

AEC STANDARD OPERATING PROCEDURES

SOP No:	04					
SOP:	Lizards – Geckos and Skinks, Large and Small Dragons					
Scientific Name:	<i>Varies with species</i>					
Category:	2 only					
Approved activities	<table border="1"> <thead> <tr> <th>Activity</th> <th>Category</th> </tr> </thead> <tbody> <tr> <td>a. The appropriate care of classroom pet lizards</td> <td>2</td> </tr> </tbody> </table>	Activity	Category	a. The appropriate care of classroom pet lizards	2	
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Approval Level:	Where an activity is not listed in this SOP, approval must be sought from the Animal Ethics Committee and confirmed before it can be undertaken.					
Authority:	Government Schools – Department for Education and Childhood Development Animal Ethics Committee Independent and Catholic Schools – Non-Government Schools Animal Ethics Committee (NGSAEC)					
Authority Approval Date:	1 August 2010					
Last Update:	21 April 2020					
Disclaimer:	<i>This document may be updated at any time. You should check the web site regularly to ensure that you are meeting the most recent recommendations. If you note any concerns with the information provided (inadequate, incorrect) please contact the relevant AEC</i>					
Licensing Requirement:	May apply to some species. Reptiles require a licence - 'Basic Keep and Sell' Permit, before keeping or breeding is permitted. Check the Department for Environment and Water website when considering a reptile. Reptiles must be obtained from a licensed keepers breeding stock.					
Compliance Requirement:	The keeping of this species needs approval from the school Principal. It is recommended that this Standard Operating Procedure be followed as a minimum in the provision of appropriate care and housing for this species.					

General Information:

Lizards are reptiles and, unlike birds or mammals, are cold-blooded creatures whose body temperature changes as the air temperature changes. Reptiles need specialised care including caging and food requirements. Lizards are very diverse in size and form. They have scales and feed on a diet of live food, plant materials and pellets. Many species are endangered and lizards must not be collected from the wild as it is illegal without a 'Take' or 'Rescue' Permit. Schools should investigate the species thoroughly to ensure they can provide for its needs before acquiring any lizards. For example does the school have the capacity to store frozen mice or rats on site safely and hygienically. Also note the length of the lifespan for reptiles is considerable and means the animal needs care for several decades.

While some lizards are considered to be placid and tolerant of human handling, they are not affectionate animals. They should not be carried around the classroom and can be defensive and bite. They are very food orientated and may attempt to bite anything that moves – including fingers.

Physical Attributes:

- **Size (adult):** They can vary from a few cms to 50cms – nose to tail tip.
- **Weight (adult):** Varies with species.
- **Life span:** Varies with species.
- **Sexual maturity:** Varies with species.

Behaviour:

Normal: Depending on the species there will be variations in the activity levels of reptiles. They should however appear alert, eat well and have good condition to their body and scales. They should shed their skins at regular intervals.

Socialisation: Many reptiles live solitary lives but some smaller species may live in colonies. Lizards should have been together from a young age and of the same sex to avoid breeding. Males housed together may fight. **Lizards of about the same size should be kept together because larger lizards may eat the smaller ones. Lizards can still fight even if of the same size however, so watch for injuries from fighting including missing toes and tails.** Talk to your local reptile expert (e.g. pet shop staff) for more information on species selection.

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Activity levels (hibernation etc.): Many reptiles come out during the heat of the day to warm themselves. Others are nocturnal, such as Geckos. Many species hibernate during the cooler winter months. In spring they are particularly active as it is mating time.

Environment:

Housing/Space: At a minimum the lizard should be able to comfortably move around the enclosure, climb and turn freely. The enclosure should be several times the lizards length and at least as wide as the lizards length. For example, bearded dragons and blue tongue lizards need enclosures 120-150 cm long at least. The size of the tank will determine the number and type of lizards kept.

The enclosure should be made of glass or a glass fronted timber tank. The top of the tank should be ventilated. A thermostat should be used to regulate tank temperature. A light fitting and UV bulb (for heating and to simulate sunlight) should also be provided as South Australian weather conditions alone may not provide enough heat, to maintain appropriate tank temperatures. Wire covering should be used on all lights to prevent thermal burns. Water and food dishes should be of adequate size and height so as not to drown the lizards but allow access. The tank should be fitted out with clean soil, branches, leaf litter and rocks to recreate a natural environment. Where possible wash natural items in soapy water prior to adding them to the tank or source them new from pet shops to prevent introducing disease into the enclosure.

Movement: Lizards have strong legs with toes and claws and a long tail. They can move and climb very rapidly. Most run and sprint across the ground. Many are good climbers.

Water: Clean water must always be available. Although they can get moisture from their food the water dish must always remain full.

Temperature: Lizards like to soak up heat from their environment and can often be found 'sunning' themselves. Once the tank has been landscaped, attach the lamp to the lid at one end of the tank, over the rocks or branches. This provides a 'hot spot' at one end and a cooler area at the other. Hotspot temperatures vary for different species (e.g. Bearded dragons, 40°C).o check with a reptile expert. The air temperature in the tank should be 28-36°C. Keep the tank away from direct sun as this can increase the temperature within the tank, making the enclosure conditions too hot.

