

# MAKE A PERISCOPE

## MATHS: STRAND UNITS AND OBJECTIVES

<b>Length</b>	<i>Estimate, compare, measure the length of an object using appropriate units</i>
<b>Lines and angles</b>	<i>Identify, describe and classify vertical, horizontal, parallel, diagonal and perpendicular lines</i>
<b>2D shapes</b>	<i>Construct and draw 2D shapes</i>
<b>3D shapes</b>	<i>Construct 3D shapes</i>
	<i>Solve and complete practical tasks and problems involving 2D and 3D shapes</i>

The diagram on the right shows light passing through a periscope. (*Reflecting prisms are used instead of mirrors to reflect the light*)



**Look at the diagram and try the following:**

### 1) Lines and Angles

How many right angles can you see?  
(Do you think there might be 16?)

Can you point out the parallel lines in the diagram?

How many diagonal lines are there?

Can you give a value (*in degrees*) to the size of all the angles in the diagram?

### 2) Shapes

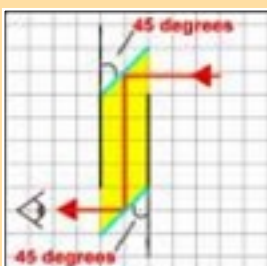
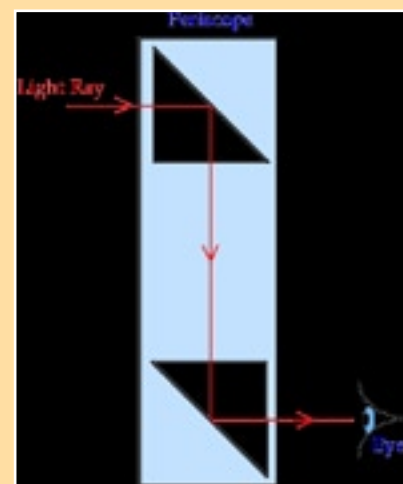
How many triangles can you see?

What name could you give these triangles?  
(*Right-angled; isosceles, etc.*)

### 3) Solve problems involving shapes

Look at the next diagram which shows the path of light through a periscope.

Can you copy this diagram accurately onto graph paper?



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## 4) Design (and Make)

Can the children design a fun house in which mirrors are placed so that you can see around corners? (It might not be very popular!).

Could they try to make such a house (or part of one) using cardboard, mirrors etc.

REMEMBER THAT LIGHT REFLECTS OFF A MIRROR AT THE SAME ANGLE AS IT LANDS ON THE MIRROR.

