Colours

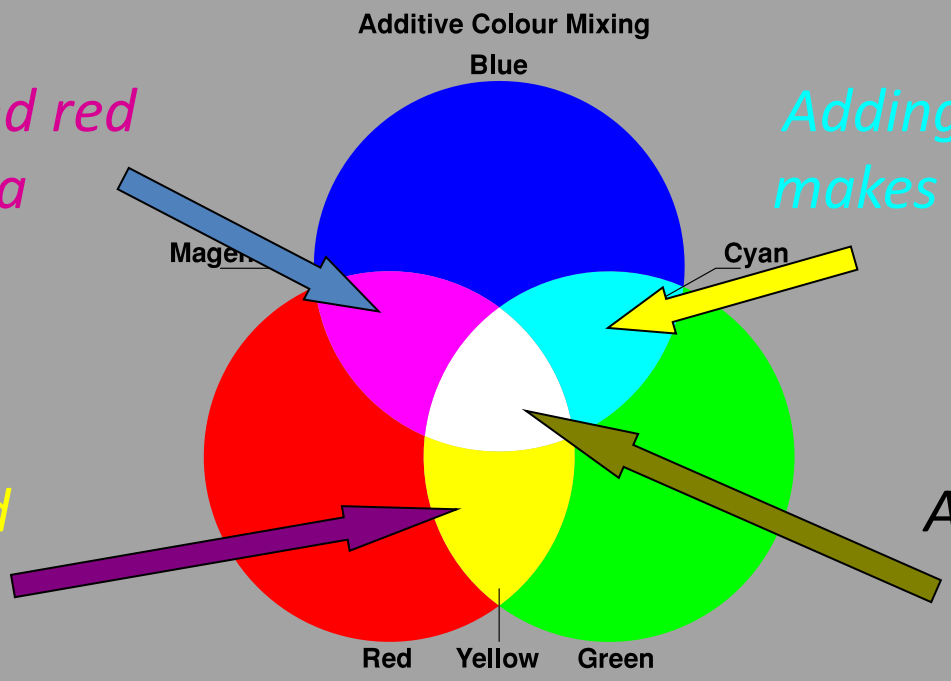
Adding colours

- White light can be split up to make separate colours. These colours can be added together again.

- The primary colours of light are red, blue and green:

Adding blue and red makes magenta (purple)

Adding blue and green makes cyan (light blue)



