

YELLAGONGA WETLAND ECOLOGY EDUCATION RESOURCE

ACSSU030 Biological Sciences, Science Understanding: Living things grow, change and have offspring similar to themselves.

ACSHE035 Human Endeavour: People use science in their daily lives, including when caring for their environment and living things.



Elaborations

- **Exploring different characteristics of life stages in animals** such as egg, caterpillar and butterfly.
- **Identifying the ways humans manage and protect resources**, such as reducing waste and caring for water supplies.
- Recognising that **many living things rely on resources that may be threatened**, and that science understanding can contribute to the preservation of such resources.

Teaching Points

- All living things grow from infant to adult.
- The time it takes to grow into an adult is different for different living things.
- Living things change as they grow from infant to adult.

This excursion is best completed in Term 3 when there are more evident examples of offspring and parents.

Pre-excursion

- Observe changes and growth of:
 - Chickens or ducks (see References).
 - Mealworms
 - Guppies – these are live bearing fish that are easy to keep and breed
 - Tadpoles.

References

<http://mothernatured.com/children/>
<http://det.wa.edu.au/curriculumsupport/animalethics/detcms/portal/>
<http://ucanhatchus.com.au>
<http://greatgrubclub.com/>

NB: Any use of live animals in the classroom must be approved by the Animal Ethics Committee (see References).

- “Cut and paste” type activities sequencing growth of various animals or plants.
- Growing plants from seed. This can be done in a clear plastic cup filled with either clear jelly or agar. The students can then see the seed split and grow. An alternative to this is to grow broad beans in large jars (e.g. a coffee jar) (see References).

During the excursion

- See **Year One Find That Plant** activities to make observations of the park environment.
- Refer to **Year Two Science Caring for Wildlife Activity Sheet** and (see References)
- The **Year Two Science Life Cycle Activity Sheet** and **Parent-Offspring Information Sheet** can be utilised before or after an excursion.
- Refer also to **Year Two Science: Animal Reproduction Teacher Information**.

Post-excursion

- Research the native animals and plants you saw at Neil Hawkins Park. Create a poster about that organism.
- Create a poster telling people about the dangers of feeding birds.
- Develop an assembly item about caring for wildlife (in their own environment).

YEAR TWO SCIENCE TEACHERS INFORMATION

ANIMAL REPRODUCTION

**• Birds and reptiles both lay eggs**

- Bird eggs are usually hard but porous (lets air in and out).
- Birds usually incubate the eggs by lining a nest with feathers and sitting on them.
- Reptile eggs have a softer shell.

• Search the internet for turtle hatching and egg laying videos.**• Turtle Breeding**

- Mating season is between winter and spring.
- Nesting season is between September to January (spring to summer).
- When female turtles leave the water to nest they head inland and can travel some distance before choosing a site e.g. up to 500 metres (Burbidge, 1967).
- Nesting sites that are open, sandy are preferred (Clay, 1981).

Clay, B.T. 1981. *Observations on the breeding biology and behaviour of the long-necked tortoise *Chelodina oblonga*.* Journal of the Royal Society of Western Australia 4:27-32.

Burbidge, A. A. 1967. *The biology of south-western Australian tortoises.* PhD. Thesis. University of Western Australia.

(see References)

• Threats to Turtle breeding

- Loss of suitable nesting sites: turtles prefer sandy soils to lay their eggs in. Excessive weeds and a loss of habitat due to roads and buildings means the female turtles have to travel further to find a good nesting site.
- Road traffic: a female turtle may have to travel across roads to nest. This puts her and her hatchlings at risk of being run over by vehicles.
- Predation: foxes will dig up turtle eggs to eat. You can often see evidence of this when walking along the lake. Look for broken egg shells and dug out areas. Ravens, birds of prey, cats and dogs are also threats to turtles.
- Poaching: taking turtles to sell or keeping as pets is illegal.
- Poor water quality: high nutrient waters encourage algae to grow. This can lead to poor water quality and turtle's shells being covered with algae.



- Drying climate: females do not reproduce as much when the lakes are dry and turtles need the water as it is the place they spend most of their time feeding.

From The Oblong Turtle of Yellagonga Park pamphlet, City of Joondalup

- **Birds nest in a variety of places**

- Many Australian ducks make a nest in tree hollows. They line the hollow with feathers to keep eggs warm and hidden.
- Other ducks and coots will make nests on raised ground using vegetation and downy feathers.
- Galahs, cockatoos and parrots will make nests in tree hollows.
- Magpies and birds of prey make nests in trees.
- Smaller birds often choose dense shrubs, often picking the Hakea that provides them with protection as it has very prickly leaves.
- For bird identification (see References)

- **Threats to bird breeding**

- Cats will hunt adult birds and fledglings as well as poaching eggs from nests. Cats should therefore be kept inside at night time.
- Many trees have been felled to make way for roads and houses resulting in a lack of tree hollows. Only older trees are large enough to have tree hollows. Nesting boxes can be made to provide breeding sites (see References).

References

[http:// www.carettochelys.com](http://www.carettochelys.com)

<http://birdlife.org.au>

<http://www.birdsinbackyards.net/Nest-box>

SCIENCE PARENT – OFFSPRING INFORMATION

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Adult	Young	Nest	Parental Care
Black Swan	Cygnets	Eggs – reeds on or near water	Some, until flying and feeding on own.
Oblong Turtle	Hatchling	Eggs – buried under sand	None
Galah	Fledgling/Chick	Eggs – in hollows of trees	Some, until flying and feeding on own.
Magpies	Fledgling/Chick	Eggs – sticks in branches of trees	Some, until flying and feeding on own.
Ducks	Duckling	Eggs – some in hollows of trees, some on ground, both made with downy feathers	Some, until flying and feeding on own.
Tiger Snakes	Hatchling	No nest or eggs – Live birth	None
Dugite Snake	Hatchling	Eggs – lightly covered by leaf litter or soil or in a hollow log.	None
Frogs	Tadpoles/Froglets	Eggs in jelly in shallow water by reeds and overhanging bushes	None
Western Grey Kangaroos	Joey	Mother's pouch	Lots, until they learn to eat on their own/sub adults.
Quendas (Southern Brown Bandicoot)	Joey	Pouch	Lots, until they learn to eat on their own/sub adults.
Rakali (Native water-rat)	Pup	Burrow	Four – eight weeks