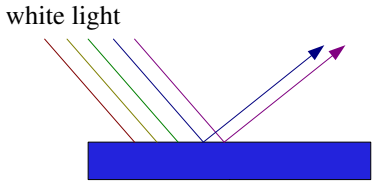
Colour

White light itself is not a colour (it is not a single frequency of light) but is a mixture of all the colours of the visible spectrum. This can be seen by spreading out the wavelengths of white light (e.g. with a prism).
Black light is the absence of light, and therefore is also not a frequency (colour) of light. For example soot is an excellent absorber of visible light (of any frequency) and so looks black.

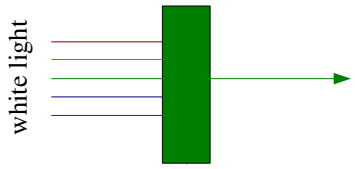
Colour by reflection occurs when some frequencies of light are absorbed by an object and others are reflected. Only the reflected frequencies travel to our eyes and we see those colours.

Objects can be given any colour by adding pigment (small particles such as in paint or dye) of certain colours in certain quantities. If the pigments reflect and absorb the right combination of frequencies, the desired colour will be achieved.



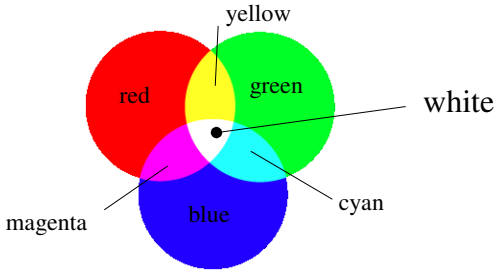
This object reflects blue and violet but absorbs the other colours.

Colour by transmission occurs when some frequencies of light are transmitted through an object while others are absorbed. Ordinary glass transmits all visible frequencies and absorbs none, while blue glass would transmit only blue and absorb the other frequencies.



This object transmits green but absorbs the other colours.

Frequencies of the light itself (rather than the pigment) can be mixed with other frequencies to produce different colours of light. For example three spotlights, each with one of the "primary" colours red, blue and green would produce this on a screen:



Every colour has a complementary colour which, when mixed with it, will produce white. The colour of an object we see is the complement of the colours the object absorbs.

When more and more pigments of different colours are mixed, the result gets darker since more wavelengths of light are being absorbed. When more and more colours of light are mixed, the result gets lighter, since more light is being reflected.