



Term 1, Lesson 5

Freshwater Turtles

Learning Objectives:

1. Describe a freshwater turtle;
2. Identify the morphology of a freshwater turtle;
3. Identify habitats used by freshwater turtles;
4. Recognise the role of freshwater turtles in the ecosystem.



Australian Freshwater Turtles

Freshwater turtles are a diverse group of reptiles that are adapted to aquatic habitats, such as rivers, lakes, wetlands and ponds.

Australia is home to 25 species of freshwater turtle, with all but one belonging to the Chelidae family.



Photo credit (L to R): Dr. James Van Dyke, Dr. Kristen Petrov & unknown user TurtleSAT

Freshwater turtle morphology

Shell - freshwater turtles have a protective shell that consists of two main parts: the carapace (top of the shell) and the plastron (underside of the shell).

The outer surface of the shell is covered with scutes which protect the underlying bone. Scutes are made of keratin.



Photo credit: Dr. Anthony Santoro

Freshwater turtle morphology

Head - the structure of the mouth and jaws typically reflects the turtles diet.

Carnivorous species have sharp pointed jaws while herbivorous species may have more beak-like mouths. Turtles lack teeth but have powerful jaw muscles that aid in grasping and processing food.

Eyes and nostrils - eyes are positioned on the side of their head. Nostrils are located on top of the snout.



Photo credit: Dr. Kristen Petrov

Freshwater turtle morphology

Neck - the length of the neck varies among species. Some species have short necks, while others have exceptionally long necks that can extend sideways.



Limbs- four limbs, each equipped with webbed feet. Limbs can partially or fully retract into the shell.



Photo credit:
Sue Harper (top),
Dr. James Van
Dyke (bottom)

Freshwater turtle habitat use

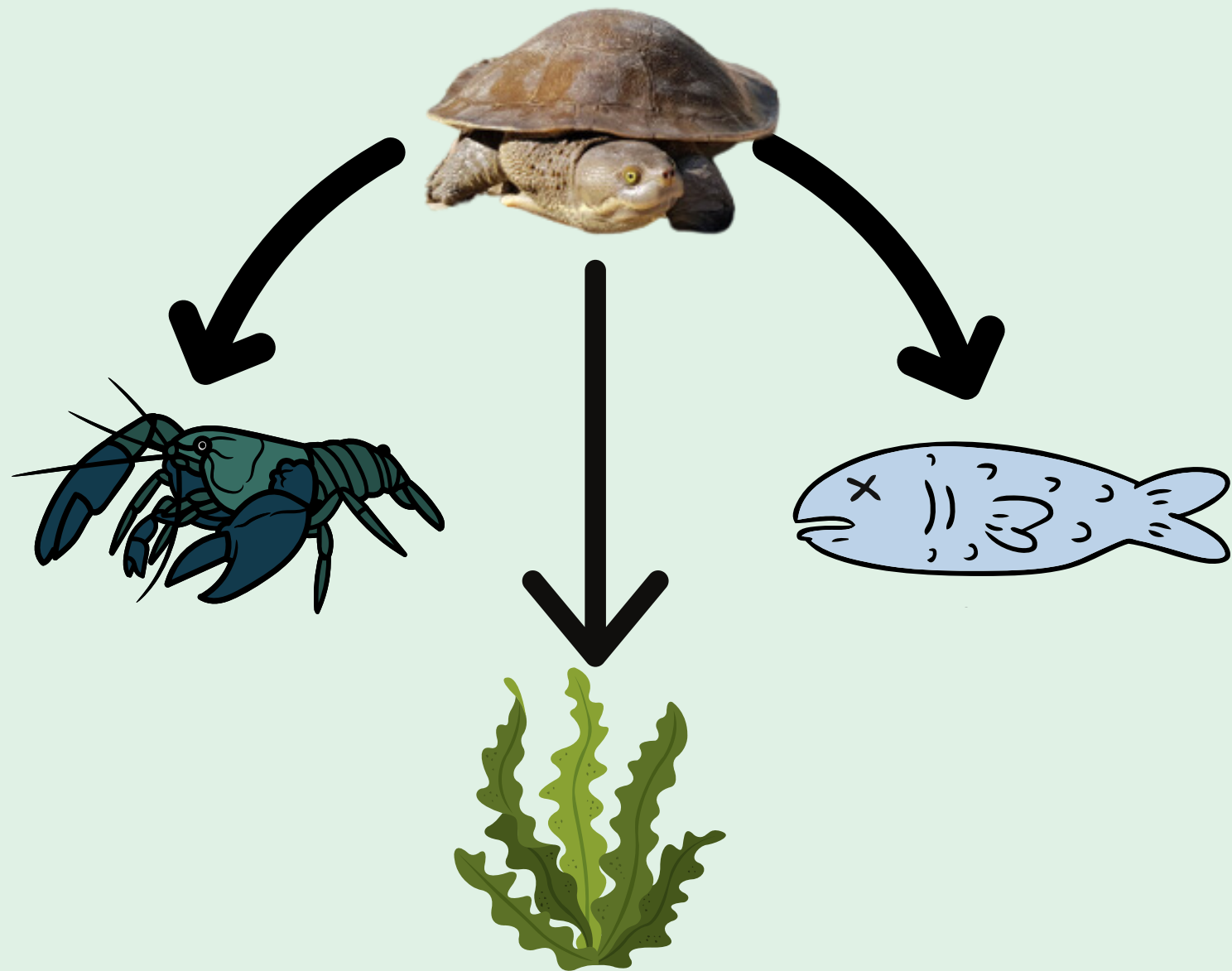
Freshwater turtles rely on both aquatic and riparian habitats. Freshwater turtles use the aquatic habitat for swimming, basking, feeding and shelter.