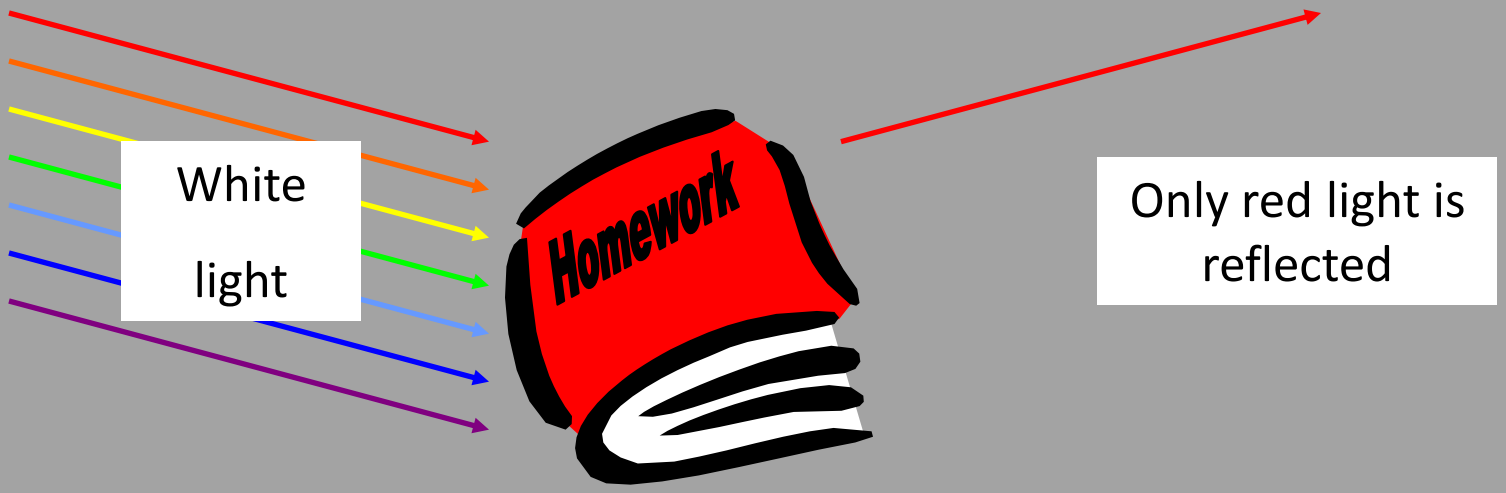
Adding red and green makes yellow

Adding all three makes white again

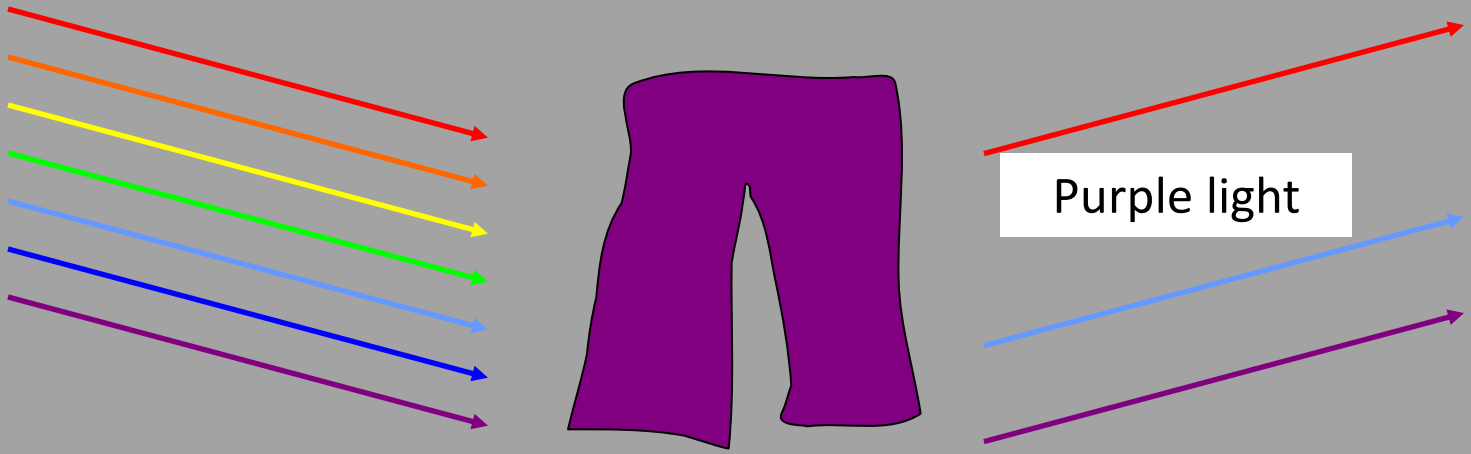
Seeing colour

- The colour of an object appears depends on the colours of light it reflects.

