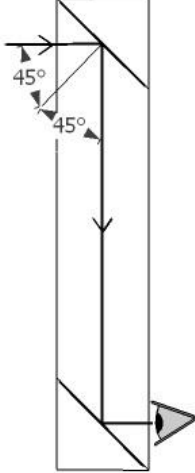




Periscopes Worksheet – Suggested Answers

<p>Suggest examples of where a periscope might be used, and what it would be used for.</p>	<p>At a golf match or horse race, to see over the heads of crowds.</p> <p>In a submarine, to see what is happening above the water without the submarine having to surface.</p> <p>In a tank, to see what is happening outside.</p> <p>In the trenches during the first world war, to see the enemy without getting in the line of fire.</p>
<p>What could happen if you look at the sun through your periscope?</p>	<p>You could damage your eye.</p>
<p>Sketch a periscope and explain how it works.</p>	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>The incoming light passes through the hole at the top of the periscope. It then reflects off the top mirror, down the axis of the periscope. Next the light reflects off the lower mirror, through the lower hole and into your eye.</p> </div> </div>
<p>Which of the materials you used reflects light?</p> <p>What properties of this material help it to reflect?</p>	<p>The mirror reflects light.</p> <p>It is smooth and shiny.</p>
<p>Extension question:</p> <p>Why is it important to mount the top mirror at 45° to the incoming light?</p>	<p>The light bounces off the mirror at the same angle as it hits it. If the top mirror is mounted at 45° then it reflects the incoming light down the axis of the periscope onto the lower mirror.</p>