Lighting: Each tank should contain a light and a heat source. The light should be kept on for 12 hours a day and the heat source for 24 hours a day. A UV light should be used if the reptiles do not have access to direct sunlight. This is important for calcium metabolism. UV lights should be replaced every 6 months unless required prior.

Covering: All enclosures must have a mesh or solid lid covering to avoid escape.

Shelter: An area for refuge from lights, noise and other lizards must be created using plants and logs.

Cleaning: Uneaten food should be removed the day after feeding. Water should be changed daily. Any faeces or soiled areas should be removed regularly. The whole enclosure should be cleaned every three months. Soils and items used in creating a natural environment should be cleaned and changed at this time. Never spray chemicals or fumes near lizard enclosures.

Feeding:

Diet: Species dependent: see table above for individual species needs..

Daily requirements: To maintain good healthy animals, feed them regularly during the warmer months but less often in winter. Feed each lizard 2-3 times a week in summer and 1-2 times a week with smaller quantities in winter. **Please be aware it is against the Animal Welfare Act 1985 to feed live mice or rats to reptiles**

Supplementary feeding: Should not be required if a varied diet as stated above is provided. Calcium powder can be fed to insects of which these insects can then be fed to reptiles as a treat. Ensure any insects being kept as a food source are fed not just calcium. Coating insects with calcium powder is not proven to be effective. Specific reptile supplements can also be purchased from Pet stores and Vet clinics.

Equipment: Food and water bowls.

Breeding:

- **Gestation period:** Many reptiles lay eggs but some birth live young.
- **Number of offspring:** Varies but 2-3 per clutch is common. Some species may lay up to 20 eggs or birth 25 live young.

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Mating: Lizards will mate when both sexes are ready in spring with birth occurring in early summer.

Pregnancy: Eggs are laid or live young birthed approximately 4-6 weeks after fertilisation. The temperature of the incubation of the eggs determines the gender of the young.

Handling:

Humans: Adults should only handle lizards, not children. Children can touch them but should avoid touching the head area. To pick up a lizard, grip the lizard firmly around the body, using fingers to trap two legs if possible. The thumb and forefinger can be used to hold the head still if the creature attempts to bite. Do not grasp the lizard's tail as it may come off. Ensure lizards are handled in an enclosed area to avoid them escaping. Small-sized lizards should not be handled as they are very fragile. People should not tap on the glass of the tank.

Equipment: A large soft net should be used for capture or moving lizards. A towel can be used to cover larger lizards. Thin gloves can be worn when handling lizards to protect the handler from bites.

Transport: Lizards should be moved in ventilated carry cages. Transport lizards quickly and do not leave unattended or allow the lizard to overheat.

Hygiene:

Thoroughly wash hands with soap and running water for at least 15 seconds after working with or handling any lizards. Dry hands with clean paper towel or air dryer. Turn off the tap with the paper towel if possible.

All reptiles have the potential to transmit diseases to humans. A range of protozoa and bacterial infections such as Salmonella spp. can occur. Maintaining good hygiene practices when cleaning and after handling reptiles, and maintaining a clean enclosure, generally can help to reduce this risk. Always follow first aid procedures should a bite occur.

Signs of illness:

Indicators:

- Parasites
- Wounds with or without infections including snout abrasions.
- Lethargy
- Weight loss
- Lumps or swellings,
- Poor appetite or water intake
- Vomiting.
- Skin changes or shedding problems.
- Limb or spine deformities or difficulty walking or climbing
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Common conditions in lizards include nutritional or mineral deficiencies (e.g. Rickets), parasite infestations and infections from fight wounds.

Treatments:

Schools are encouraged to develop relationships with Veterinarians and Animal industry representatives familiar with reptiles. These contacts can be used for disease diagnoses, treatment options and dietary, husbandry and welfare advice. Veterinarians can also assist with emergencies, particularly where euthanasia is needed. Treatments must be documented in the appropriate records.

Euthanasia:

When an illness or injury is such that recovery is unlikely then the lizard must be euthanised by a Veterinarian. Schools should contact their local Veterinarian to discuss emergency treatment options prior to an event occurring when keeping lizards. Any adverse event including death must be reported to the AEC using the ADVERSE EVENTS form. Forms must be returned to the AEC within 7 days of the event occurring.

Disposal/fate planning:

When no longer required lizards must be rehomed. They must **NEVER** be released into the environment. Bodies must be disposed of correctly in accordance with local council regulations.

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Holiday and weekend care:

Lizards can be sent home for weekends or holiday care with students providing consent is received from the school Principal and the parents. Staff should provide carers with animal care and record-keeping instructions, emergency contacts and provide appropriate equipment and food. Lizards must be checked daily, records kept and any problems reported to the school immediately whether kept onsite or taken offsite.