Freshwater turtles are ectothermic which means they rely on external sources of heat to regulate their body temperature. Freshwater turtles nest in the riparian habitat and typically lay their eggs in areas with loose, sandy soil with minimal vegetation cover.



Ecological role of freshwater turtles

Turtles fill multiple ecological roles in the food web - they may be herbivores, mesocarnivores, top predators and scavengers.



Freshwater turtles are often referred to as the “vacuum cleaners” of the river as they feed on carrion (dead animal matter) and help to mitigate the effect of animal decomposition.

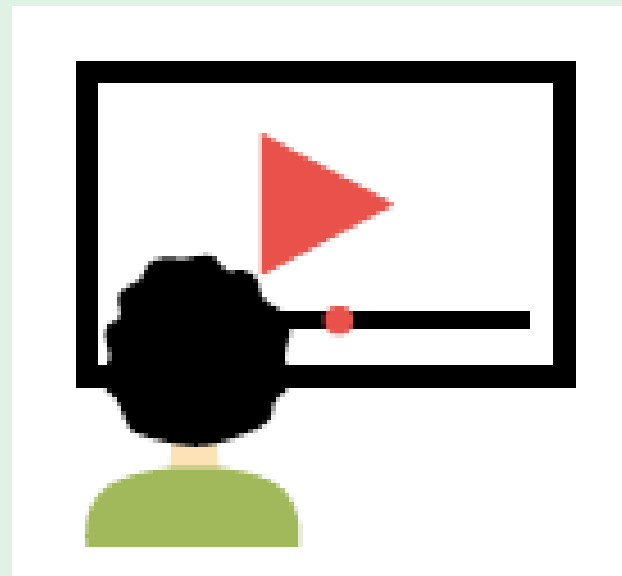
Classroom Activities

Activity 1 -

Classroom discussion about freshwater turtles.

Video: Freshwater turtles

<https://www.youtube.com/watch?v=-w6KueWTR-8>



Classroom Activities

Activity 2 -

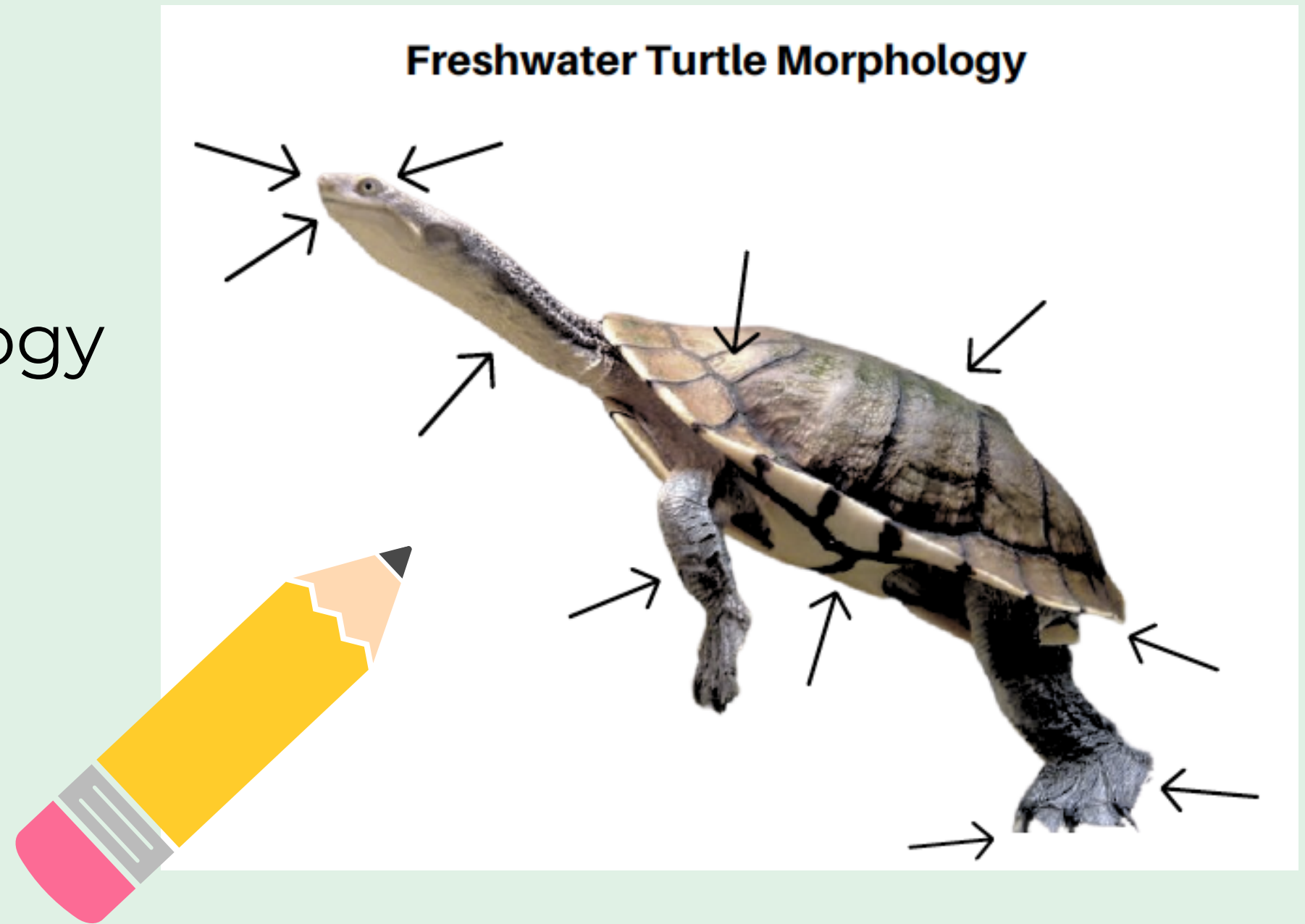
- In groups, research an Australian freshwater turtle species.
- Collate information relating to the species morphology, distribution, habitat preferences and reproduction.
- Present your findings as a poster and share the information with the class.



Classroom Activities

Activity 3 -

- Label the morphological characteristics of freshwater turtles in the Turtle Morphology Handout.



Classroom Activities

Activity 4 -

- Create your own freshwater turtle using paper mache.
- Incorporate the morphological features you have learnt about into your turtle design.

