

Positioning a rear-view mirror

Outstanding Science Year 6 - Light - OS6D002

National Curriculum Statutory Requirements

6D1 - recognise that light appears to travel in straight lines

Learning Objective



I can calculate the best position for a rear-view mirror.

Me:   

Teacher:   

Rear-view mirrors

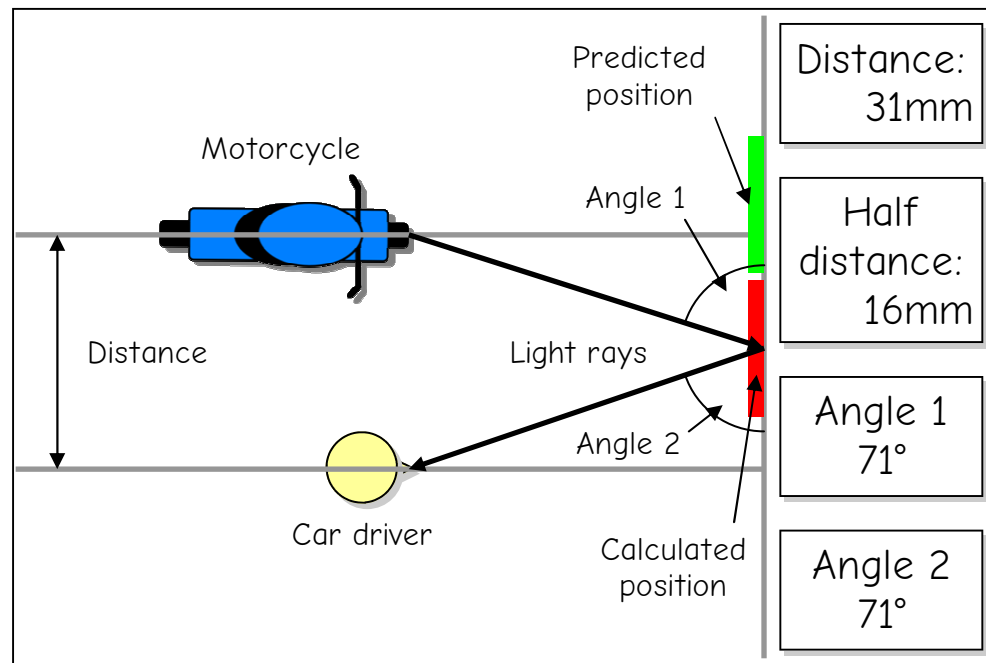
Cars and other road vehicles are equipped with **mirrors**. These enable the driver to see what is around them without having to turn their heads, which could distract their attention from the road ahead.

It is important to place the rear-view mirror in the correct position. Because light travels in straight lines, we can calculate the best place for a mirror by using our Maths skills.

Activity

Predict where you think the mirror should be positioned so that the car driver can see the headlamp of the motorcycle. Record your prediction by drawing a 2cm line using a green felt tip and a ruler.

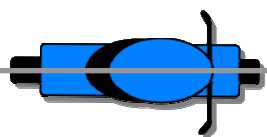
Follow the horizontal lines along from the driver and motorcycle. Measure the distance (in mm) between the lines using your ruler and record in the box provided.



Use your maths skills to halve the distance, rounding to the nearest millimetre. Record this in the box provided. Make a mark halfway along the line, using the measurement you have just taken. Draw a red line 1cm either side of this mark to show the best position of the mirror.

Using your ruler, draw a straight line from the motorbike to the centre of the mirror, then from the centre of the mirror to the driver. This represents the light ray.

Use your protractor to measure the angle between the mirror and each of the light rays. Record these angles in the boxes.

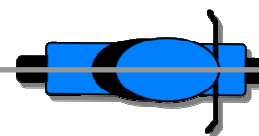


Distance:
mm

Half
distance:
mm

Angle 1

Angle 2

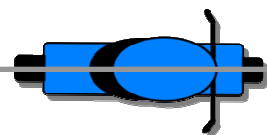


Distance:
mm

Half
distance:
mm

Angle 1

Angle 2

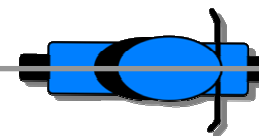


Distance:
mm

Half
distance:
mm

Angle 1

Angle 2



Distance:
mm

Half
distance:
mm

Angle 1

Angle 2

