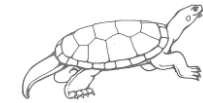
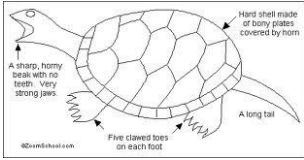


Unique Adaptations to a Unique Environment: Mary River Turtle and its Environs



LESSON TWO: Turtle Physical Features and Habitat

PHASE	LEARNING SEQUENCE	ACTIVITY	RESOURCES
<p>Engage</p> 	<p>General introduction to freshwater creatures of the Mary River.</p> <p>Physical features and how they fit the environment.</p>	<p>ASOT goal: Display and discuss</p> <p>View DVD Lesson 2</p>	<p>Resource #1 ASOT goal-setting question</p> <p>Resource #2: Sharing Mary DVD Lesson 2</p> <p><u>Additional resource:</u> Info sheet <i>Turtles of the Mary River</i> www.mrccc.org.au</p>
<p>Explore</p>	<p><u>Creature features:</u> Introduce names of Turtle body parts</p>	<p>In teams, complete the diagram by adding names for body parts (carapace, plastron, barbels)</p>	<p>Resource #3 Turtle Physical Features</p>
<p>Explain</p>	<p>Habitat: how the Mary River fits the needs of the unique Mary River Turtle.</p>	<p>View DVD: discusses tail, cloacal breathing, low-domed carapace, (refer back to first segment which shows the three turtles basking together on a log).</p> <p>Read Explain Info sheet</p>	<p>Resource 2# Sharing Mary DVD section 3</p> <p>Resource #4 What does the Mary River turtle look like? (worksheet)</p>
<p>Elaborate</p>	<p>Understanding the relationship between habitat and organism</p>	<p><u>Review things that organisms need to survive:</u> Food, habitat, oxygen, shelter, successful reproduction</p> <p>Match the habitat feature to the MR turtle's needs (cut and paste)</p>	<p>Worksheet Resource # 5 Matching habitat features to turtle needs (glue, scissors, Science journal)</p>
<p>Evaluate</p>	<p><u>Teacher notes:</u> Help the students understand that many of the same habitat features are also needed by the Mary River Cod and Lungfish, mentioned in the DVD segment.</p>	<p>Can you suggest some of ways in which the Mary River fills the unique needs of the Mary River Turtle?</p> <p>What can we do to help keep the river safe?</p>	<p>Resource 6# Label turtle body parts (sheet per student)</p> <p>Resource # 7 Word Wall words (printed and laminated)</p> <p>Task: Add terms to glossary/Word Wall</p>

Teacher Tips:

There are 6 species of freshwater turtles in the Mary River, the second-highest diversity of turtles found in any river in Australia. The endangered Mary River Turtle (*Elusor macrurus*) is the least often sighted and found exclusively in the Mary River system.

The other iconic species your students may be familiar with include the endangered Mary River Cod (one of the largest fish in Australia) and the Queensland Lungfish. More info on these species can be found at www.mrccc.org.au

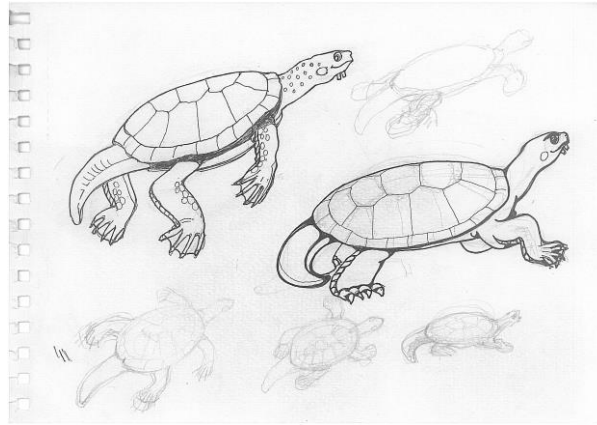
There are two species (Mary River Turtle and Qld Lungfish) of extreme interest to the international scientific community in the Mary River, due to their ability to absorb oxygen in two ways: at the surface using lungs and under water with gill-like structures. The gill-like structure is found in the tail of the turtle which leads to the humorous description “bum breather”. This adaptation reduces their need to surface and thus reduce exposure to predators.

Scientists have not yet discovered the purpose of the very large fat tail of the male – a unique feature of the Mary River turtle.

