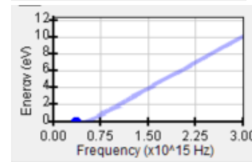
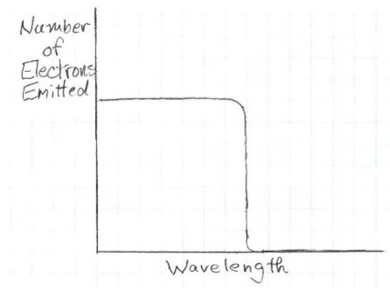
Result:

1. Violet, blue, and green light cause electrons to be emitted from Na. The maximum wavelength is 539 nm.
2. The graph is a straight line that passes through the origin; this means that, if electrons are being emitted, the current is directly proportional to light intensity.

3. The graph is a straight line. It differs because it does not pass through the origin. This implies that there is a minimum frequency below which no electrons are emitted (and so there is no current).



4. A graph of number of electrons emitted vs wavelength would look like the graph at the right. If you increased the intensity of light the left side of the graph would be higher but the vertical part would be at the same wavelength.



Solution:

1. You can double-click on the wavelength number to set it to any whole-number value; using this method electrons are emitted at 539 nm but not at 540 nm. Thus the maximum wavelength at which electrons are emitted is 539 nm.
2. The graph is obtained by clicking the check box "current vs light intensity" and varying the intensity over its entire range. Choosing a very short wavelength makes this process easier.
3. The graph is obtained by clicking the check box "electron energy vs light frequency" and varying the wavelength over its entire range. Choosing a high intensity makes this process easier.
4. The graph indicates what you observed in result 1: as the wavelength increases a point is reached beyond which no electrons are emitted. Higher intensity of light causes more electrons to be emitted (see result 2) so the graph is higher, but beyond the so-called "threshold" wavelength no electrons are emitted.