

Name : _____ () Class : _____ Date : _____

Plants are living things !

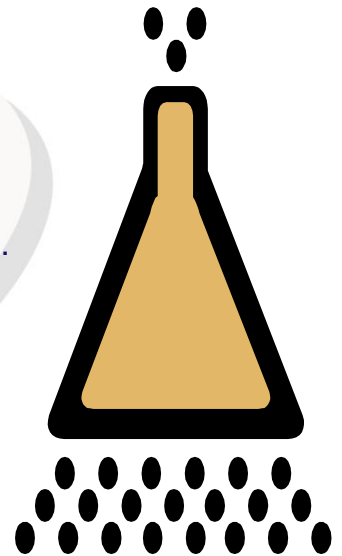
Experiment 1. How do plants respire during photosynthesis?

Equipment and materials prepared:

hydrilla, a 900 ml glass beaker, a glass funnel, a test tub, a lamp, sodium carbonate, water, a pair of scissors, a spoon

Procedures:

1. Fill half of the beaker with water.
2. Add a spoon of sodium carbonate into the water and stir well in order to release carbon dioxide (CO₂).
3. Clear the branches at the lower part of the stem of the hydrilla.
4. Cut the part of the head of the stem at an angle.
5. Put the hydrilla into the funnel stem (up side down).
6. Place the funnel with the hydrilla (up side down) into the beaker.
7. Fill the beaker with water up to over 900 ml in order to cover the funnel.
8. Fill up the test tub with water.
9. Place the test tub carefully (up side down) to cover the funnel stem.
10. Turn on the lamp and shed the light onto the hydrilla.
11. If bubbles do not come out from the stem, repeat step 4 onwards.



Experiment 2. What do plant cells look like?

Equipment and materials prepared:

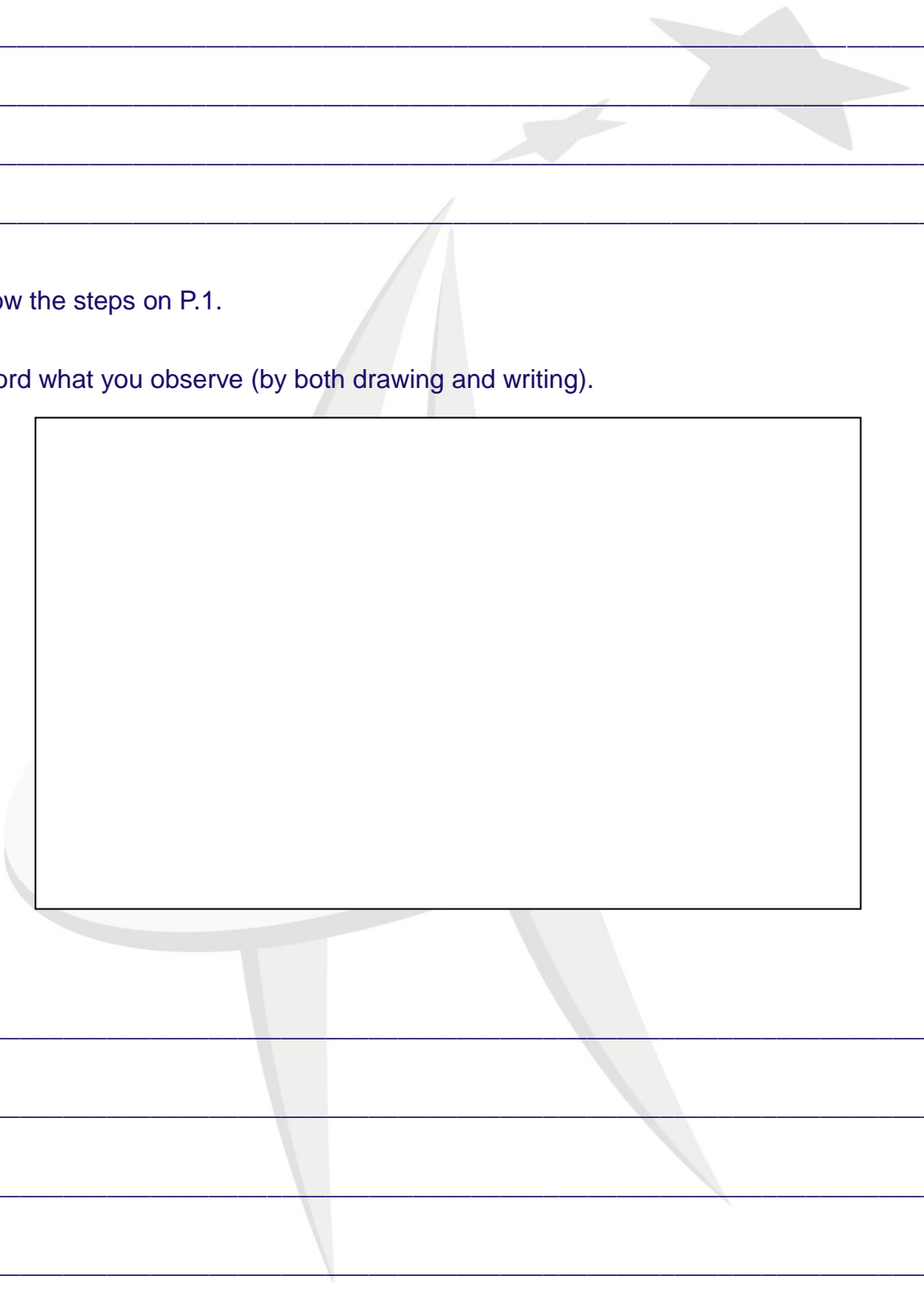
a slice of onion tissue, microscope, slide, iodine solution, a dropper

Procedures:

1. Cut out a slice of onion tissue.
2. Place it onto a slide.
3. Add a drop of iodine solution.
4. Cover it with another slide.
5. Place it onto the microscope and adjust the focus.
6. Find out the structure of the cells.

