# Light Through Materials: Look and Compare

Answers and adult support.

## Choose safe samples

An adult supplies a smooth clear plastic sheet, tracing paper and card with no sharp edges. Do not use glass or plastic bags. Use room light and a large dark shape drawn on paper; never look at the Sun.

## Make a fair comparison

Keep the same shape and lighting. Hold each sample the same small distance in front of the shape, not pressed against the paper. Look through one layer at a time. An adult can hold the sample and scribe.

## Three useful words

Transparent materials let you see an object clearly through them. Translucent materials let light through but the object is not clearly seen. Opaque materials do not let light through. Typical clear plastic, tracing paper and card illustrate these respectively, but thickness and finish matter.

## Record what actually happens

Accept the observed results for the chosen samples, including uncertainty. Repeat with the same distance and light before comparing. Do not replace observations with the typical pattern. The final sentence should describe evidence, not a guessed result.