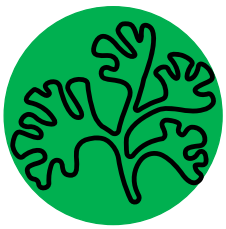
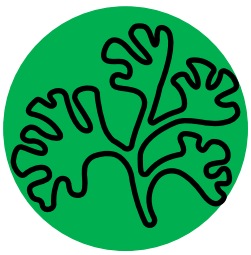
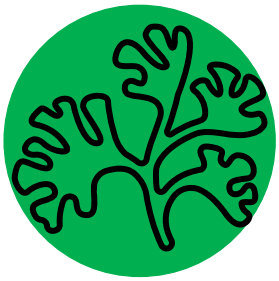
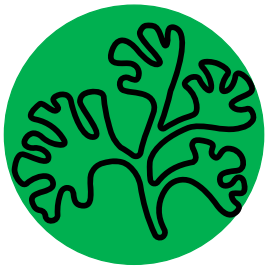
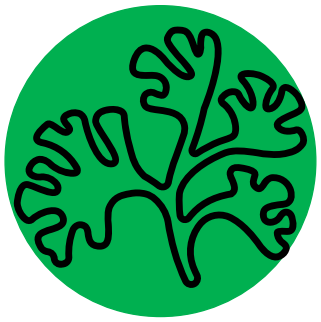
Simulated Seaweed Experiment

Measure the diameter of each seaweed and record in the blank spaces.

	Low Light	Diameter (mm)	Medium Light	Diameter (mm)	High Light	Diameter (mm)
Day 1						
Day 2						
Day 3						
Day 4						
Day 5						

Experimental Questions

1. Did your seaweed grow, shrink, or stay the same after five days?

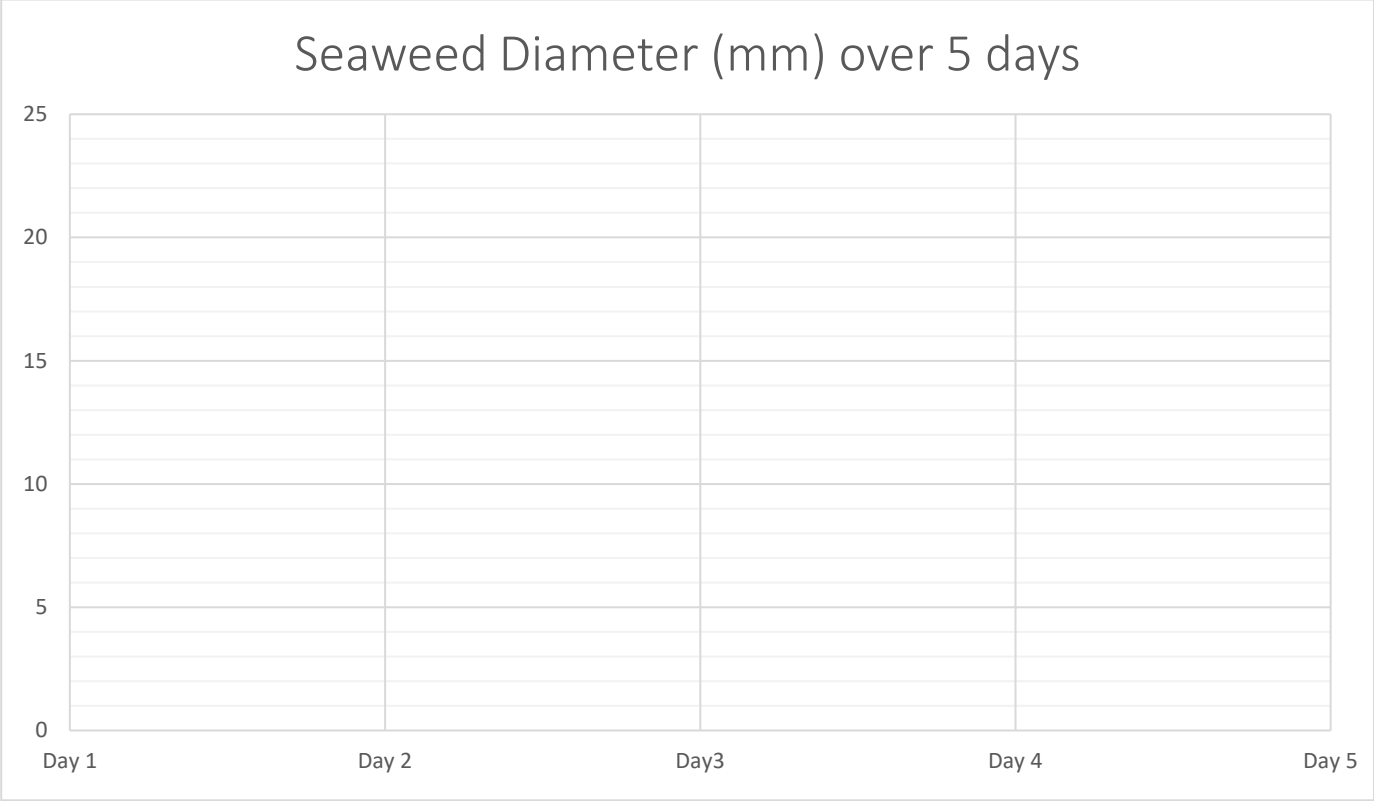
2. Create a line plot of your seaweed's growth after 5 days by marking a point for the seaweed diameter at each day and connecting the points with a straightedge. Use a different color for each light level and fill in the circles below with the color you choose.