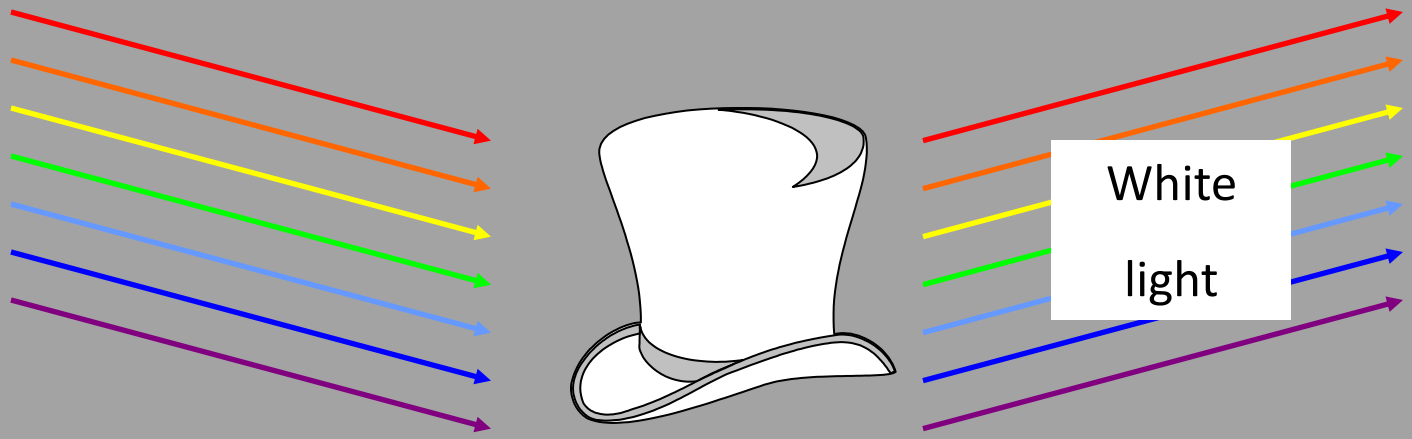
For example, a red book only reflects red light:



A pair of purple trousers would reflect purple light *(and red and blue, as purple is made up of red and blue):*

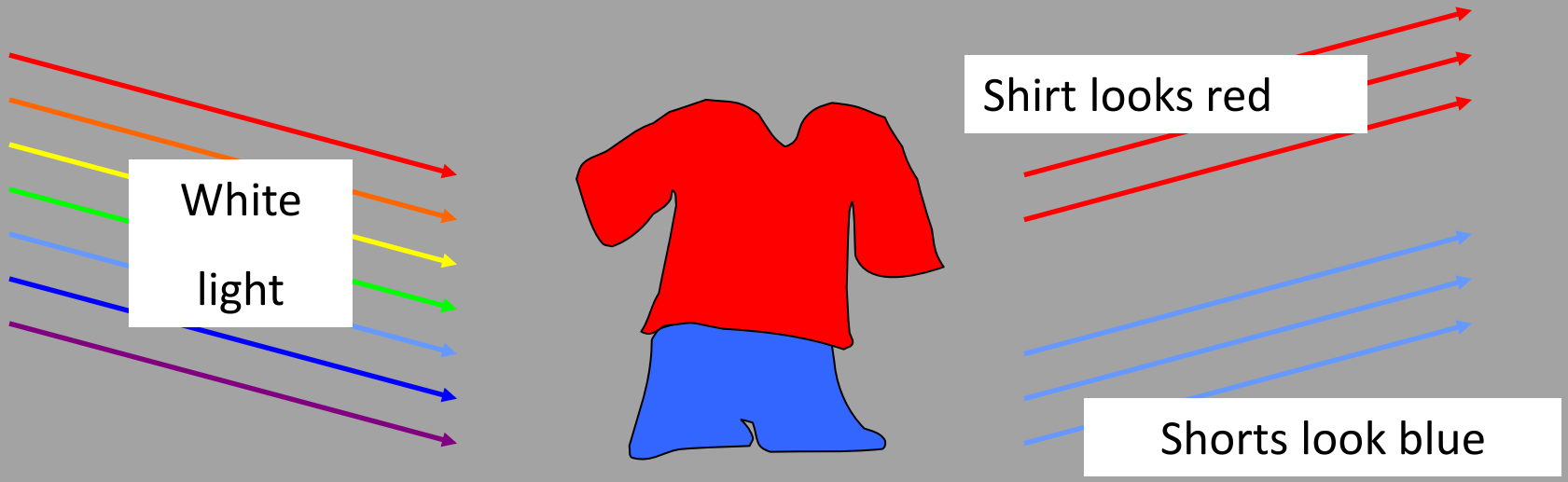


A white hat would reflect all seven colours:

