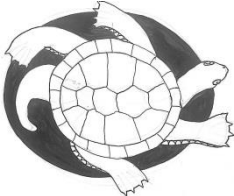


Unique Adaptations to a Unique Environment: Mary River Turtle and its Habitat

LESSON FIVE: How did the Mary River Turtle become endangered?



PHASE	LEARNING SEQUENCE	ACTIVITY	RESOURCES
Engage 	Historically there have been a series of adverse events which have endangered the survival of the Mary River Turtle as a species. There are still threats to the survival of the Mary River Turtle.	ASOT goal: What are the threats to the MRT? Introduce and discuss Lesson Goals (focus Questions) View DVD Section	Resource #1: ASOT goal setting Resource #2: Sharing Mary DVD Lesson 5
Explore	Observe & identify habitat features and threats	In teams of 3 or 4, match and rank the Threats and Impacts in order of importance from 1 to 8. Speakers from each team report on their rankings.	Resource #3 Match & rank threats and impacts (cards and game board, set per team, printed, cut up and laminated)
Explain	Threats to the Mary River Turtle	Read worksheet “Why is the Mary River Turtle endangered?” Complete Cloze task. <u>Optional:</u> View: ABC documentary <i>Two on Great Divide</i> segment on Mary River Turtle (Tim Flannery & John Doyle)	Resource #4 Why is the Mary River Turtle endangered? (cloze exercise, copy for each student) Optional: Digital copy of “Two on the Great Divide” segment.
Elaborate	Impacts on population of Mary River turtles through egg losses.	Survival Game (Maths) Accumulated list strategy by teacher on board or whiteboard.	Resource # 5: Survival (maths skills, sheet per student)
Evaluate	Evaluate the seriousness of various threats to the survival of Mary River Turtle.	Discuss the collective opinion of the greatest threats. Examine and discuss the conclusions that can be drawn from the graphs. If possible, graphs put into double column format on Whiteboard. How does this kind of information help scientists?	Resource #6: ASOT goal review Graph paper (not supplied) Glue graphs into Science journal Science journal

Teacher Tips

Although the Mary River Turtle is well adapted to its environment, by both its physical characteristics (structural) and the way it behaves (behavioural) there are still dangers to its survival. Other factors threaten its existence.

Animals became endangered when:

- Their needs are not being met eg clean water, food supply
- Habitat being damaged eg erosion of nesting banks, water pollution.
- Human interference eg stainless steel fishing hooks pose a danger as they do not break down, injury or death from being struck by outboard motors

Historically numbers were severely depleted when thousands of hatchlings were sold to the pet shop trade.

Fact:

The Mary River Turtle is the second most endangered freshwater turtle in Australia.

ASOT Goal Setting

Today's Lesson poses the question:

What are the THREATS to the
Mary River Turtle?



Match and rank the threats and impacts

Threats	Impacts	Order of seriousness
<i>Floods</i>	Nesting banks washed away and eggs drowned	1st
<i>Loss of rocks and logs in the water</i>	No places to bask or hide	2nd
<i>Plastics and pollutants in the river</i>	Poisoning and choking of turtles	3rd
<i>Goannas raiding nests & eating eggs</i>	No babies hatching	4th
<i>Human pet trade</i>	Selling turtle babies	5th
<i>Pet dogs digging up nests and eating eggs.</i>	No young turtles hatching	6th
<i>Feral animals such as foxes raiding nests</i>	No young turtles hatching	7th

Threat	Impacts	Order of seriousness

Why is the Mary River Turtle endangered?

Wild Mary River turtles can be found only in the Mary River in south east Queensland, nowhere else in the world.

During the 1960's, fishermen would travel down the river in their boat looking for places on the banks of the river where turtles had laid eggs.

The baby turtles were posted to Sydney and Melbourne where they were sold as pet turtles. No one, not even the fishermen, knew these turtles were different to every other turtle in Australia. Years later, the fishermen stopped collected the eggs, but now foxes, wild dogs and goannas have been eating turtle eggs.

So for many, many years, very few baby turtles have been making their way into the river.



Add the missing words:

Many baby Mary River turtles were posted to

_____ and _____

where they were sold as pet turtles. No one, not

even the fishermen, knew these turtles were

_____ to every other turtle in

_____.

The fishermen stopped collecting the eggs, but now

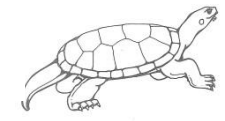
_____, wild dogs and _____

have been eating the turtle eggs. So for many

years, very few _____ turtles have

been making their way into the river.

