **translucent** (semi-transparent).

Record your findings in the table. Write or draw the material in the appropriate column.

Extension: Can you experiment with which colours are best at creating a blackout? Are layers of material better at creating a blackout or is one single layer better?

Transparent	Translucent	Opaque

# Blackout Materials Investigation

Which material was the best at creating a blackout? Why do you think this? Use scientific language to support your answer.

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