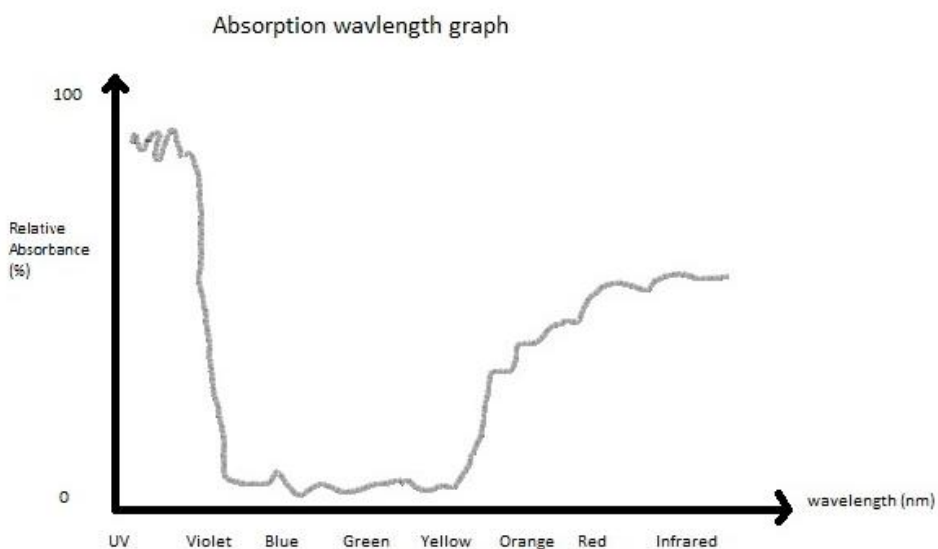


## Assignment Solutions

1. Graph 1- 712nm, Graph 2-408nm, Graph 3- 356nm, Graph 4- 662nm

Graph 2 goes with 408nm because absorption peak is quite high at that wavelength and doesn't match with any of the other graphs too well. Graph 3 goes with 356nm because even though 408nm is highly absorbed, it is not highly absorbed in Graph 2, thus allowing us to differentiate between the two. Graph 1 and 4 both highly absorb wavelengths at 712nm and 662nm, but Graph 1 has a lower absorbance at 662nm, so by choosing 662nm to go with Graph 4, you can distinguish between them by difference in transmitted intensity.

2. Here is an example of a possible absorption curve that should be drawn.



3. The main types of electromagnetic waves are radio waves, microwaves, infrared, visible, ultraviolet, X-ray and gamma rays. Their applications are found on the websites provided as links in the webquest.