***Adapted from McGraw-Hill Ryerson Biology 12***

**Seeing Green**

Chlorophyll is the main pigment that absorbs light in plants and helps the process of synthesizing carbohydrates. What effect does light have on chlorophyll if it is removed from a living plant?

**Materials**

* Beaker of prepared chlorophyll solution (made by teacher\*)
* Strong light source

**Procedure**

1) Darken the lights in the room. Shine a strong beam of light at the beaker of chlorophyll solution.

2) Observe the colour of the chlorophyll by viewing the sample at a slight angle

3) Observe the colour of the chlorophyll by viewing the sample at a right angle to the beam of light

**Questions**

1) What colours of light did you observe? From what you know about visible light and its different wavelengths what colour of light do you think chlorophyll absorbs?

***\*Teacher’s notes***

*A way to make chlorophyll solution (or it can be bought from a laboratory supply company)*

*Making the chlorophyll solution:*

*a. Remove the large veins of three small spinach leaves.*

*b. Shred the leaves into small pieces by hand.*

*c. Using mortar and pestle, grind leaves to a puree form.*

*d. Combine puree with 10 ml of buffer solution.*

*e. Grind until the mixture appears green and foamy.*

*f. Place cheesecloth into funnel.*

*g. Filter mixture through cheesecloth into a beaker. (This is the*

*chlorophyll solution.)*

*h. Place beaker with chlorophyll solution on ice.*