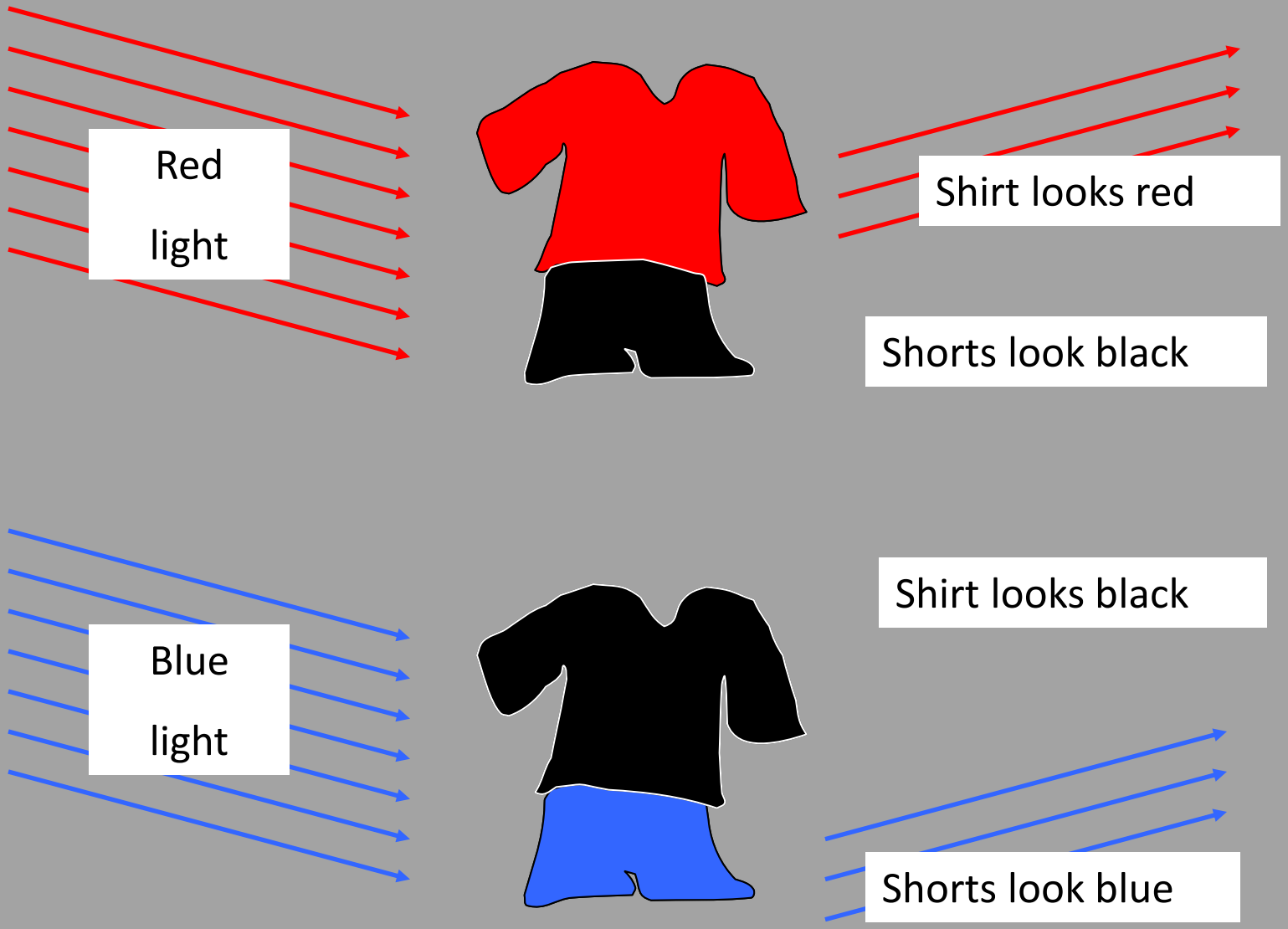


Using coloured light

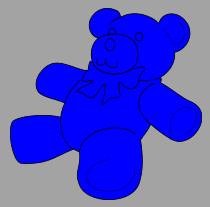
- If we look at a coloured object in coloured light we see something different. For example, consider a football kit:

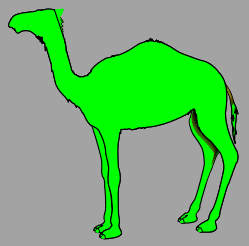


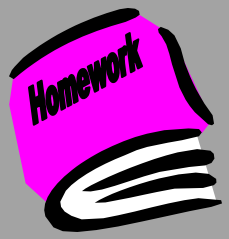
- In different colours of light this kit would look different:



Some further examples:



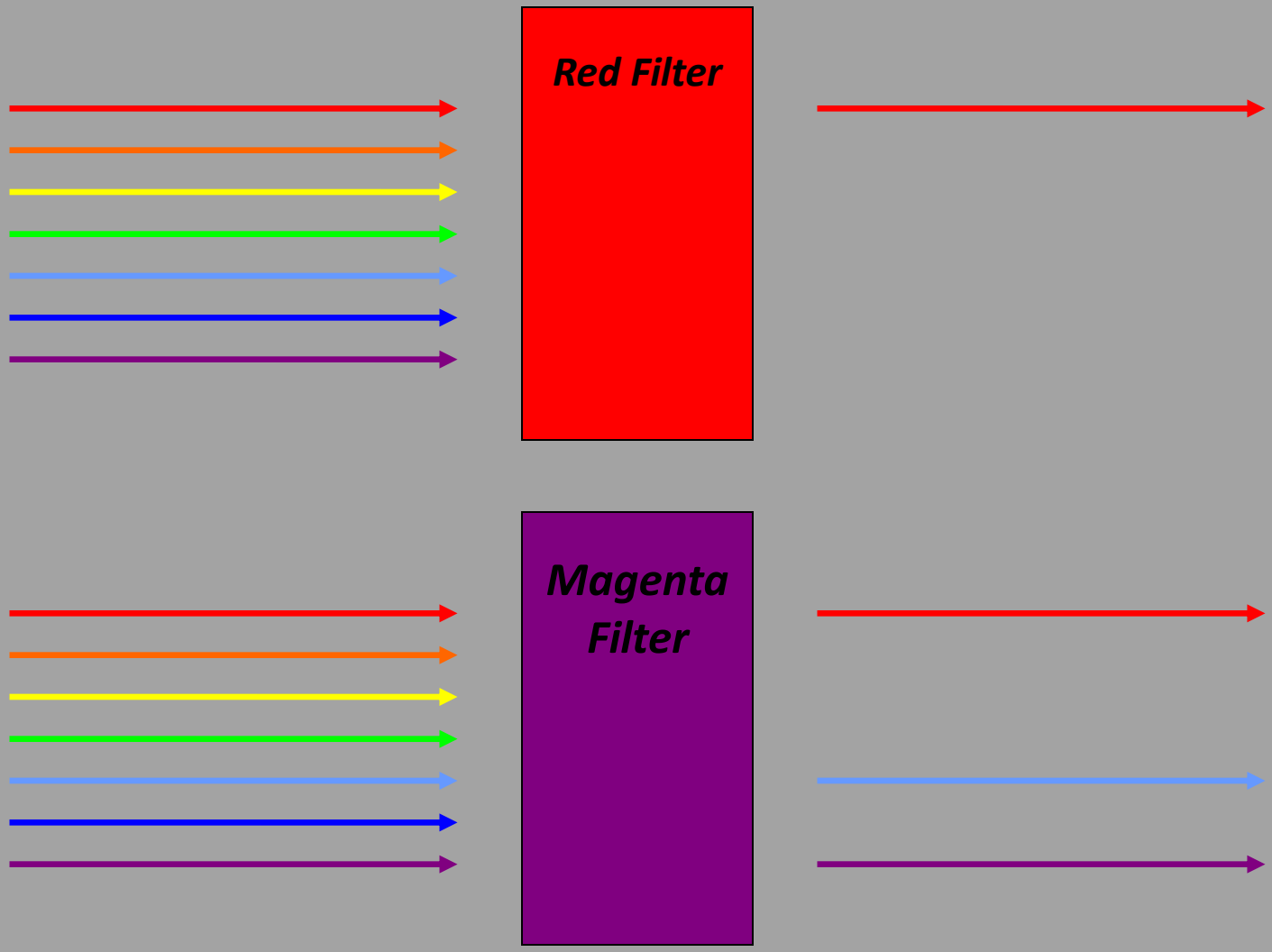




Object	Colour of light	Colour object seems to be
