

MARINE TURTLES - LESSON 2

1. Overview:

5 groups. Allocated activities:

Group 1 - Habitat:

- Create a model/diorama of marine habitat.
- Make turtle food chain cards.
- Examine ocean water under the microscope.

Group 2 - Life Cycle:

- Life cycle of a turtle (Loggerhead)

Group 3 - Turtle Tableau:

- Turtle tagging tableau and PPT

Group 4 - Pollution:

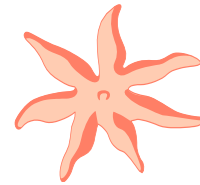
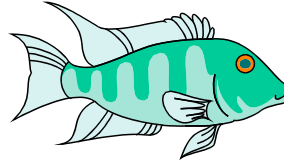
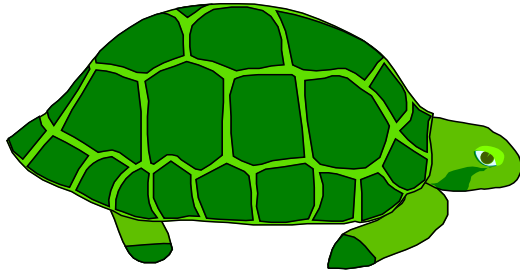
- Acid rain, go away!
- or
- Crying over spilled oil!

Group 5 - Nutrients:

- Nutrients in sea water.

TURTLE HABITAT AND FOOD CHAIN

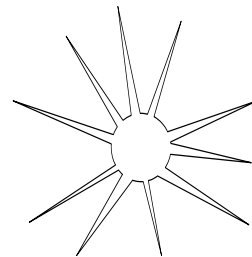
Work in pairs



1. Research marine habitat of loggerhead turtles. Create a model/diorama of this habitat. Take a digital photograph of the diorama/model for your portfolio.

2. Research the loggerhead turtle's food chain. Use these to create different "Marine Organism" cards (including the turtle) with a description of each organism on the back. **Order** the cards to show a marine food chain. Take a digital **photograph** of your food chain.

3. Examine marine life under the microscope. Work in pairs
Using an eye dropper place a drop of water on the microscope slide. Place the slide under the microscope and look carefully. Draw what you see.



Use the internet to find out information about one form of life you observed under the microscope. Write three things you found out:

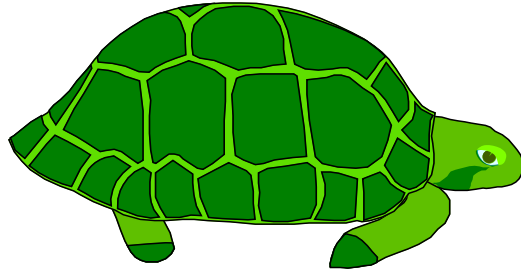
1. _____

2. _____

3. _____

LIFE CYCLE OF A TURTLE

Work in pairs



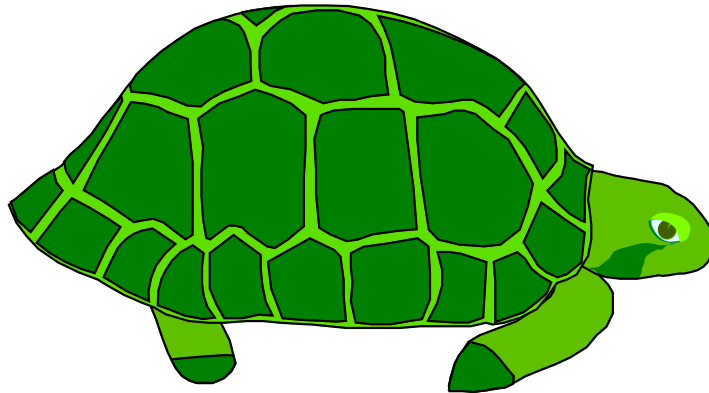
- A. Make a **sketch** of the stages in the life cycle of a loggerhead turtle. Include:
1. Male turtle mates with female turtle (October)
 2. Eggs in sand (January)
 3. Hatchling (March) 60 days later
 4. Young turtle 10 years
 5. Mature breeding turtle 30-40 years
- B. Make a **diorama** of the life cycle of a loggerhead turtle:
1. Use playdough, sand, cellophane and vegetation to make a model of the stages (in the correct order) in the box you have been given.
 2. Neatly label cards telling the different stages.
 3. Label a title card: The Life Cycle of the Loggerhead Turtle.

C. Answer the following **questions**:
When does a helium-filled balloon look like a jellyfish?

What can happen to turtles if we release helium-filled balloons?

TURTLE TABLEAU

Work in a group of 4



1. **View** the Turtle Talk and Turtle Tagging PPT presentations. Work out the steps involved in turtle tagging. No more than ten steps. Each student makes a neat mindmap of the steps.
2. Show **mindmaps** to teacher.
3. Group members **role play** the steps in tableau form.
4. Using the digital camera, **photograph** the steps. No more than ten photographs.
5. Make a **PPT presentation** of the steps. Include:
 - Title heading for PPT presentation and names of group members
 - Photographs
 - Titles and brief descriptions for each slide
 - Explain why the turtles are tagged
6. **Present** the PPT Turtle Tableau to the class.
7. **Print** a copy of the PPT presentation for your portfolio.



