

Science - Year 6

Light – Block 6L

Crime Lab Investigation

Session 2

Resource pack

UK CRIME LAB: HEIGHT CONVERSION DATA



CRIMINAL CASE FILE: 197663

OFFICERS IN CHARGE: DC Charlotte Briers & DC Ahmed Karim

Key conversion information:

1 foot = 12 inches

1 inch = 2.54 cm

Sample calculation:

Suspect is 5ft 3

5ft = 5x12inches = 60inches

60inches + 3inches = 63inches

63inches x 2.54 = 160.02

5ft 3 = 160cm

Diagram of gym

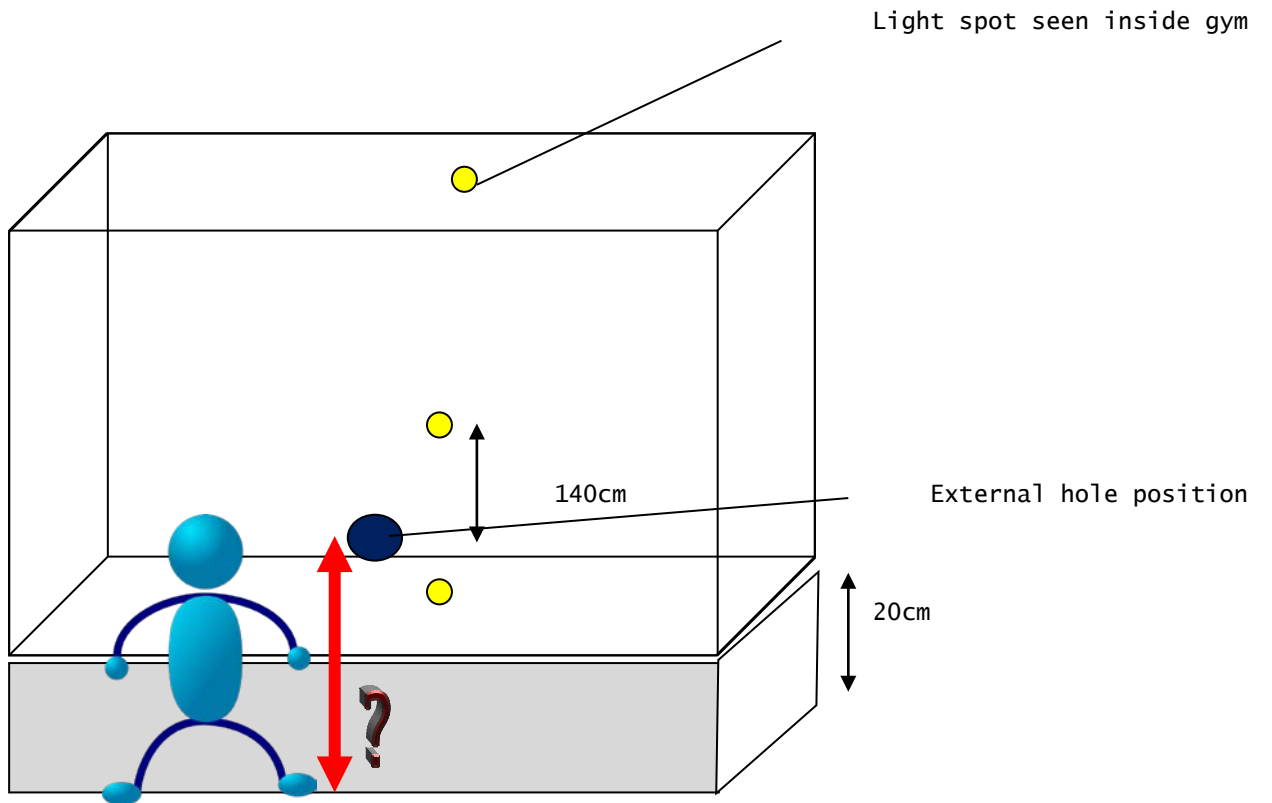
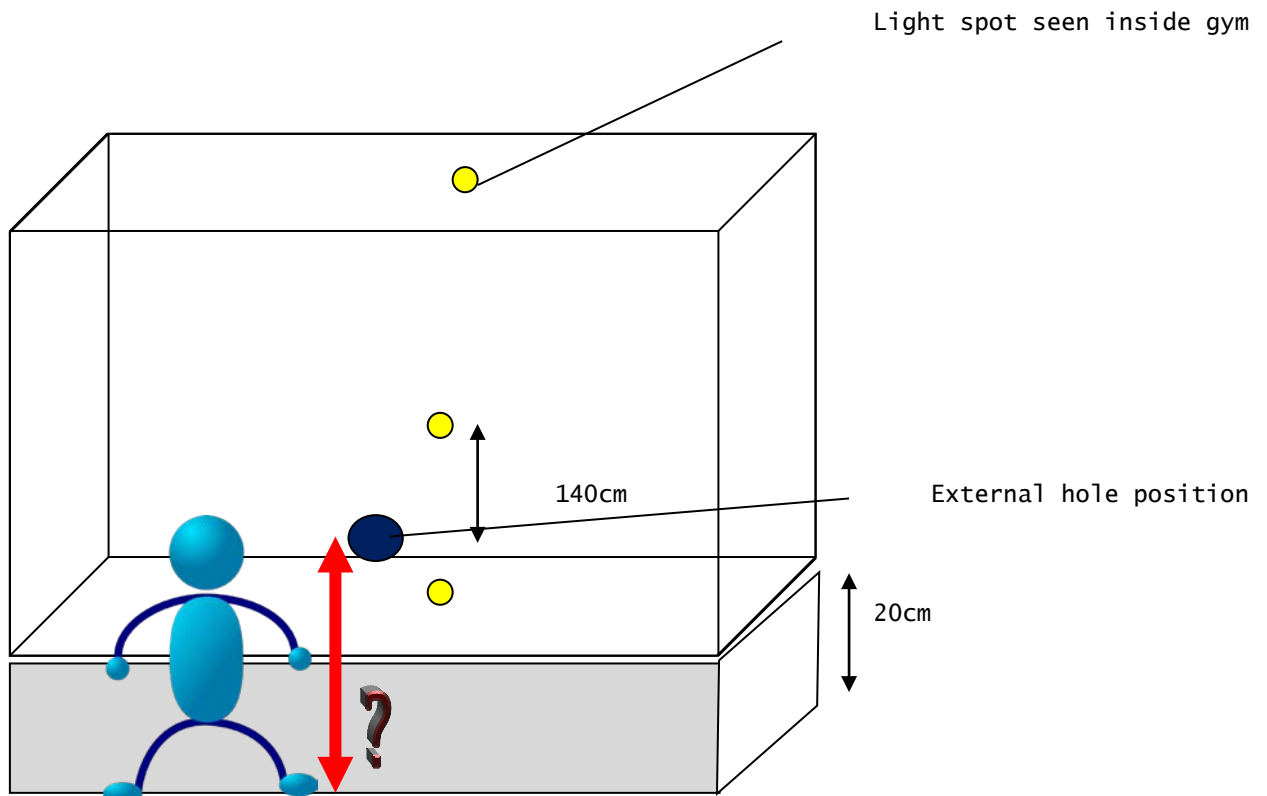


Diagram of gym



Teachers notes

The ground outside is 20cm lower than the floor of the gym. The middle light spot (directly opposite the drilled hole) is 140cm from the gym floor.

One light spot is directly opposite the hole, one is high on the wall, and another is on the floor. This means that the suspect must be tall enough to...

- 1) Look directly ahead through the hole
- 2) Look upwards through the hole at an angle
- 3) Look downwards through the hole at an angle

All suspects can carry out 1) and 2). However, one suspect is not tall enough to be able to look downwards through the hole at an angle. As light travels in a straight line we know the person looking in must have been above a certain height, presuming that they were shining the torch where they were looking.

The suspect heights are given (in imperial measurements) in session one.