

Teaching ideas for Option A (SL only), *Eye and sight*

Questions

A number of worksheets are provided for this Option:

- support questions examine the very basic concepts of the syllabus
- extended questions delve deeper and are equivalent to exam level questions.

Teaching ideas

- It is a classic question to ask why it is difficult to read red on a green background or vice versa. Ask students to explain these facts by using the graph showing the sensitivity of cone cells as a function of wavelength.

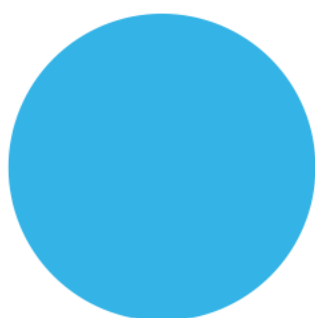


Practical activities/ICT

- If you have access to Mathematica or Wolfram Alpha the command

```
Graphics[{RGBColor[0.2, 0.7, 0.9], Disk[{0, 0}, {1, 1}]}]
```

will produce a disc filled with a colour that is the combination of Red, Green and Blue in proportions dictated by the three numbers in the square brackets following RGB. For the numbers shown above the output is



It is an interesting exercise to see how the different colours are created by the combination of three primary colours.

Theory of knowledge (TOK)

- Perception is a big part of TOK and here there are obvious links about how the choice of colour and lighting influences and changes our perception of objects or buildings. See <http://www.echalk.co.uk/amusements/OpticalIllusions/illusions.aspx> for some neat examples.