Red socks	Red	Red
	Blue	Black
	Green	Black
Blue teddy	Red	Black
	Blue	
	Green	
Green camel	Red	
	Blue	
	Green	
Magenta book	Red	
	Blue	
	Green	

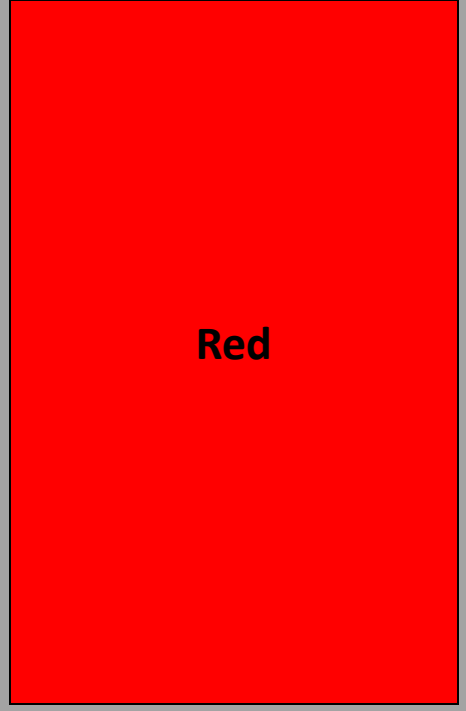
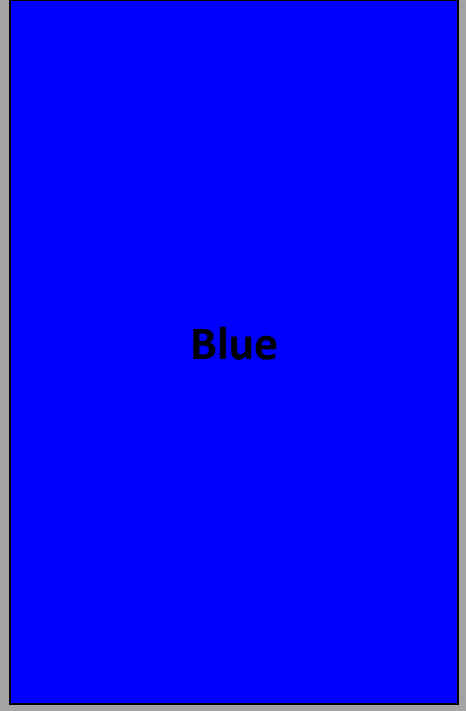
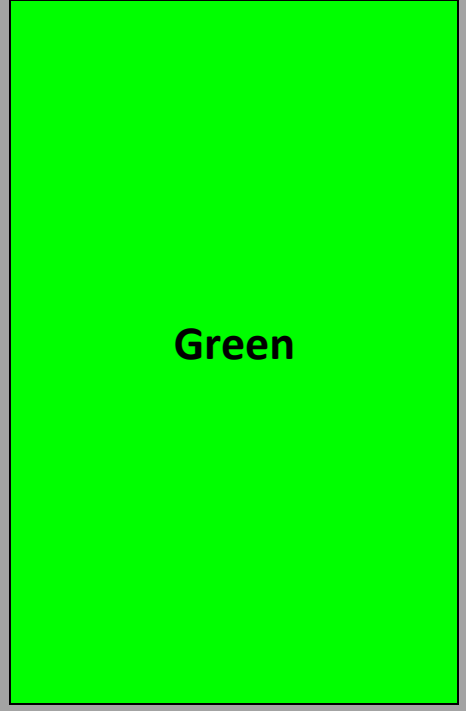
Using filters