ASOT Goal Setting

Today's Lesson poses the questions:

Can I name the physical features
(body parts) of a freshwater turtle?



What are its habitat requirements?

TURTLE PHYSICAL FEATURES

Plastron
(lower portion of shell)

Gular shields **in contact**
with each other

Gular shields **separated**
by intergular shield

Fig. A

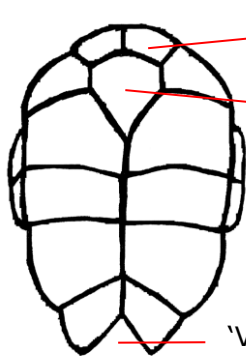
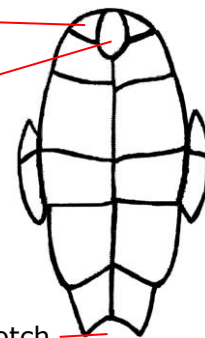


Fig. B



Gular shield

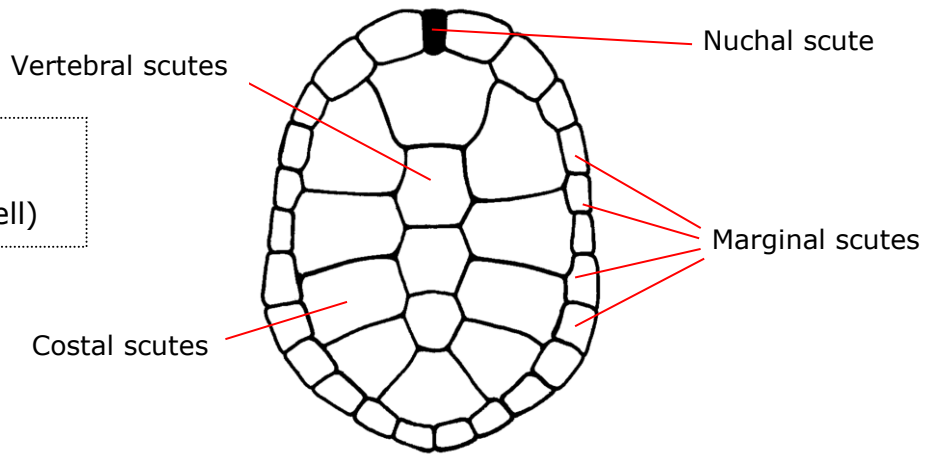
Intergular shield

'V' shaped rear notch

'U' shaped rear notch

Carapace
(top portion of shell)

Fig. C



Vertebral scutes

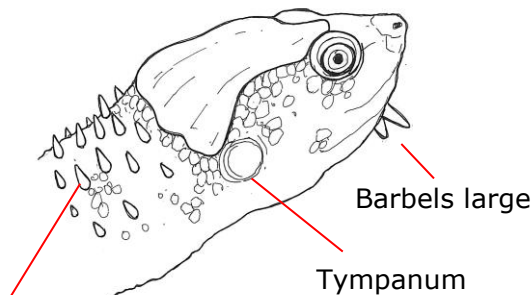
Nuchal scute

Marginal scutes

Costal scutes

Head shield **extending**
down the sides of the head

Fig. D



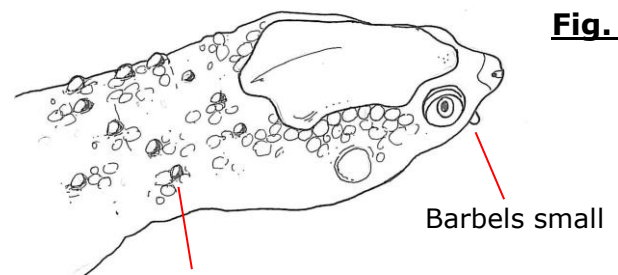
Barbels large

Tympanum

Tubercles tall, tapering

Head shield **NOT extending**
down the sides of the head

Fig. E



Barbels small

Tubercles short, squat

What does the Mary River turtle look like?

Living in the Mary River are six different turtles. Two have very long necks and the other four have short necks. The one which is called the Mary River turtle has a short neck.

Adult Mary River turtles are one of the largest river turtles in Australia. Their carapace (top half of the shell) grows to about 40cm across (bigger than a dinner plate) and is dark grey/brown. The



plastron (the lower half of the shell) is a creamy yellowish colour. The males grow much larger than the females which is very unusual for turtles in Australia.

