

YELLAGONGA WETLAND ECOLOGY EDUCATION RESOURCE

ACSS U072 Biological Sciences, Science Understanding: Living things have life cycles.

ACSH E062 Human Endeavour: Science knowledge helps people to understand the effect of their actions.

Elaborations

- Recognising that **environmental factors** can affect life cycles such as fire and seed germination.
- Exploring how science has contributed to a discussion about an issue such as loss of habitat for living things or how human activity has changed the local environment.

Teaching Points

- Vocabulary; larvae, nymph, tadpole, fledgling, seedling, pollen and fruit.
- Many Australian native plant seeds need fire to germinate.
- Life cycles can be disrupted by introduced species e.g. foxes and cats will dig up turtle eggs, weeds prevent turtles from burying eggs at a safe depth.

ACSS U073 Biological Sciences, Science Understanding: Living things, including plants and animals, depend on each other and the environment to survive.

Elaborations

- Investigating how **plants provide shelter** for animals.
- Investigating the **roles of living things in a habitat**, for instance producers, consumers or decomposers.
- Observing and describing **predator-prey relationships**.
- Recognising that **interactions between living things** may be competitive or mutually beneficial.

Teaching Points

- Provide examples of plants that give shelter e.g. Hakea shrubs offer protection to small animals because they are spiky, old large trees with hollows provide nesting sites for birds and homes for possums.
- Define the terms: producer, consumer and decomposer.
- Provide local examples of producers, consumers and decomposers.
- Look at how artificial feeding disrupts and changes the balance of the environment.
- Define the term competitive.
- Provide examples of competitive relationships e.g. native ducks and domestic ducks compete for the same food, pigeons and native birds compete for food, space and nesting sites.



Pre-excursion

- Learn appropriate vocabulary.
- Look at various different flowers and compare and contrast. Try to provide examples of insect and wind pollinated flowers.
- Research the life cycle of the Oblong Turtle also known as the Long-necked turtle (*Chelodina colliei* formerly *oblonga*). See the Department of Parks and Wildlife Fauna Notes No. 37; (see References)
- Introduce Producers, Consumers and Decomposers and look at how they relate to each other.

During the excursion

- This excursion is best timed when there are flowers and fruit – generally late term three or term four. Fruit is the scientific term for the seed pod – it can be fleshy like an apple or woody like a gum nut.
 - Students can take a walk around the park and make observations about the flowers and the type of fruit produced. Use the Year Four Science Seed Pod Cards Activity as a stimulus. They may even be able to find examples of the seeds. Look out for the various ways native seeds are dispersed.
- Complete the **Year Four Science Investigate the Oblong Turtles Habitat Activity Sheet**.
- Complete the **Year Four Science Who Eats Who? Activity Sheet**.

Post-excursion

- Germinate native seeds – Men of the Trees can assist with this (see References).
- Create a poster about the Oblong Turtle (see References).
 - physical characteristics
 - life cycle
 - threats (weeds, foxes, pollution, road traffic, drying climate).
- Create a field guide for local native Australian plants which includes photographs of the flower, fruit and seed.

References

<http://www.turtleoblonganetwork.org.au>

<http://www.climatewatch.org.au/species/reptiles/oblongturtle>

<http://perthzoo.wa.gov.au/animals-plants/australia/reptile-encounter/oblong-turtle/>

<http://www.menofthetrees.com.au>

<http://www.joondalup.wa.gov.au/Live/Environment/PublicationsplansandPolicies.aspx>



SCIENCE : SEED POD CARDS

**Cut out this set of cards for each group.
Students can use these cards to find the plant they belong to.**

Discussion questions:

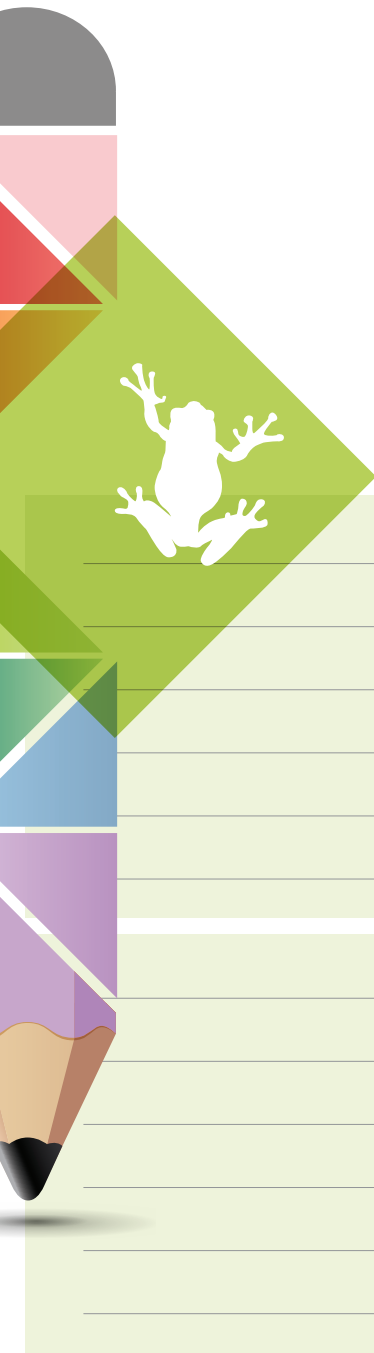
1. What did the flower look like?
2. How do you think the flower was pollinated?
3. How do you think the seeds are distributed?
4. What evidence (clues) do you have to make you think this?
5. Is there any evidence that the seeds may need fire to germinate?