Legend

◯ Low light

◯ Medium light

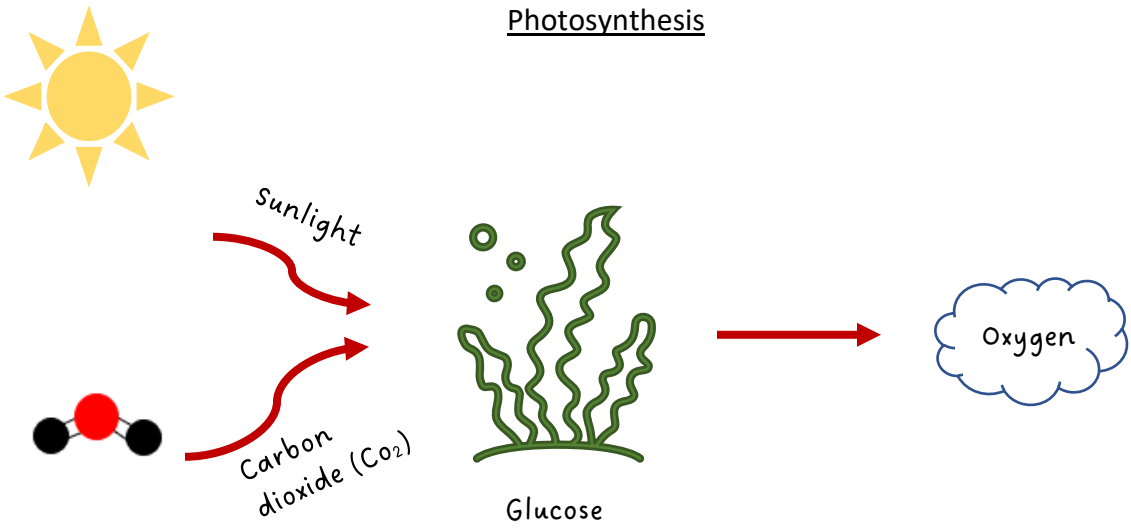
◯ High light



3. Compare the seaweed growth at different light levels. Which light level showed the least amount of growth? Which light level had the most amount of growth? What can you conclude about how light effects growth?

Reading Comprehension Questions

1. Seaweed uses energy from the sun and takes up carbon dioxide (CO_2) to produce food for the seaweed, and releases oxygen as a byproduct.



Based on this, why is light important for seaweed growth?

2. Read the following information, answer the questions and complete the word search.

Aquaculture is defined as raising, growing, and harvesting organisms in marine or fresh water – similar to farming on land. Aquaculture products can be used for food, medicine, makeup and can create healthier marine habitats through restoration. There are a variety of different types of aquaculture including fish, shellfish, and seaweed/algae. Seaweed and algae aquaculture is used mainly in the food industry for salads, sushi, chips, sauces, and seasonings.

Aquaculture farms require energy to run their equipment. Many farms rely on fossil fuels, such as gas, to power their equipment. This can contribute to global warming. If aquaculture farms switch to a form of clean, renewable energy, they can help the Earth. A potential type of renewable energy that they can use is marine energy, which uses the motion of the ocean to produce electricity. Other types of renewable energy are wind and solar energy.

a) What are two uses of aquaculture products?

b) What is the benefit of using renewable energy to power aquaculture farms?