Experiment 1. How do plants respire?

1. Hypothesis (What do you expect about the outcome of Experiment 1 and why?)



2. Follow the steps on P.1.

3. Record what you observe (by both drawing and writing).

4. What are the bubbles which release from the stem of the hydrilla?

5. Suggest a method of testing the type of gas in Question 4.

6. Is your hypothesis correct? Why?

7. What have you learnt from Experiment 1?

Experiment 2. How do plant cells look like?

1. Hypothesis (What do you expect about the outcome of Experiment 2?)



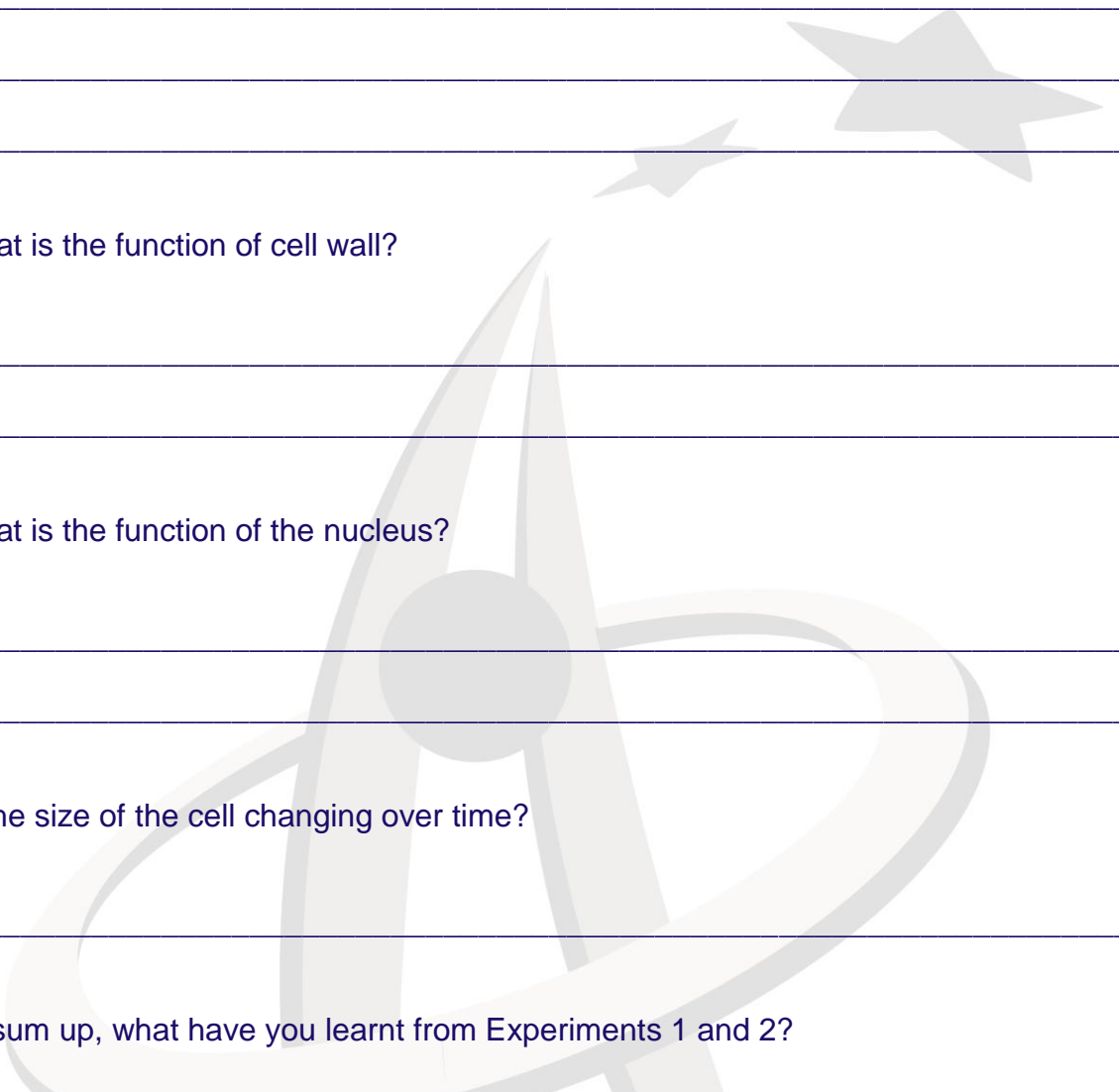
2. Follow the steps on P.1.

3. Record what you observe (by both drawing and writing).

Please label "cell wall" and "nucleus".



4. Is your hypothesis correct? Why?



5. What is the function of cell wall?

6. What is the function of the nucleus?

7. Is the size of the cell changing over time?

8. To sum up, what have you learnt from Experiments 1 and 2?

We are great scientists !