



THE PIQUE LAB LEARNING CENTRE

Secondary School Science Programme



S1 SCIENCE WA3 CRASH COURSE

Answer Booklet

Name: _____

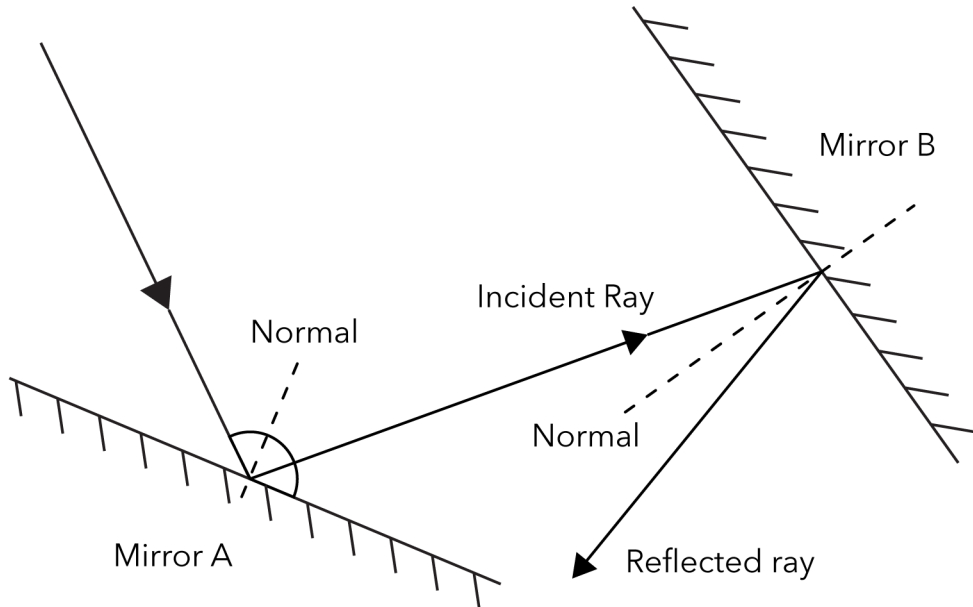
Class: _____

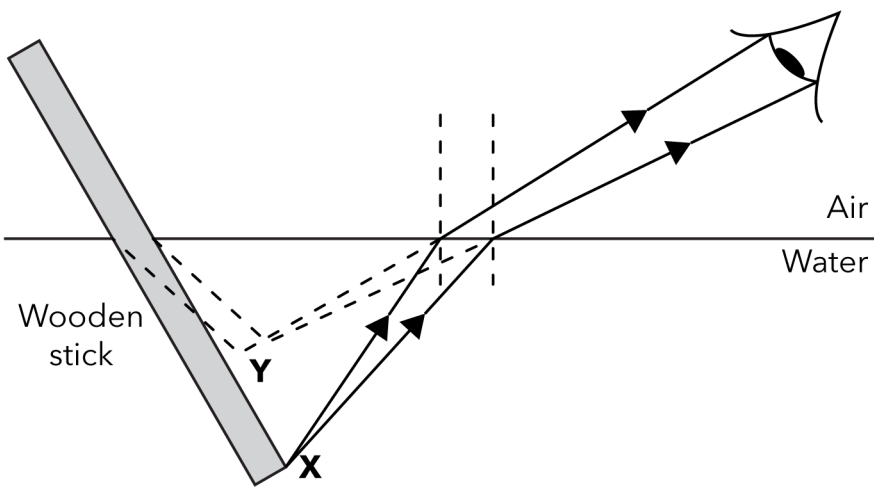
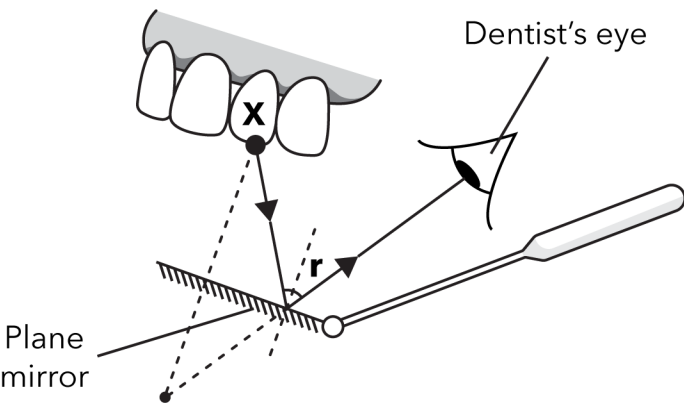
TOPICS COVERED

Topic	Title	Page
1	Light	1 - 2

S1 SCIENCE WA3 CRASH COURSE

TOPIC: LIGHT

Qn	Answer
Q1	2
Q2	1
Q3	1
Q4	2
Q5	3
Q6	4
Q7	2
Q8ai	47°
aii	 <p>The diagram illustrates a periscope. It consists of two mirrors, Mirror A and Mirror B, positioned at 45-degree angles to each other. An incident ray enters from the top left, hits Mirror A, reflects upwards, then hits Mirror B, and finally reflects out as a reflected ray at the bottom right. Dashed lines represent the normals at the points of reflection on both mirrors.</p>
aiii	<p>A full-length mirror at home for personal grooming. OR A periscope, to see objects at a higher position behind an obstacle such as a wall.</p>
bi	<p>Refraction is the bending of light when it travels from one medium to another of different optical density.</p>

bii	
biii	<p>When light travels from water which is optically denser, to air, which is optically less dense, the speed of light increases.</p> <p>This causes the refracted light ray to bend more away from the normal due to the refraction of light.</p>
Q9a	A virtual image is an image that is not real and cannot be captured on a screen.
b	<p>Any 2 of the following:</p> <ul style="list-style-type: none"> • Upright • Laterally inverted • Image is the same size as the object • Distance of object and image from the plane mirror is equal
ci cii ciii	
civ	A concave mirror can be used to magnify the image of a patient's teeth.
Q10a	60°
b	Medium A
c	<p>When light travels from medium B which is optically denser, to medium A, which is optically less dense, the speed of light increases. This causes the refracted light ray to bend more away from the normal due to the refraction of light.</p>