4.2 Properties of Light

Answer the following questions as a group then complete your handout. (use your text book)

- What is refraction?
- What is white light?
- What are the 7 most visible colours of the rainbow?
- How is reflection important for seeing colour?

- Answer the questions on the handout.

Video on colour.

https://www.youtube.com/watch?v=jnGTCaiZqOE

For next class: Pick a partner

- What is a spectroscope?
- How does it work?
- What is it used for?

- You are going to build one! Next day we will go to the computer lab and you can work on a design.
- Then the following class you will bring materials.

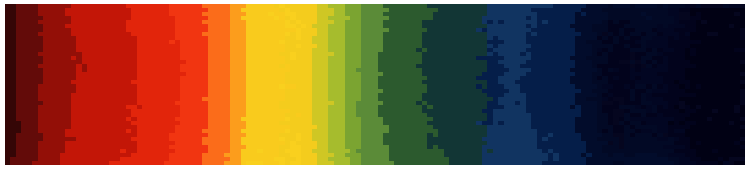
4.2 Properties of Visible Light

- **Refraction is the bending of wave due to a change in its speed.**
  - **Light waves refract when they pass from one material to another.**

Colours of the Rainbow

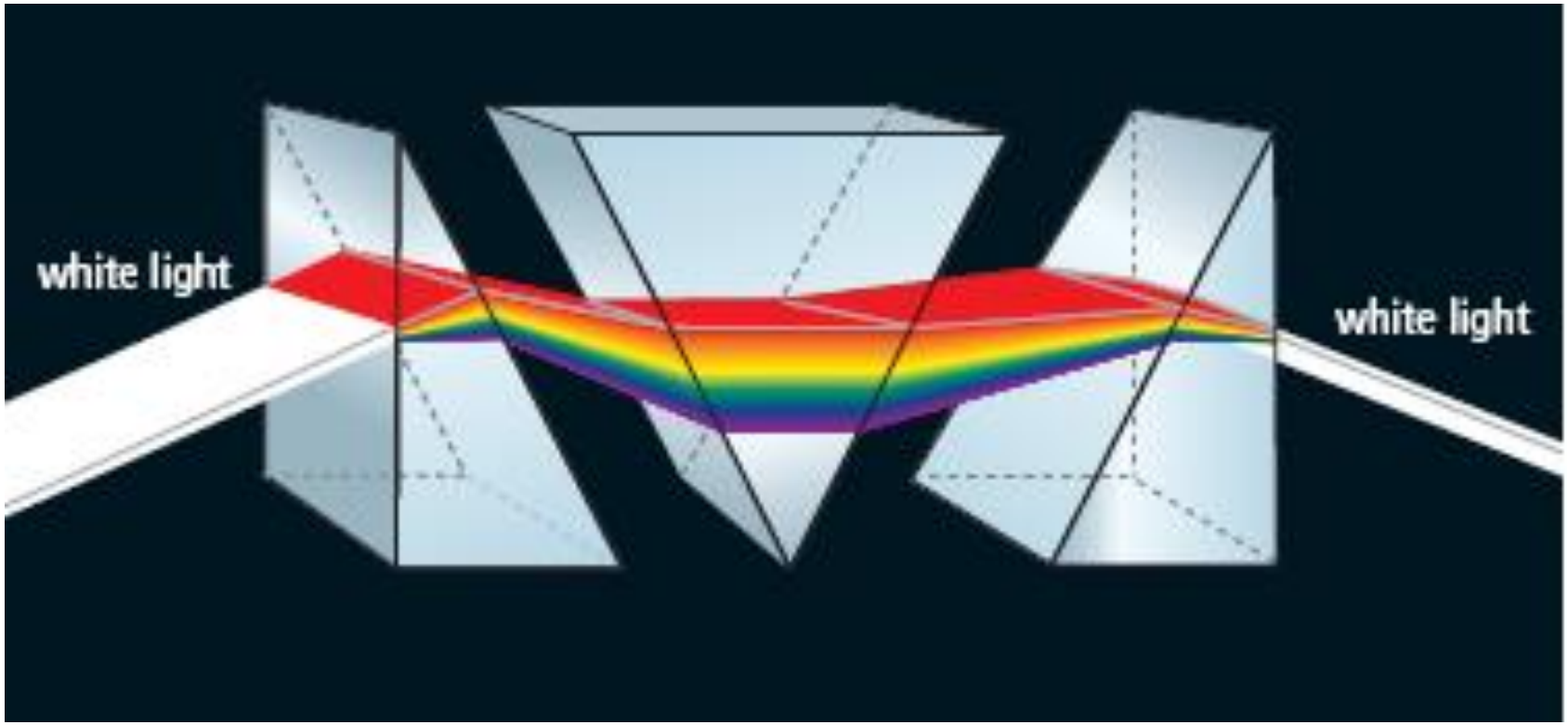
- White light is made up of waves of different wavelengths.
- Different wavelengths refract light by different amounts.
- When white light is separated into its different colours, this band of colour is called the spectrum.
- The seven most visible colours of the spectrum are: Red, Orange, Yellow, Green, Blue, Indigo, Violet. (ROY G BIV)

R O Y G B I V



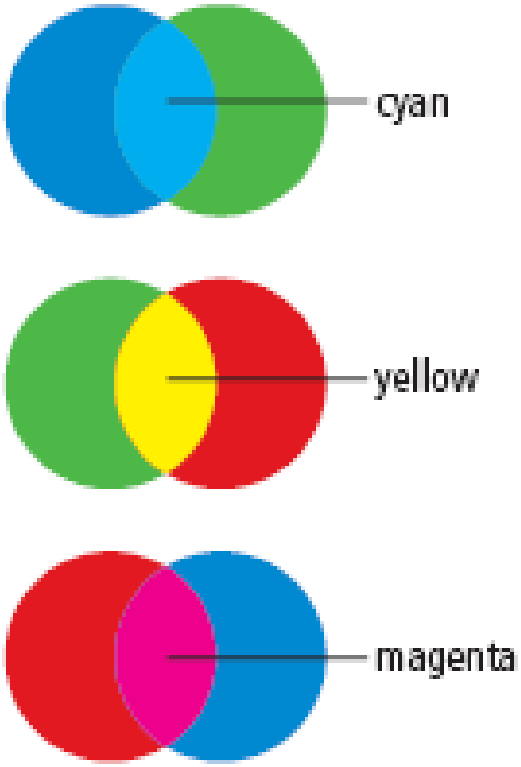
Producing the Visible Spectrum

- A prism causes white light to split into a spectrum.
- White light, such as sunlight, is the result of mixing together all the different colours of light.



Colour and Reflection

- Reflection occurs when light bounces off an object.
- When white light strikes an object, some colours are reflected and some are absorbed. Only the reflected colours can be seen.
  - For example, yellow cloth reflects yellow and absorbs all other colours.
- The three additive primary colours of light are: red, green, and blue.



Assignment

- **Computer lab discussion**

- http://www.bbc.co.uk/schools/gcsebitesize/science/21c_pre_2011/radiation/electromagneticradiationact.shtml