

Unique Adaptations to a Unique Environment: Mary River Turtle and its Habitat

LESSON FOUR: **Difference Between Structural and Behavioural Adaptations**



PHASE	LEARNING SEQUENCE	ACTIVITY	RESOURCES
Engage	Introduce concepts of behavioural and structural adaptations.	Introduce lesson's focus question Write on the whiteboard: Behavioural adaptation, structural adaptation View DVD Lesson 4	Resource #1 ASOT Goal setting Resource # 2 Sharing Mary DVD Lesson 4
Explore	Becoming familiar with the terms Applying the distinction to examples	Team game: matching terms, pictures and type of adaptation	Resource # 3 Distinguish between types of adaptation (card matching game, make enough sets for class)
Explain	Discover adaptations of the Mary River Turtle	Read Worksheet "What does the Mary River turtle get up to?" individually or in teams. Answer 7 comprehension questions.	Resource #4 What does the Mary River turtle get up to? (two-sided sheet with answers, sheet per student)
Elaborate	Distinguish between types of adaptations	Individual Task: Sort Behavioural from structural adaptations	Resource sheet #5 Structural vs behavioural adaptations (assessment task, copy per student)
Evaluate	Check student learning	Write definitions of structural and behavioural Adaptations in Science Journal. Add words to word wall	Resource #6: Word Wall words

Teacher tips:

Adaptations are specific traits, both physical and behavioural, that enable reptiles and other creatures to survive in their environments.

Discuss and give examples as per DVD suggestions and worksheet, eg. streamlined shell, two methods of breathing, elusive nature, large tail, long lived .

Examples:

Behavioural adaptations mentioned in the story:

- females lay at night to reduce predation.
- elusive behaviour
- basking allows them to regulate their blood temperature, digest food and control parasites.

Structural adaptations include the physical characteristics covered in last week's lesson, like the breathing through the tail and low-domed carapace (shell) which allows streamlined movement through water.





ASOT Goal Setting

Today's lesson poses the question:



Can I tell the difference between
behavioural and structural adaptations?

Distinguish between types of adaptation

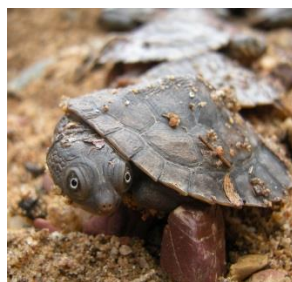
<i>Structural Adaptations</i>	<i>Behavioural Adaptations</i>
Parts of the body	Actions or behaviours
big tail 	basking 
flat carapace 	lays eggs at night 

What does the Mary River turtle get up to?

The Mary River turtle lives a very long time, possibly up to 80 years. As they live in the water, they eat water plants, chew algae from the rocks and logs that are below the surface of the water, catch dragonflies and other insects which swim in the river. During the day, the turtles climb onto parts of the rocks and logs which are above the height of the water, stretch out their head and legs and sunbake. This is called basking. They are very shy and quickly slide back into the river if an eagle or hawk flies overhead or a canoe, boat or person passes by.

At night time during spring and early summer, the adult females leave the safety of the water and walk up the riverbank to find some damp sand to lay their eggs. Using their back legs, they dig a hole about 15cm deep and lay about 12 – 25 eggs. She then covers the eggs and slides back into the river.

After about 55 days, the little turtle hatchlings dig their way up through the sand and run down into the river where they will spend the rest of their lives.



View:

You-tube clip: **Mary River turtle hatchlings Race to the River** by Tiaro Landcare

Questions:

1. How old can Mary River turtles get? _____

2. List four things Mary River turtles can eat.

3. Describe what Mary River turtle do when basking.

4. What behaviours show that they are shy creatures?

5. During what seasons do Mary River turtles lay eggs?

6. How many eggs does the female Mary River turtle usually lay?

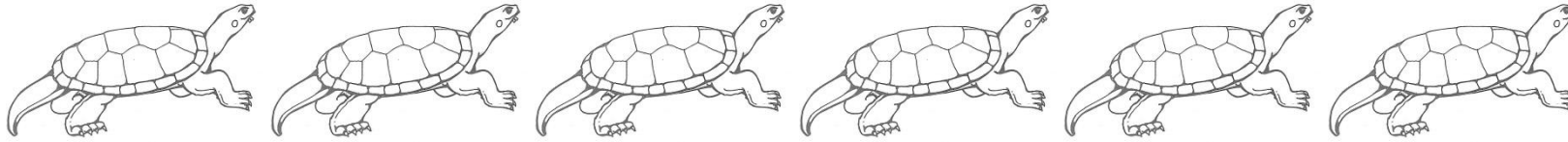
7. How long before the hatchlings come out of their eggs?



Structural vs behavioural adaptations

Team Names: _____

Date: _____



Adaptations: Can you sort the behavioural (things animals do) from the structural (parts of their body)? Write them in the correct columns.

waits for sand to be damp before laying eggs **strong back claws** **basks on logs in sunshine**
very large tail **low flat carapace** **stays underwater for days at a time** **gills in tail**
hides among rocks or logs **Lays eggs at night** **dark coloured carapace**

Structural adaptations	Behavioural adaptations

Word Wall words

Structural Adaptations

Behavioural Adaptations

Way things act or behave

Parts of body