OR

PUPPET PLAY

Work in pairs

1. A. Research one species of marine turtles.
2. Write a script for a puppet show to tell a story about the turtle. Your story must include scientific information about your chosen topic.
3. Make puppet/s out of recycled materials.
4. Present the show to your class.

ACID RAIN, GO AWAY!



Work in pairs

Acid rain is rain that has dangerous chemicals in it. The chemicals come from factory smokestacks and car exhaust.

Conduct the following experiment:

Aim: What happens when too much acid rain falls on plants?

Materials:

- 4 x 500mL jars with lids
- Big container of rainwater
- Masking tape/popsticks
- Pen/texta
- Measuring cup
- Vinegar
- 4 plants of the same kind (from a coastal environment)
- This worksheet to record your results

Method:

- A. Make labels for your jars (use strips of masking tape and/or popsticks). Label the jars:
 1. A little acid rain
 2. A lot of acid rain
 3. Tap water
 4. Rainwater.Label your plant pots the same way.
- B. Measure 50 mL of vinegar into jar 1.
Measure 250 mL of vinegar into jar 2.
Fill jar 3 with tap water.
Fill jar 4 with rainwater.
- C. Put your plants in a sunny place where they will get the same amount of light. Water them every few days with the matching jars of water. Only give them enough water to keep the soil just moist. Make sure you water the plants on Friday of Week 1.
- D. Check the plants every school day for 2 weeks. Record your results in the table on the back of this sheet.

Prediction:

What do you think will happen? _____

Recording Results:

Write in the boxes for each jar, commenting on three things:

1. Does the plant look **healthy**?
2. Are any **leaves drooping**?
3. What **colour** are the **leaves**?

Day	Jar 1	Jar2	Jar3	Jar4
WK 1 Mon				
Tues				
Wed				
Thurs				
Fri				
WK 2 Mon				
Tues				

Wed				
Thurs				
Fri				

Results:

Explain in detail the results of the experiment and why you think things turned out the way they did. Comment on:

1. When did changes start happening?
2. Which plant started to die first?
3. How does the plant 4, watered with rainwater compare with the other plants?
What might this tell you about the rainfall in your area?

Reflection:

How could you improve the experiment?

How can your findings be applied in the real world?

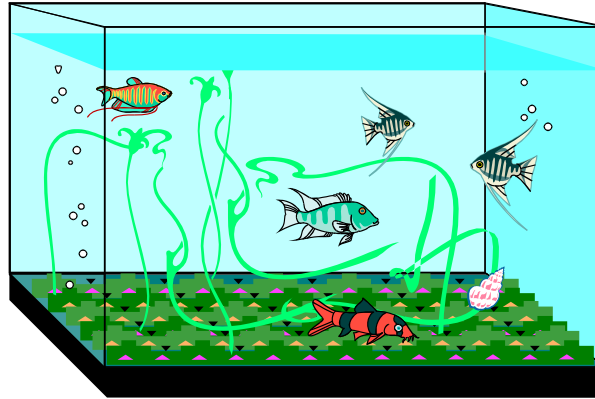
Reflections:

How can your findings be applied in the real world?

Brainstorm other ideas for cleaning up oil spills. Sketch your ideas below:

Brainstorm ideas for preventing oil spills. Write your ideas below:

NUTRIENTS IN WATER



Work in pairs

Aim:

What happens to sea and pond water when detergent phosphates are added to the water?
What effect will nutrient enrichment have on sea and pond water, if any?

Materials:

Phosphate solution
Pond water
Sea water
8 clear drinking glasses
Masking tape labels to identify each glass
Eyedropper
Paper towels

Method:

1. Label the glasses as follows:

Pond water	glass 1 - control
	glass 2 - 2 drops of phosphate solution
	glass 3 - 4 drops of phosphate solution
	glass 4 - 8 drops of phosphate solution
Sea water	glass 5 - control
	glass 6 - 2 drops of phosphate solution
	glass 7 - 4 drops of phosphate solution
	glass 8 - 8 drops of phosphate solution
2. Cover each glass with a paper towel.
3. Place each glass in a sunny part of the room. Make sure all the glasses receive the same amount of light.
4. Each day for 10 days add the same number of drops as you did the first time.
5. Write down your observations on the following table.

Prediction:

What do you think will happen? Why? _____

Recording Results:

Make observations about the water in the glasses. Write down the appearance of the water in each glass e.g. clear, tinge of green, light green, dark green, very cloudy.

Pond Water:

Day	Glass 1	Glass 2	Glass 3	Glass 4
WK 1 Mon				
Tues				
Wed				
Thurs				
Fri				
WK 2 Mon				
Tues				
Wed				
Thurs				
Fri				

Sea Water:

Day	Glass 5	Glass 6	Glass 7	Glass 8
WK 1 Mon				
Tues				
Wed				
Thurs				
Fri				
WK 2 Mon				
Tues				
Wed				
Thurs				
Fri				

Results:

Explain in detail the results of the experiment and why you think things turned out the way they did.

1. How did the phosphate affect the pond water?

How did the phosphate affect the sea water?

What do you think is happening in the water?

How might this change affect water in the natural environment?

Reflections:

Was your prediction close to your findings?

How could you improve the experiment?

How can your findings be applied in the real world?