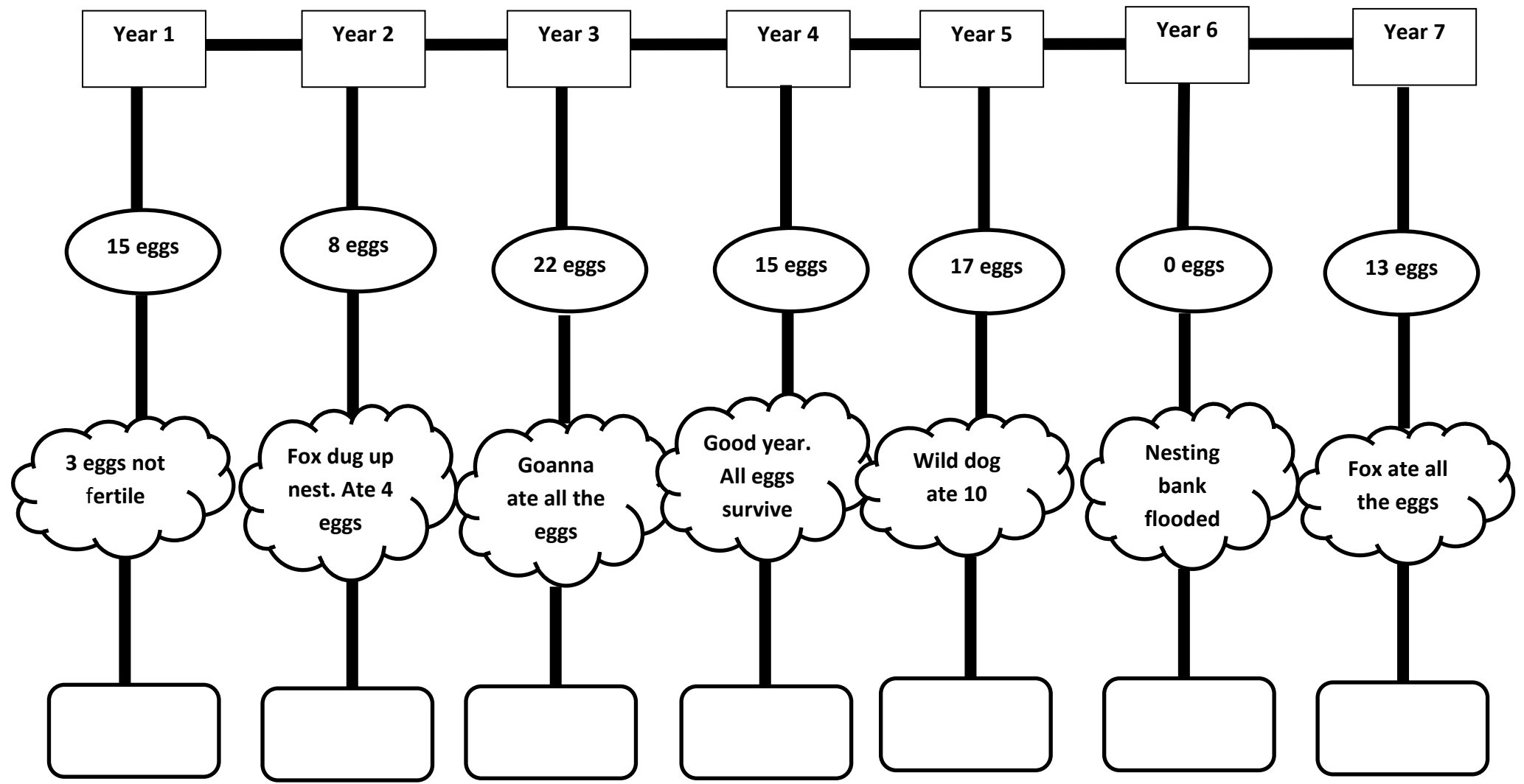
Survival? Understanding impacts on the population of Mary River



Each year adult female turtles will lay a clutch of eggs. During incubation these clutches are exposed to a variety of threats. Assume the population of wild turtles is 130 in year 1. What will the population be after 7 years given the following situations?

Make a graph of how many eggs were laid over 7 years.

Make another graph of how many eggs hatched over 7 years.



ASOT goal review



Can you now

- List three serious threats to the Mary River turtle
- Justify/explain your answers