All turtles have tails, but the tail of a male Mary River turtle is very large and hooks at the end. No other turtle in the world have tails which hook. This makes them unique.



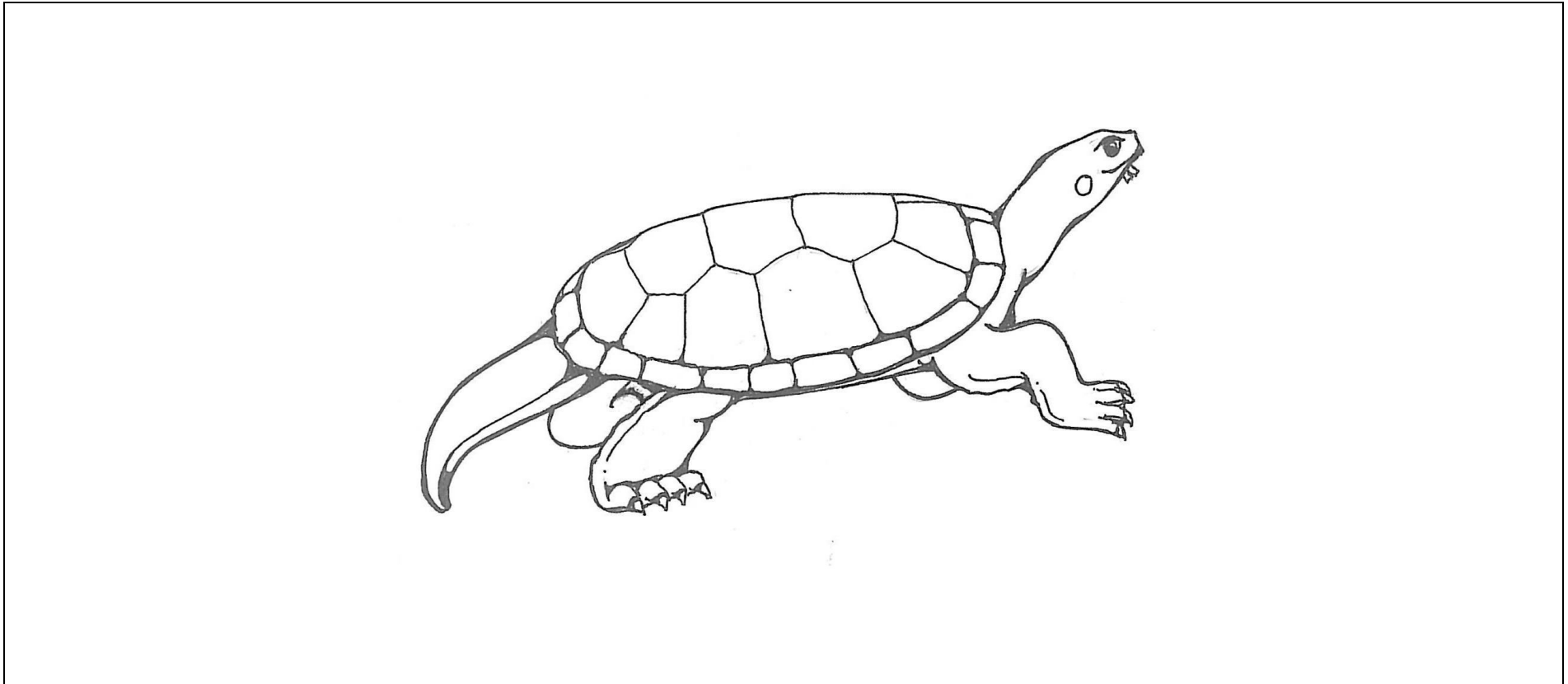
They have a narrow head. Under the chin are usually four barbels (pointed pieces of skin). The soft parts of the turtle are grey except for a pinkish tinge on the rear legs. Their legs are long and their feet are webbed which help them swim very fast.

Can you match the habitat feature to the Mary River Turtle's needs?

Sand banks	Food source
Logs and rocks (underwater)	Basking
Water	Food source
Logs and rocks (above water)	Oxygen
Riffle zones	Hiding places
Water plants and algae	Reproduction (egg laying)
Dragonflies & water bugs	Habitat



Can you **label the body parts** of this turtle and draw in some of the habitat features it requires to survive?



Word Wall Words

Carapace

Plastron

Barbels

Oxygen

Genus

species

Elusor macrurus

Riffle zone

Trees & logs

Clear water

Basking places