Aim

To investigate the different kinds of image you can see in curved mirrors, and to explain the ways in which curved mirrors reflect light.

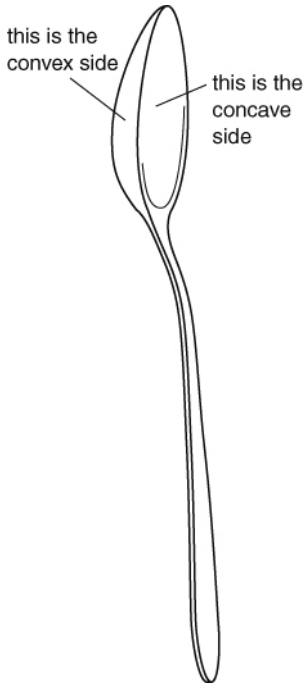
Introduction

Curved mirrors can be described as concave or convex, depending on which way they curve. The two sides of a spoon act as concave and convex mirrors, so you can use a spoon to investigate the kinds of images you see in both types of mirror.

Method

Apparatus

- concave mirror
- convex mirror
- ray box and power pack
- triple slits
- plain paper



Describing images

A Look at your image in a convex mirror (or the convex side of a spoon). Describe it carefully. Does it seem bigger or smaller than your face? Is it the right way up? Does it change if you move the mirror closer or further away?

B Now look at your image in a concave mirror or the concave side of a spoon, and describe it carefully.

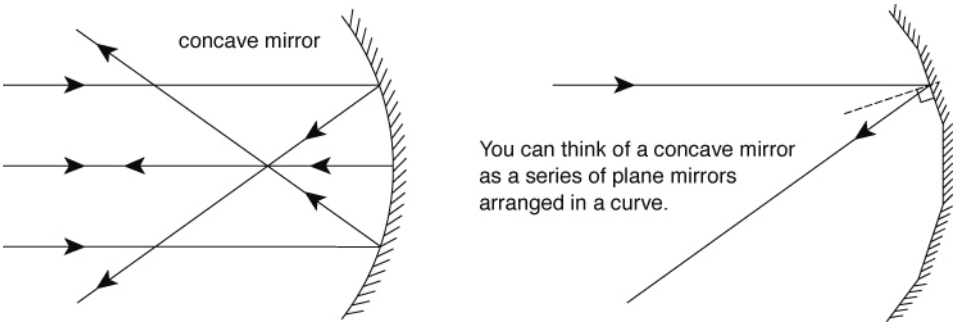
Method: How the mirrors reflect light

C Set up the ray box so that it shines three rays of light at a convex mirror. Record what happens to the rays.

D Repeat step C for a concave mirror.

Considering your results

You can use a model to help you to explain why curved mirrors reflect light as they do.



1 Copy the model of the concave mirror and add rays to it to explain how a real concave mirror reflects light rays.

2 Make a similar drawing of a convex mirror and a model of the mirror. Add rays to show how the convex mirror reflects light, and how the model helps to explain this.

I can...

- make careful observations
- record results in a clear way
- use a model to explain how curved mirrors reflect light.