Lizard type	Features
<p>Small Geckos</p>	<p>Includes Beaded, Bynoe's Prickly, Eastern Stone, Wood, Western Stone or Wheat-belt Geckos.</p> <p>Shelter: under bark and leaf litter, under rocks and in small burrows.</p> <p>Diet: crickets, grasshoppers, beetles, spiders, insects and other geckos, cockroaches, termites, ants, slaters, mealworms and larvae. They prefer live food eating 2-3 insects per meal.</p> <p>General: They are very active at night. They lay 2 eggs per clutch. Geckos do not have moveable eyelids so they lick their eyes to clear them of dust. Geckos have sticky pads on their feet, which enables them to climb and adhere to most surfaces.</p>
<p>Large Geckos</p>	<p>Includes Thick-tailed, Barking, Knob-tailed or Starred Knob-tailed Geckos.</p> <p>General: can be identified by the different tails they have, being wider, flatter and leaf shaped.</p> <p>Shelter: same as for small geckos</p> <p>Diet: same as for small geckos</p> <p>General: as for small geckos.</p>
<p>Small dragons</p>	<p>Approx. 22 species in 4 main groups: crevice (flattened bodies), sand, burrowing or ground and bicycle dragons</p> <p>General: mostly small with long tails twice the length of their bodies and usually camouflaged to the colour of their environment.</p> <p>Diet: invertebrates such as ants, termites, centipedes, scorpions, snails, spiders, beetles, moths etc. as well as leaves, flowers, fruits and carrion. Small dragons prefer all live food.</p>
<p>Bearded dragons</p>	<p>Approx. 6 species of Bearded Dragons.</p> <p>Diet: omnivorous and eat a variety of foods – flowers, fruits, green shoots, insects, spiders, eggs, small lizards and small mammals. Larger dragons prefer more insects.</p> <p>General: In the wild they live in desert arid to semi-arid regions. They have strong legs and sharp claws. When alarmed they face the threat with their beard extended. Females lay 10-20 eggs in a burrow. Bearded Dragons live for up to 10 years in captivity.</p>

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Skinks	<p>This is the largest family of lizards in Australia, ranging from a few cms to 40 cms long. Includes the Sleepy, Eastern Bluetongue, Conningham's, Gidgee, Broad-banded and Narrow-banded Skinks.</p> <p>General: mostly diurnal and possess shiny tight scales. They commonly produce live young from 1-25 depending on the species, which are self-sufficient from birth. They hiss and mouth gape when startled.</p> <p>Diet: omnivorous and eat a variety of foods – flowers, fruits, berries, green shoots, insects, snails, spiders, eggs, small lizards and small mammals. Their diet can also include a small amount of canned dog food.</p>
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Approved activities: Where an activity is not listed in this SOP, approval must be sought from the Animal Ethics Committee and confirmed before it can be undertaken.

Activity a. THE APPROPRIATE CARE OF CLASSROOM PET LIZARDS

Category Category 2

Objective: To instruct students on the care and husbandry needs of lizards housed in the classroom.

Schools must ensure they can provide adequate, housing, care and husbandry needs for lizards before acquiring them for their classrooms. This includes meeting licensing requirements. Schools should also be aware of the long lifespan of lizards when considering fate planning.

Resources: **NSW Fauna and Parks - Husbandry Guidelines for:**

nswfmpa.org

- Blue Tongue Lizards

<http://nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Reptilia/Blue%20Tongue%20Lizard%20%28Johnson%29.pdf>

- Eastern Bearded Dragons

[http://nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Reptilia/Bear ded%20Dragons%20\(Ferguson\).pdf](http://nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Reptilia/Bear ded%20Dragons%20(Ferguson).pdf)

- Bearded Dragons

[http://nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Reptilia/Bear ded%20Dragons%20\(Nelson\).pdf](http://nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Reptilia/Bear ded%20Dragons%20(Nelson).pdf)

- Central Netted Dragon

<http://nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Reptilia/Centr al%20Netted%20Dragon.pdf>

- Frilled Lizard

<http://nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Reptilia/Frilled %20Lizard.pdf>

- Water dragon

[http://nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Reptilia/Wate r%20Dragon%20\(Hosking\).pdf](http://nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Reptilia/Wate r%20Dragon%20(Hosking).pdf)

Australasian Zoo Keeping - Husbandry Manual for Cane Grass Dragons

www.australasianzookeeping.org/Husbandry%20Manuals/Cane%20Grass%20Drago n.pdf

Herp Vet – lizard care sheets

www.herpvet.com.au/blue-tongued-skink-care-sheet/

www.herpvet.com.au/central-bearded-dragon-care-sheet/

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Pet care – Blue tongue lizards and Bearded Dragons – Sydney Exotics and Rabbit Vets

www.exoticvet.com.au/pet-care

Suggested guidelines for lizard enrichment

www.aazk.org/wp-content/uploads/Suggested-Guidelines-for-Reptile-Enrichment.pdf

Environmental enrichment for reptiles and amphibians workshop notes

www.enrichment.org/MiniWebs/Australasia/workshop01.pdf

Code of practice Captive reptile and amphibian husbandry – Department of Environment and Science – Queensland 2010

environment.des.qld.gov.au/?a=90614