SUGGESTED ANSWERS

1. Zamia seeds (large orange).
2. Acacia (Wattle) seeds (twisted bean pod).
3. Callistamon (Bottlebrush) seeds (small round seed pods attached to stem).
4. Eucalypt seeds (gumnut).
5. Banksia (furry cone with larger openings).
6. Xanthorrhoea seeds (Balga/Grass tree) (tall cylinder with numerous seed pods).

See References to seek answers for questions 1 to 6.



References

<https://florabase.dpaw.wa.gov.au/>

<http://www.anbg.gov.au/>

<http://anpsa.org.au>

<http://www.bgpa.wa.gov.au>

<http://australia.gov.au/about-australia/australian-story/austn-flora>

NAME

STUDENT ACTIVITY

INVESTIGATE THE OBLONG TURTLES HABITAT



Oblong turtles also known as Long-necked turtles (*Chelodina colliei* formerly *oblonga*) spend most of their lives in a fresh water lake. They like to sunbake on logs to warm up. Female turtles leave the water in spring and summer to dig a nest for their eggs. When the hatchlings emerge from the eggs and leave the nest from between late autumn to early spring, they head straight for the water.

1. Walk along the bushland path from Neil Hawkins Park heading north or south. Talk to your group members and discuss the questions below.
 - a. What is the vegetation (plants) like?
 - b. Is the ground sandy or are there a lot of grasses and weeds growing?
 - c. Do you think that it would be easy or hard for the turtles to walk on this ground?
 - d. Do you think it would be easy or hard for the female turtles to dig a nest for their eggs?
 - e. Would it be hard or easy for the hatchlings to walk to the lake?





2. If a female turtle can't find a suitable place to bury her eggs she will keep searching until she finds a place. Turtles will walk long distances in order to find a safe and suitable place to lay her eggs. People have found them in their gardens.

a. What hazards do you think the female turtles will face in their search for a nesting place?

b. Do you think it would be hard or easy for the hatchlings to find their way back to the lake?

c. What do you think you should do if you find hatchlings in your garden or on the road?

3. The female turtle buries her eggs and then she leaves them. They are left safe underground or are they? Foxes were introduced to Australia when the first European Settlers arrived. They were brought over for the sport of hunting.

a. Can you see any evidence of foxes predated turtle eggs?
Look carefully for holes and broken shells.

b. How many raided nests can you find?

4. Further Resources

- The Oblong Turtle of Yellagonga Regional Park at joondalup.wa.gov.au
- Department of Parks and Wildlife Fauna Notes No. 37

References

<http://www.turtleoblonganetwork.org.au>

<http://www.climatewatch.org.au/species/reptiles/oblong-turtle>

<http://perthzoo.wa.gov.au/animals-plants/australia/reptile-encounter/oblong-turtle/>

NAME

STUDENT ACTIVITY

WHO EATS WHO?

Find a quiet place to sit. Look and listen – what plants and animals can you see and hear? Write down your observations in the table below.

Producers	Consumers	Decomposers

Using your observations and by looking on the information signs around the park, complete the table below. The first one has been done for you.

Consumer	What does this animal eat?
1. Butcherbird	Small lizards (e.g. skinks) and insects
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

Park Invaders

Did you know there are birds that live at Neil Hawkins Park that are invaders? Many birds have been released or escaped from backyard aviaries. Do you recognise any of the birds below?



Many people like to feed the birds at Neil Hawkins Park. Find the sign that has the title "Let nature feed itself".

What are the main reasons why you should not feed wild birds?:

1.

2.

3.



Can you see any of these birds today? Write the ones you have seen.

Introduced birds (birds that are not native to the area) compete with the native birds. What do you think they compete for?

What can you do to help with this problem?

Who does belong?

Use the signs found around Neil Hawkins Park to make a list of the some of the Fauna (animals) and Flora (plants) that live in Yellagonga Regional Park.

Fauna	Flora