Word Bank

AQUACULTURE RENEWABLE SEAWEED SHELLFISH FUEL

RESTORATION OCEAN ELECTRICITY CLEAN FARMING

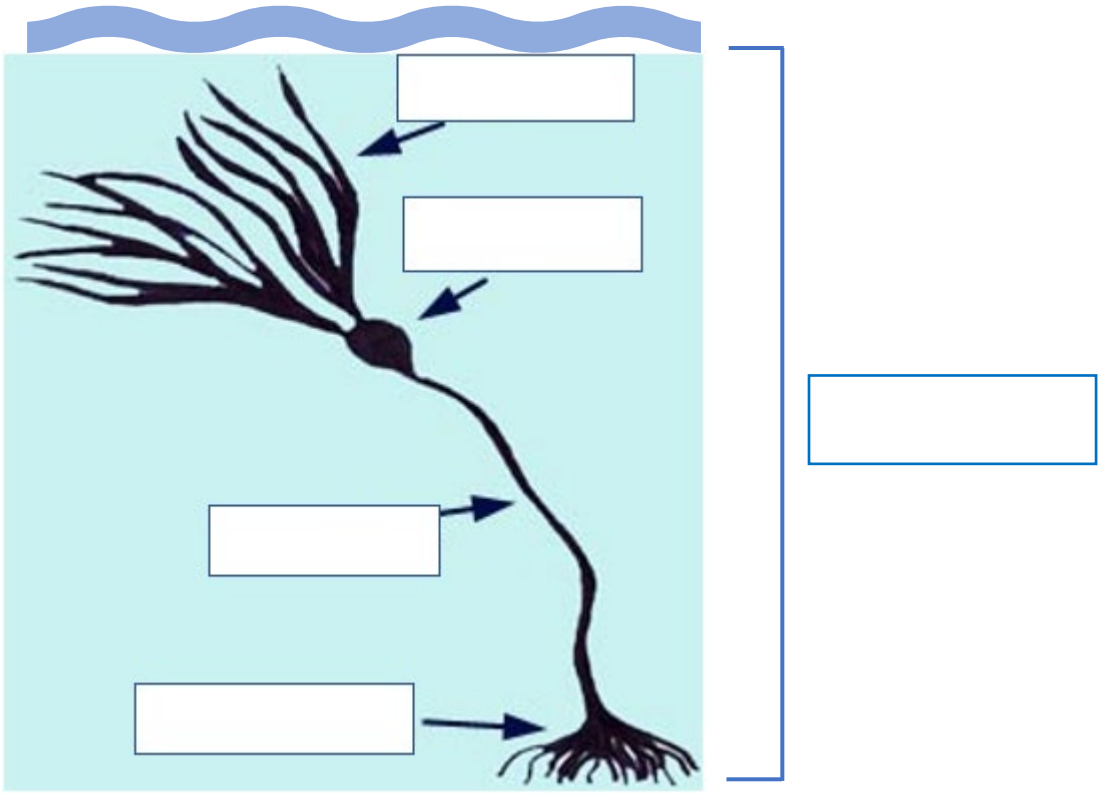
B	I	C	L	E	A	N	D	E	F	I	S	C	A	P
K	F	L	M	W	L	B	S	A	L	C	E	E	N	F
S	E	P	R	E	C	E	O	H	L	R	A	S	M	U
E	N	L	V	Y	Q	N	C	I	U	D	K	H	G	E
A	A	S	B	N	T	D	L	T	W	J	C	E	L	L
W	E	I	E	A	A	M	L	E	R	O	M	L	N	Q
E	C	B	V	L	W	U	Z	Y	K	I	X	L	I	D
E	O	R	A	T	C	E	B	N	W	M	C	F	U	N
D	W	G	W	A	C	Y	N	X	B	P	M	I	C	P
B	E	I	U	R	O	M	J	E	T	H	R	S	T	N
W	J	Q	S	M	G	N	I	M	R	A	F	H	Z	Y
V	A	Q	N	O	I	T	A	R	O	T	S	E	R	M

3. The structure of seaweeds can change depending on species. Below is a general structure of seaweed.

Structures:

- **Thallus**: entire body of the seaweed
- **Blades**: structures that resembles a leaf
- **Air bladders or floats**: gas filled organ that allows the seaweed to float
- **Stipe**: stem like structure
- **Holdfast**: anchors the seaweed to a surface such as sediment or rock

Label the seaweed below with the correct structure.



4. How is the seaweed shown in the figure different from the ones you have in your classroom? What structures do you see present, and which ones are missing?

5. Which structure do you think photosynthesis happens in?