

## LIGHT AND SHADOWS

### KEY IDEAS

- Light travels outwards from its source
- Some materials let light pass through them, others do not
- Light cannot pass through opaque materials
- Shadows are formed by opaque materials blocking out the light path

### EXAMPLE QUESTIONS

- What kind of materials make shadows?
- What kind of materials do not make shadows?
- What has to happen for a shadow to be made?

### LIGHT CAN PASS THROUGH CERTAIN MATERIALS

- Materials, such as clear glass or perspex, clingfilm and clear water, let most of the light pass through them.
- Some materials, such as colored glass, only let certain colors of light pass through them.
- Opaque materials, that have no transparent quality, such as wood, do not let any light pass through them.

### SHADOWS CAN FORM BEHIND OPAQUE OBJECTS

- Opaque objects block out the light by absorbing it. As a result, a shadow may form behind the object.
- This is because light travels in straight lines from its source.
- It cannot wrap around the opaque object to illuminate the area behind it.