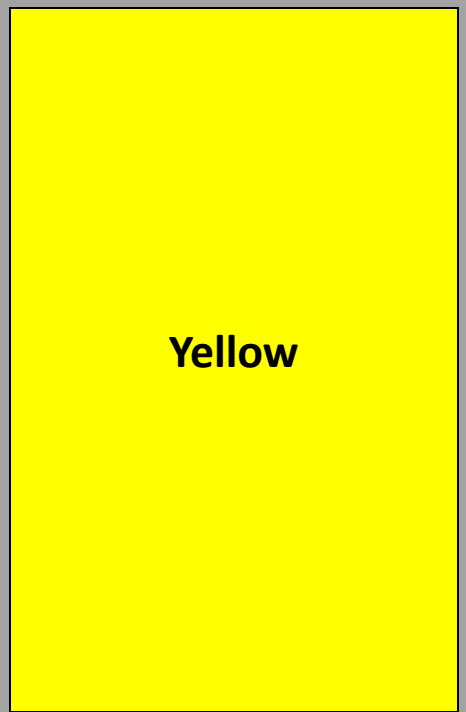
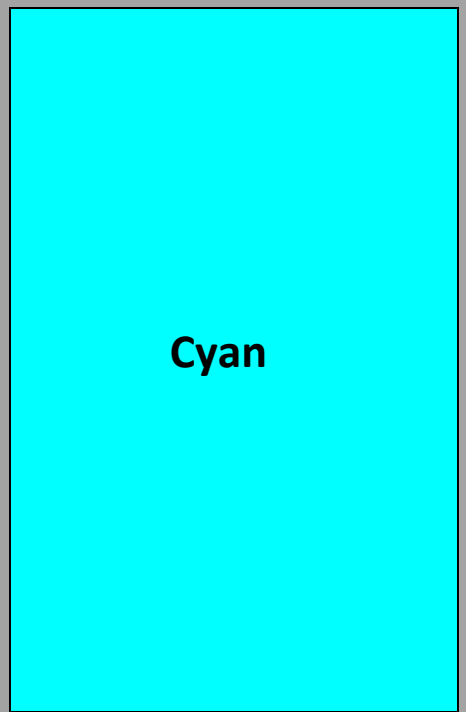
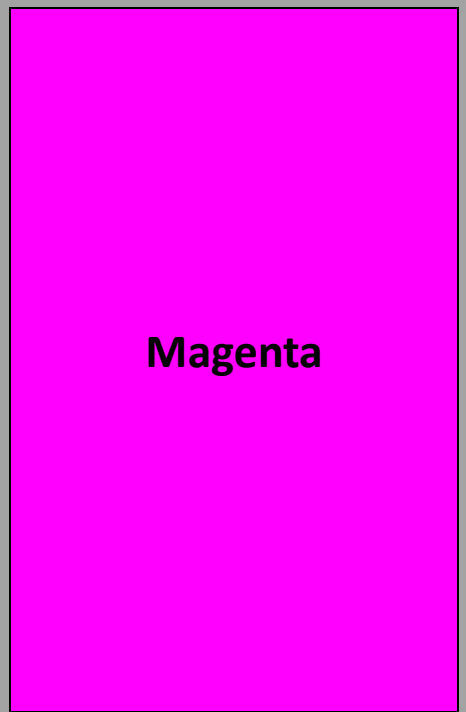
- Filters can be used to “block” out different colours of light:



Investigating filters

Colour of filter	*Colours that could be "seen"*
Red	
Green	
Blue	
Cyan	
Magenta	
Yellow	


Red

Blue

Green

White

Yellow

Cyan

Magenta