EXPERIMENT 10: CHLOROPLAST IN AQUATIC PLANT

Course Learning Outcome:
Solve basic problems related to transport system processes, mechanisms for adaptations in living things, ecological and environmental issues in biology.
(C3, PLO 2, CTPS 3, MQF LOC ii)

Learning Outcomes:
At the end of this lesson, students should be able to:

i. Describe the structure and function of chloroplast involved during photosynthesis
ii. Identify the internal structure of an *Elodea* leaf.

Student Learning Time:

Face-to-face	Non face-to-face
1 hour	1 hour

Direction: Read over the lab manual and then answer the following questions.

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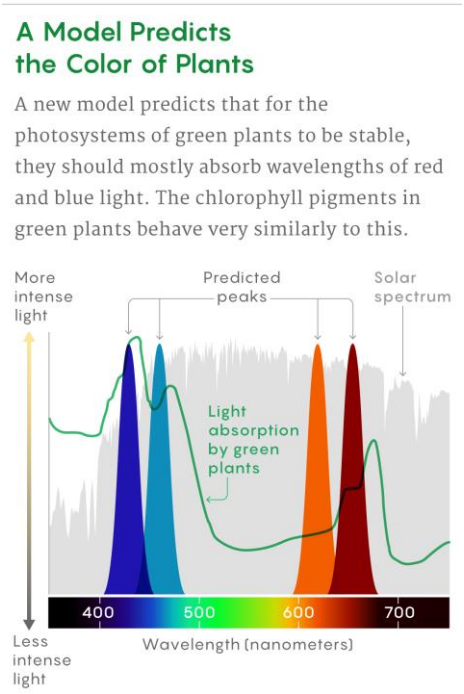

Why are some plants not green?

Generally, plants are always thought to be green. If a plant appears another colour, such as red, it is not necessarily because the plant does not contain chlorophyll. Other pigments may cover up the green pigment, making the plant appear a different colour. In this case, the plant is still an autotroph, using photosynthesis to generate energy.

Let's view some interesting facts about plant.
https://www.youtube.com/watch?v=X96d1YEN_fQ

Introduction:

1. What is the function of chloroplast in plant cell?

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2. Why are plants green?

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3. What are the substances required by the plants to carry out the photosynthesis process?

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4. What are the importance of aquatic plants such as *Elodea* sp. in the freshwater ecosystem?

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5. Why don't we need any stain to observe the chloroplasts in the tissue of *Elodea* sp.?

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Experiment:

1. Why do we need to put a drop of distilled water in preparing the slide of *Elodea* sp. leaf?

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2. How is the correct way to place the cover slip onto the leaf?

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3. What is the precaution of the experiment?

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4. What are the organelles or the cell parts that can be viewed by the light microscopy? Identify the function of each structure.

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5. What is the shape of a typical *Elodea* sp. cell?

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6. Complete the diagram below with the correct labels for the structure of chloroplast.