TURTLES IN SCHOOLS

TERM 1 WORKBOOK

Photo credit: Ricky Spencer

1 Million Turtles

COMMUNITY CONSERVATION PROGRAM

TURTLES IN SCHOOLS

Produced by the
1 Million Turtles Community
Conservation Program
and funded by
The Foundation for National
Parks and Wildlife.

In the pages that follow, you will find a comprehensive set of lesson plans. Our initiative is not just about imparting knowledge but fostering a deep connection between students and their natural environment and instilling a sense of responsibility and awareness of freshwater turtles and their conservation.

As we embark on this educational venture, we extend our gratitude to educators, students, and all those who champion the cause of conservation. The Turtles in Schools Program is not just a curriculum; it is a movement to inspire the next generation of environmental custodians.

Thank you,

1 Million Turtles Community Conservation Program

LESSON 3

TERM ONE

FLORA & FAUNA

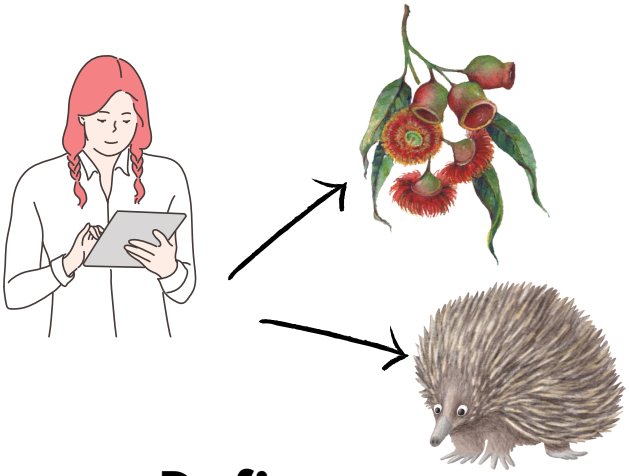
- Learning Intentions
- Background
- Activities
- Curriculum Mapping

Learning Intentions

(1) Define flora and fauna.

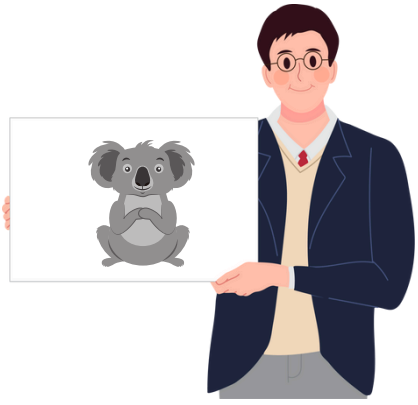
(2) Use literature, search engines and council factsheets to research different flora and fauna within the riparian and aquatic environments of your local wetland and summarise key information;

(3) Demonstrate your knowledge of the fauna/flora by presenting your findings with the class.



Define

Research



Present

Background Information: What are flora and fauna?

Flora: Plants

Fauna: Animals

Scientific name: the taxonomic name of the organism. It includes the genus and species and is mainly used by scientists.

Common name: the name of an organism generally used by the community.

Background Information: Freshwater Flora

Australian freshwater ecosystems support a diversity of flora. Each freshwater ecosystem is unique with its own assemblage of species adapted to specific environmental conditions.

Wetland plants can be divided into three groups; submerged, emergent and riparian (also known as fringing) vegetation.

Submerged vegetation: consists of plants that grow entirely or partially underwater. Some species may have floating leaves and flowers.

Examples include:
Wavy Marshwort (*Nymphoides crenata*): this species have floating waterlily-like leaves. The leaves are bright green in colour. Flowers are bright yellow.

Photo credit: S.Bowen/DPE

Red Water-Milfoil (*Myriophyllum verrucosum*): native submerged plant. The stem can grow up to 4m long and has feathery-like leaves. The species can be green to purple in colour.

Photo credit: NSW Local Land Services

Background Information: Freshwater Flora

Emergent plants: consists of plants rooted in the substrate underwater but with their stems and leaves extending above the water surface. These plants are often found along the edges of water bodies.

Examples include:
Southern Cattail (*Typha domingensis*): commonly grows along the waters edge. Cattails have tall rigid reeds, with flowers in a cylindrical brown-fluffy spike.

