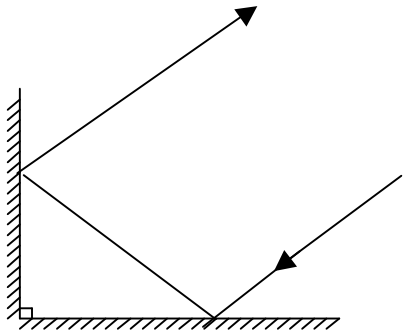
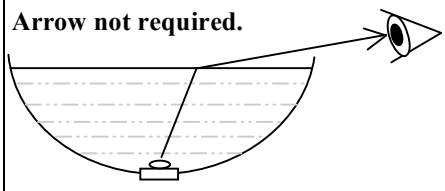
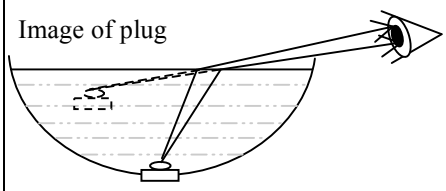
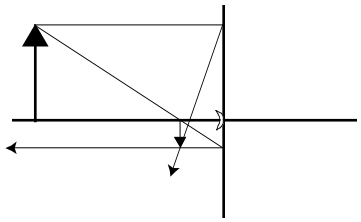
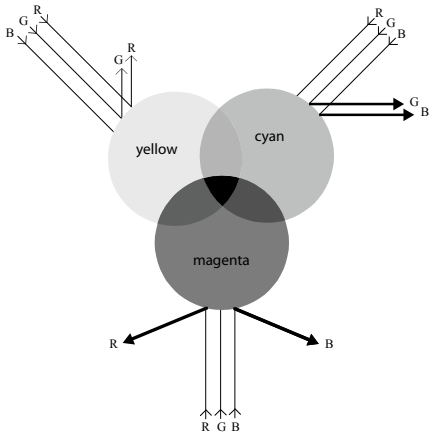
Assessment Schedule – 2006

Science: Use physics concepts and principles to describe the behaviour of light (90768)

Evidence Statement

1 (a)	 Reflected angle = incident angle (±1º) for both reflections and 2nd reflected ray is parallel to initial incident ray.		
(b)	> 90° light rays will reflect out **OR** not cross each other. **OR** diagram correct to support answer	> 90° light rays will reflect out **AND** not cross each other. **OR** diagram drawn correctly to support answer.	
(c)	▪ The images are as far behind the mirrors as Darryl is in front **OR** ▪ the images are virtual **OR** ▪ images 1 and 2 are laterally inverted.	▪ The images are as far behind the mirrors as Darryl is in front **AND/OR** ▪ the images are virtual **AND/OR** ▪ images 1 and 2 are laterally inverted (2 points made).	
(d)	Image 3 is due to two reflections **OR** it is the image of Image 1 in mirror 2 **OR** the image of Image 2 in mirror 1.	Two correct responses required. Image 3 is due to two reflections; **AND/OR** it is the image of Image 1 in mirror 2 **AND/OR** the image of Image 2 in mirror 1.	Three correct responses required. Image 3 is due to two reflections; **AND** it is the image of Image 1 in mirror 2 **AND** the image of Image 2 in mirror 1.
2 (a)	Light ray(s) from water refract / bend at interface **OR** away from normal.	The empty basin's edge obstructs the view of the plug-hole **AND** when filled with water, light rays from the plug bend towards the eye (or away from normal or around edge) to make it visible.	
(b)	**Arrow not required.** 	Image of plug  Diagram showing real rays correct in water and air **AND** virtual rays correct **OR** image of plug in correct position. (arrows not required)	

3 (a)	Light from the Sun reflects off the concave spoon to form a focus. **OR** Since the Sun is far away its rays are parallel **AND** therefore the spoon-paper distance is the spoon's focal length.	Light from the Sun reflects off the concave spoon to form a focus. **AND** Since the Sun is far away its rays are parallel and so the spoon-paper distance is the spoon's focal length.	
(b)	 Object in correct position **AND** focal point inserted correctly **AND** at least one light ray drawn accurately.	Object in correct position **AND** focal point inserted correctly **AND** two rays drawn accurately **AND** image shown correctly.	**ALSO** image size correct (11 ± 1 mm) **AND** nature of image real, diminished, inverted (at least two) described **AND** image distance = 22 ± 1 mm in front of mirror. Rays must have arrows
4 (a)	 Two reflected rays correct from **one** of at least of either Cyan or Magenta **OR** correct labelling.		
(b)	One colour; Red, Green or Blue, is explained correctly, eg: Red is created when Yellow and Magenta are mixed because then both Blue (because of the yellow) and Green (because of the Magenta) are subtracted / absorbed and only the Red is reflected. Yellow + Magenta = White – Blue – Green = Red Green is created by mixing Yellow and Cyan (Blue and Red are subracted leaving only Green). Yellow + Cyan = White – Blue – Red = Green Blue is created by mixing Cyan and Magenta (Red and Green are subtracted leaving only Blue). Cyan + Magenta = White – Red – Green = Blue.	Two of the colours Red, Green or Blue are explained correctly.	All three colours; Red, Green and Blue, are explained correctly.

Judgement Statement

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Achievement	Achievement with Merit	Achievement with Excellence
FIVE questions answered correctly. Minimum of 5 × A	SIX questions answered correctly, including at least THREE at Merit level. Minimum of 3 × M + 3 × A	SIX questions answered correctly, including at least ONE at Excellence level and at least THREE at Merit level. Minimum of 1 × E + 3 × M + 2 × A