Photo credit: Alex Heyman

Common Rush (*Juncus usitatus*): typically grows in dense clumps, up to 3m tall. The stems are cylindrical and are usually green-brown in colour.

Photo credit: Robert Whyte

Background Information: Freshwater Flora

Riparian (fringing) plants: vegetation that grows along the margins of water bodies, including the banks of rivers, lakeshores, and wetland edges. This vegetation serves important ecological functions such as stabilising banks, filtering runoff, providing habitat, and acting as a buffer between land and water.

Examples include:
Paperbarks (*Melaleuca spp.*): commonly found in swampy areas, paperbarks have spongy, paper-like bark.

Photo credit: EAGiven

River Red Gums (*Eucalyptus camaldulensis*): These trees are characteristic of Australian wetlands, providing important habitat for birds, mammals, and insects. Their roots help stabilise riverbanks and prevent erosion.

Photo credit: Gerhard Saueracker

Background Information: Freshwater Fauna

Australian wetland environments are crucial habitats for many species, providing food, shelter, and breeding grounds for a wide range of animals.

Amphibians: Many amphibians rely on wetlands for breeding. They lay their eggs in water or in moist areas near water bodies. Wetlands provide a safe and suitable habitat for their eggs to develop into tadpoles and eventually metamorphose into adult frogs.

Examples include:
Green and Golden Bell Frog (*Litoria aurea*): the species has a bright green back with gold patches. The Green and Golden Bell Frog has experienced severe declines due to amphibian chytrid fungus.

Photo credit: Sydney Olympic Park Authority

Crawling Toadlet (*Pseudophryne guentheri*): this ground-dwelling species grow to 3.5 cm in body length. It has a slightly flattened body. Its back is mottled with brown and grey.

Photo credit: B. Maryan

Background Information: Freshwater Fauna

Freshwater fish: Freshwater fish use wetlands for breeding, shelter and feeding.

Examples include:
Murray Cod (*Maccullochella peelii*): a large predatory freshwater fish found in slow flowing rivers, creeks and streams of the Murray-Darling Basin. The species is highly territorial and aggressive towards other fish.

Photo credit: Rudie H. Kuiter / Aquatic Photographics.

Western Pygmy Perch (*Nannoperca vittata*): small species (up to 8cm), native to south western Australia. Typically found in shallow, slow-moving streams, billabongs and lakes amongst aquatic vegetation.

Photo credit: Rudie H. Kuiter / Aquatic Photographics.

Background Information: Freshwater Fauna

Monotremes: Monotremes (i.e. platypus and echidna) are a group of specialised mammals that lay eggs and have no teats. Pores on the females belly secrete milk for their young.

Platypus (*Ornithorhynchus anatinus*): the platypus has a leathery beak that is used to sift through substrate for invertebrates. Platypus burrow in the banks of rivers, creeks and ponds and may burrow under the roots of riparian vegetation.

Photo credit: Hornsby Shire Council

Reptiles: Reptiles are cold-blooded (ectothermic) vertebrates that use external sources (i.e. the sun) to regulate their body temperature. Reptiles such as freshwater turtles may spend most of their life in wetland environments, while others such as snakes may search for food around wetlands but otherwise spend their life on land.

Examples include:
Eastern long-neck turtle (*Chelodina longicollis*): lives in freshwater environments and is known for making overland movements in search of new habitat.

Photo credit: Rosie Nicolai, OEH

Background Information: Freshwater Fauna

Waterbirds: Wetland environments provide breeding grounds, food sources, migration stopovers, roosting sites and protection for waterbirds.

Examples include:
Little Egret (*Egretta garzetta*): the little egret is a species of small heron. It feeds in both shallow water and on land. In shallow water, it shuffles its foot to stir up aquatic prey.

Photo credit: James Bennett

Purple Swamphen (*Porphyrio porphyrio*): the Purple Swamphen feeds upon emergent plants eating the shoots of reeds and rushes. It is also known for eating small animals such as frogs, snails and ducklings.

Photo credit: Andrew Haysom

Classroom Activities

ACTIVITY 1

(1A) Cut out the pictures of flora and fauna.

(1B) Assign each picture to a category (either flora or fauna) in the worksheet.

ACTIVITY 2

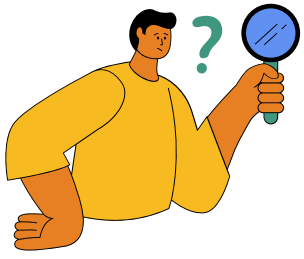
(2A) Independently or as a group research one plant and one animal that may be found at your local wetland. Present your findings to the class.

(2B) In your research identify:

- The species common name and scientific name;
- The habitat the species is found in (aquatic or riparian);
- A description of the species;
- The role of the species in the ecosystem. Does the species support or contribute to the functioning of the wetland ecosystem (i.e. flora may create shade for the aquatic environment).
- Include references and/or a bibliography.

(2C) Draw your chosen species.

Research



Identify

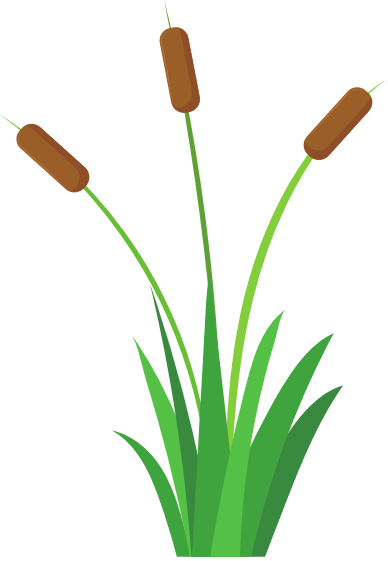
Present

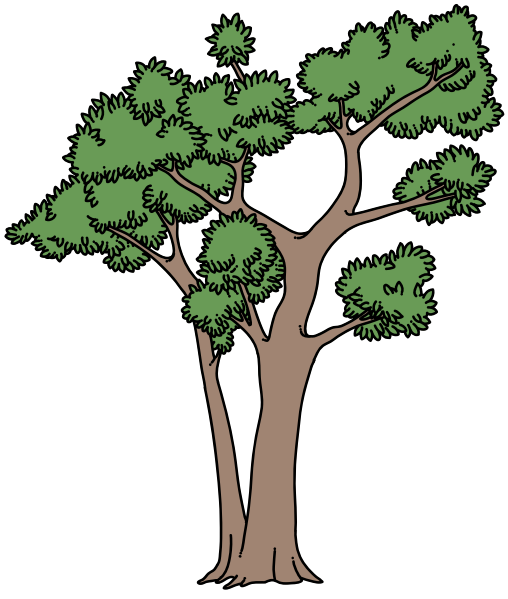
Flora and Fauna

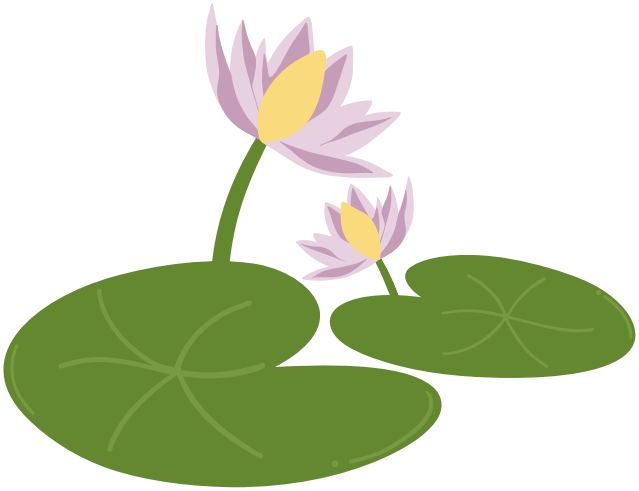
Cut and paste the pictures of flora and fauna and assign each to their category below

Flora	Fauna

Flora and Fauna







Wetland Flora

Fill in the information below about your chosen flora.

Common name

Scientific name:

Species habitat:

Species description:

The role of the species in the ecosystem:

Draw your chosen species:

Wetland Fauna

Fill in the information below about your chosen fauna.

Common name

Scientific name:

Species habitat:

Species description:

The role of the species in the ecosystem:

Draw your chosen species: