

# POULTRY EGG HATCHING

## STANDARD OPERATING PROCEDURE

Approved 15 November 2023

Approval to conduct activities under this Standard Operating Procedure (SOP) is conditional upon curriculum justification for this use of animals being documented by the activity leader and reviewed by the principal.

Schools may undertake the approved activities outlined in this SOP once authorised to do so by the Queensland Schools Animal Ethics Committee (QSAEC) Animal Ethics Officer.

### TABLE OF CONTENTS

<b>SECTION 1   OBLIGATIONS</b> .....	<b>3</b>
1.1. Legal obligations .....	3
1.2. Duty of care for animals.....	3
1.3. Curriculum justification for the use of animals in education .....	3
1.4. Animal health and welfare .....	4
1.5. Student and staff health .....	4
1.6. Recordkeeping .....	5
<b>SECTION 2   QUALIFICATIONS, SKILLS AND EXPERIENCE</b> .....	<b>5</b>
<b>SECTION 3   STANDARDS OF PRACTICE</b> .....	<b>6</b>
3.1. Egg incubation, hatching and brooding as a classroom activity .....	6
3.2. Supply of fertilised eggs .....	6
3.3. Incubation equipment supply and operation .....	6
3.4. Brooding and feeding systems .....	7
3.5. Supervision and monitoring .....	9
3.6. Handling of chicks .....	9
3.7. Rehoming of the chicks .....	9
3.8. Signs of illness or distress .....	10
3.9. Animal emergency arrangements .....	10
3.10. Humane killing and euthanasia .....	10
<b>SECTION 4   APPROVED ACTIVITIES</b> .....	<b>11</b>
4.1. Incubation.....	11
4.2. Hatching .....	11

4.3. Brooding .....	11
4.4 Measuring, weighing, monitoring and moving .....	12
4.5. Transport of hatchlings .....	12
<b>SECTION 5   GLOSSARY .....</b>	<b>13</b>
<b>SECTION 6   REFERENCES .....</b>	<b>13</b>
<b>APPENDIX A   ALTERNATIVES TO POULTRY EGG-HATCHING ACTIVITIES.....</b>	<b>14</b>
<b>APPENDIX B   SUGGESTED LETTER TO PARENTS, PRIOR TO BOOKING AN EGG-HATCHING ACTIVITY.....</b>	<b>15</b>
<b>SECTION 7   APPLICATION/ACTIVITY NOTIFICATION FORM.....</b>	<b>16</b>

## SECTION 1 | OBLIGATIONS

---

### 1.1. LEGAL OBLIGATIONS

---

Schools have legal obligations under the [Animal Care and Protection Act 2001 \(Qld\)](#), the [Animal Care and Protection Regulation 2023 \(Qld\)](#), and the [Australian code for the care and use of animals for scientific purposes, 8<sup>th</sup> edition 2013 \(updated 2021\)](#) (Cwlth) (the Code), including:

- 1) ensuring persons in charge of an animal fulfil their duty of care to that animal
- 2) obtaining animal ethics approval prior to conducting scientific activities involving animals and acting in accordance with that approval once granted
- 3) reporting on the use of animals for scientific purposes.

Non-compliance with this legislation may result in schools receiving a maximum fine of 2000 penalty units. (Penalty unit value is notified in the [Penalties and Sentences Regulation 2015 \(Qld\)](#)).

All Queenslanders have a 'general biosecurity obligation' under the [Biosecurity Act 2014 \(Qld\)](#). Schools are responsible for [managing biosecurity risks](#) that are under their control and that they know about, or should reasonably be expected to know about. Contact Biosecurity Queensland on 13 25 23 for advice on managing specific risks or to report [notifiable incidents](#).

### 1.2. DUTY OF CARE FOR ANIMALS

---

If you are in charge of an animal, you have a duty of care to that animal - no matter why you are in charge of it, what you are using it for or how long it will be in your care. All decisions and actions involving the care and use of animals for scientific purposes must be underpinned by respect for animals. This respect is demonstrated by:

- using animals only when justified
- supporting the wellbeing of the animals involved
- avoiding or minimising harm, including pain and distress, to those animals
- applying high standards of scientific integrity
- applying the principles of [Replacement, Reduction and Refinement](#) (the 3Rs) at all stages of animal care and use through:
  - **replacement** of animals with other methods (alternatives)
  - **reduction** in numbers of animals used
  - **refinement** of techniques used, in order to minimise adverse impacts on animals
- knowing and accepting one's responsibilities.

### 1.3. CURRICULUM JUSTIFICATION FOR THE USE OF ANIMALS IN EDUCATION

---

It is the teacher's responsibility to provide a curriculum justification for any learning activity that involves the use of animals, including activities approved under a SOP. The use of animals must provide an added component to the learning that is neither trivial nor available in other ways, and there must be evidence to support this position. **Planning documents must clearly identify how the use of animals is essential to achieving the learning objectives.** The justification should consider whether [non-animal alternatives](#) could achieve the same learning objectives, the minimum number of animals necessary to achieve the objectives, the impact on the animal/s involved and whether the potential effects on the wellbeing of the animals are justified by the potential benefits of their use.

The QSAEC, when undertaking a site visit at the school, may request to see documentation detailing the curriculum justification for the use of animals.

If there are viable alternatives to animal use that meet the learning objectives, they must be used in preference to using animals. At all times the impact on the animal/s should be considered and, where appropriate, discussed with the students in an age-appropriate way.

Activities outside the scope of this SOP **must be considered by the QSAEC before approval can be granted.** To seek approval to conduct activities additional to those approved under this SOP or to modify an activity approved in this SOP, submit a [Modification, SOP variation or amendment form](#) in conjunction with the Application/Activity notification form at the last page of this SOP.

**Please note:** The QSAEC will **not** approve any activities classified as Category 4 in the [Categories of animal use](#).

## 1.4. ANIMAL HEALTH AND WELFARE

---

[Responsibilities of school personnel under the Code](#) details obligations of staff under animal welfare legislation to promote the responsible care and use of animals for scientific purposes.

An **unexpected adverse event** is any event that may have a negative impact on the wellbeing of an animal and was not foreshadowed in the approved proposal, SOP or subsequent documents to the QSAEC.

An unexpected adverse event may result from different causes, and includes but is not limited to:

- death of an animal, or group of animals, that was not expected (e.g. during surgery or anaesthesia, or after a procedure or treatment)
- adverse effects following a procedure or treatment that were not expected
- adverse effects in a larger number of animals than predicted during the planning of the project or activity, based on the number of animals actually used, not the number approved for the study
- a greater level of pain or distress than was predicted during the planning of the project or activity
- power failures, inclement weather, emergency situations or other factors external to the project or activity that have a negative impact on the welfare of the animals.

In the event of an unexpected adverse event or emergency, immediate action must be taken to address any adverse impacts on the animal/s. Alleviating unanticipated pain and distress must take precedence over an individual animal reaching the planned endpoint of the project, or the continuation or completion of the project. Emergency treatment may be required and, if necessary, animals must be humanely killed without delay.

In response to an unexpected adverse event, action and investigation by the activity leader or facility manager is required to ensure students, staff or other animals are not inadvertently affected. The specific response will depend on the animal and the circumstances. It may require seeking advice from a veterinarian to determine the best course of action (e.g. necropsy of the dead animal by the vet), removal of the deceased animal (e.g. by the supplier), or diagnostic investigations of facility or management practices to determine cause of death (e.g. water testing of fish tank, checking of ventilation).

All adverse events provide opportunities for students to learn from the experience. Activity leaders should optimise student learning outcomes (incidental and planned) by focussing on the learning potential of a specific event (e.g. prevention, animal welfare, diagnostic tools, treatment, security, harm minimisation).

Notify the QSAEC within 7 days of the event, using an [Unexpected adverse event report](#).

Please note: Necropsy of a dead animal is not an approved activity under this SOP due to potential health and biosecurity risks, and must only be performed by a competent person. The QSAEC recommends that if a necropsy is required it is performed by a vet.

Further advice about reporting unexpected adverse events is available on the [Department of Primary Industries \(DPI\) website](#).

## 1.5. STUDENT AND STAFF HEALTH

---

Those involved in the care and use of animals should make themselves aware of the potential disease hazards and other associated occupational health and safety issues, and manage risks according to the school's risk management process. Apart from injuries which may occur due to handling animals, there are a variety of infectious diseases (zoonoses) that are transmissible from various animals to humans.

Zoonotic diseases are common and the illnesses they cause can be serious. They can be spread by direct contact with animals, for example via bites or scratches, or through contact with animal faeces, bodily fluids, airborne particles, birth products, or enclosures contaminated with these materials.

Staff should familiarise themselves with the zoonoses the animals in their care may potentially transmit, the routes of transmission and what activities may potentially expose staff or students to infection. This research will inform the risk assessment to determine how to manage these risks or determine whether the activity should be conducted at all.

For comprehensive advice regarding zoonotic diseases and precautionary measures to minimise risks to staff and students, refer to [Animal observation and handling](#), [Animal contact guidelines - reducing the risk to human health 2014 \(Interim\)](#) and [Preventing zoonoses](#).

[Risk management](#) of animal activities ensures the health, safety and well-being of students, staff and others involved. If a specific [Curriculum Activity Risk Assessment activity guideline](#) exists, that guideline must be adhered to at a minimum. Risks associated with [zoonotic diseases](#) carried by animals must be identified and measures planned to allow activities to be conducted with an acceptable level of residual risk.

Any incident or injury that occurs in association with an activity must be reported, recorded and notified in accordance with the [Health, safety and wellbeing incident management procedure](#).

## 1.6. RECORDKEEPING

---

Schools must keep a [school-based animal activity register](#) which includes records relating to their use of animals for scientific purposes for seven years for audit purposes. This includes:

- scientific user registration (for non-state schools)
- signed applications, activity notification forms and modifications
- approval responses from QSAEC
- signed QSAEC reports (e.g. annual completion reporting, unexpected adverse events, complaints)

Clear and accurate records relevant to the particular species used in the activity/s should be readily available, including, as relevant:

- animal identification records (e.g. number of each species kept in each coop/cage/incubator)
- dates and sources of acquisition
- disposal details and dates
- feeding logs (times/amount)
- maintenance of electrical equipment
- names, dosage, dates of any chemicals administered and veterinary treatment provided
- emergency contacts and procedures.

## SECTION 2 | QUALIFICATIONS, SKILLS AND EXPERIENCE

---

Any teacher conducting scientific animal activity must have competency in the particular procedure and:

- a relevant science or science education qualification (e.g. Agricultural Science, Biological Science)
- or
- relevant science or science education experience as deemed appropriate by the school principal (generally 2 years' experience).

For new or inexperienced teachers (less than two years' experience), all activities must be conducted under the supervision of a Science or Agricultural Science Head of Department (HOD) or suitably experienced person.

Where direct supervision of a suitably experienced person is not available, a new or inexperienced teacher must:

- identify a mentor, maybe a Science or Agriculture HOD from a neighbouring school
- provide planning documents to the mentor.

Persons deemed to be suitably qualified must have:

- conducted risk assessments on the procedure/s to be carried out
- found the procedure/s to be safe and humane considering animal and student welfare
- considered the maturity and suitability of the student/s involved in the activity.

Teachers should ensure that animal users, including students, staff and visitors, are provided with adequate prior instruction in specific activities to enable appropriate care of an animal and to minimise risk of undue stress or harm to an animal.

## SECTION 3 | STANDARDS OF PRACTICE

---

### 3.1. EGG INCUBATION, HATCHING AND BROODING AS A CLASSROOM ACTIVITY

---

Egg incubation, hatching and brooding using incubation equipment in a classroom setting places chicks in an artificial rearing environment. Alternatives to this activity need to be carefully considered before deciding to conduct an egg-hatching activity. **Refer to [Appendix A](#) for some alternatives.**

The welfare of chicks must be the first consideration.

All egg-hatching activities run with Prep and Year 1 students are to be observation only. There is to be no experiential holding of chicks. Any handling of chicks by students in Year 2 and above should be for the purposes of measuring, weighing, monitoring and moving.

An egg-hatching activity should not be repeated with the same cohort of students as they progress through different year levels in the school. Therefore, careful consideration should be given to the most appropriate age for students to participate in an egg-hatching activity, the learning experiences the students will be exposed to and how this is justified within the curriculum. Clear and careful instructions and staff modelling will encourage students' understanding of their duty of care for the chicks.

Proper consideration for relocating the chicks at the end of the activity must be considered prior to commencing the activity. Fate planning should form part of the ethical discussion with students about animal use, stewardship, animal welfare and fate of the chicks post activity.

All chicks that are not to form part of a school flock approved under a separate animal ethics application must be returned to the supplier at the end of the activity. Any variations to this rehoming of chicks must be approved by the QSAEC prior to conducting the activity. Such approval should be sought by submitting a [Modification, SOP variation or amendment form](#).

#### INFORMATION TO PARENTS

Prior to booking an egg-hatching activity, parents **must** be informed of the proposed activity – giving them the opportunity to consider ethical and welfare matters associated with egg hatching and to raise any concerns with the activity leader. **A suggested letter is at [Appendix B](#).**

#### NUMBER OF EGGS

Keep the number of eggs used in this activity to a minimum.

**Maximum of 1 clutch (10-13 fertile eggs) and 3 one-day-old chicks per single/double classroom.**

### 3.2. SUPPLY OF FERTILISED EGGS

---

Fertile eggs should be obtained from a reputable supplier or an accredited hatchery that has been established to provide the equipment and/or eggs. If using a commercial supplier, **only layer eggs may be used** in a classroom setting. Check that the eggs have been fumigated prior to setting.

If the eggs are from your school farm, discuss with the Agricultural Science staff members the requirement for clean sanitised eggs for an egg-hatching activity.

Eggs must be:

- sanitised using a proprietary bacterial wash before they are delivered to the school to ensure that no shell-borne pathogens are present on the eggs
- clean and hygienic.

### 3.3. INCUBATION EQUIPMENT SUPPLY AND OPERATION

---

Arrangements for equipment supplied by a commercial provider need to include:

- confirmed dates for the start and conclusion of the activity
- delivery of equipment
- responsibilities for setup and monitoring of equipment
- directions and instructions for use
- cleaning and maintenance.

If the equipment is the school's property, ensure it is:

- clean, safe, certified
- positioned in a safe place where it cannot be knocked over
- located in a warm, quiet space to reduce stress to the chicks
- accessible for students to monitor under supervision
- not in direct sunlight at any time during the day.

Transport of the fertile eggs, placing them in the incubator and routine procedures for the optimum conditions for the eggs all need to be undertaken carefully. Follow the directions from the supplier. If there are no directions, develop a set of routine handling directions, suggestions and information and keep these details for reference.

The power supply and electrical equipment should be tested, reliable and well maintained, with a backup supply of power accessible if the main power supply is interrupted.

Check the bedding, temperature and the feeders prior to starting the activity. Ensure all requirements are ready and available for use as needed.

### 3.4. BROODING AND FEEDING SYSTEMS

---

Young birds of all species are unable to maintain their body temperature until they reach up to six weeks of age and therefore require an appropriate level of heat from another source. The best indicator of the temperature comfort range is alert and active behaviour by the hatchlings.

The brooding and feeding systems described below for chickens are generally suitable for small numbers of chickens, turkeys, ducks or geese.

The period from hatching until the chickens no longer require supplementary heat is called the 'brooding period' and usually lasts for 3-6 weeks, depending on seasonal temperatures and the type of housing.

The heat can be supplied by a broody hen or, more usually, by artificial brooding equipment.

As the chicken grows, its downy coat is replaced by feathers, and the brooding temperature can be gradually reduced until supplementary heat is discontinued at about 3-6 weeks.

#### TEMPERATURE

The brooder must be capable of providing a temperature of 33 °C, even in the coldest conditions. It must be adjustable so that a steady temperature can be maintained. Simple electric hobby brooders can be obtained from poultry equipment suppliers.

The brooding temperature for day-old chicks should be measured at the level of the chicks' backs, that is, about 50 mm above the litter. As the chickens grow, the temperature can be reduced until it is discontinued generally at the end of the fourth week, though it may be necessary to provide heat on very cold nights in the fifth and sixth week.

- The following temperatures for day-olds are recommended:
- Chickens: 33 °C. Reduce by 1 °C every 2-3 days until the temperature reaches 20 °C, at 28 days of age.
- Ducks and geese: 30 °C. Reduce by 3 °C each week until the third week when the heat may be removed (depending on the weather).
- Turkeys: For day-old poults under a brooder, measured 10cm above the ground at the rim of the brooder, the temperature, taken with a black bulb thermometer, should be 38 °C. Every three days, lower the temperature 1 °C to 2 °C to reach 21 °C when the poults are four to six weeks of age. When poults are weaned, the preferred temperature range is 20 °C - 28 °C.

Temperatures are to be used as a guide only because the best way to adjust the temperature for the comfort of the chicks is to observe their behaviour. If they crowd near the heat source and chirp loudly, the temperature is too low. If they move well away from the heat source and start panting, they are too hot. Ideally, they should be fairly quiet and spaced evenly under and around the heat source.



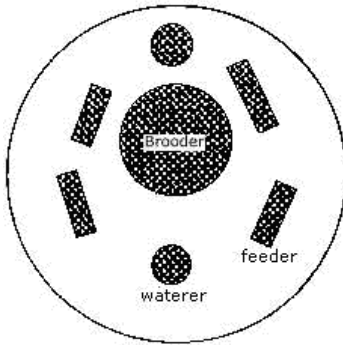


Figure 2: Brooding area layout showing surrounding fence, heat source, feeder and waterer

NSW Department of Primary Industries, [Small-scale poultry keeping brooding and rearing chickens](#) (2007)

A simple and effective means of brooding small numbers of chickens is to use an infra-red heat lamp. The infra-red energy passes through the air without heating it but when it strikes an absorbing body, such as a chick, the energy is absorbed and transformed into heat. The litter is also heated and the surrounding air warmed by heat convected from the heated bodies.

The lamp should be suspended 350 - 400 mm above the litter and the temperature checked by laying a thermometer on the litter directly under the lamp. The temperature can be adjusted by raising or lowering the lamp. Heat lamps must be hung securely by a chain and not by the electric lead. A spare globe must be available.

### PREPARING FOR THE CHICKS/CHICKENS

Clean and disinfect the brooding area some days before the chickens arrive so there is time for the area to dry. Cover the floor with dry absorbent litter material (wood shavings, rice hulls, chopped straw, sawdust or shredded paper) to a depth of 50 mm. Place a surround of cardboard, metal sheeting or hardboard around the brooding area. The surround should be about 450 mm high to protect the chickens from draughts, and the area enclosed should provide at least 50 cm<sup>2</sup> of floor space for each bird. The surround can be gradually expanded until removed completely at 2 weeks.

For the first two days, the litter in the brooding area should be covered with newspaper. Feed should be sprinkled on the paper and clean fresh water provided. Ideally the water should be in specially designed drinkers consisting of a plastic jar inverted into a shallow circular trough. Ordinary flat dishes can also be used if care is taken to ensure that the water is not too deep. A large stone or block of wood should be placed in the centre of the pan to reduce the amount of water in the vessel without restricting access by the birds.

Switch the brooder on at least two hours before the chickens arrive so that the area is warmed and the necessary adjustments to temperature can be made.

Water and feed should be placed near the heat source. As you place a chicken in the brooder, dip its beak in the water to encourage it to drink.

The base pans from hanging feeders can be used as feeders for young chickens and, as the chickens grow, tube hoppers can be attached. The tube will hold enough feed for several days. Small flat pans or trays can also be used for feed for the first week.

Fresh food and water must be available to the chickens at all times and feeders and drinkers must be cleaned and refilled regularly. Cleaning will have to be carried out at least twice daily until the chicks have grown sufficiently and the feeders and drinkers can be raised above the litter.

After three days, the newspaper can be removed and the feeders and drinkers moved further away from the heat source.

Make sure that the brooder room is well ventilated but that the chickens are free from draughts.



## FLOOR SPACE AND EQUIPMENT

[Recommended space requirements](#) are as shown:

Age (weeks)	Floor space (birds per m2)	Feeder space (mm per bird)	Drinking space (mm per bird)
1-4	20	20	10
5-8	10	30	20
9-20	5	50	30

## FEEDING

Consult the egg supplier or local feed supplier to determine the appropriate chicken starter food for the particular breed or strain of poultry in use.

## LIGHTING

A light intensity of about 20 lux is required on the food and water for the first three days after hatching in order to learn to find food and water. It may then be reduced to as low as 2 lux during rearing. (Poultry SCARM Code, s. 5.1).

### 3.5. SUPERVISION AND MONITORING

---

Frequent and regular monitoring of eggs and chicks, at least twice daily, must be conducted by skilled staff. Ensure any recording logs are regularly maintained and kept up to date after each observation.

Diligence in observation does not alter on weekends and holidays. Staff members need to be rostered to maintain observation schedule as per weekdays.

### 3.6. HANDLING OF CHICKS

---

**All egg-hatching activities run with Prep and Year 1 students are to be observation only. There is to be no experiential holding of chicks. Any handling of chicks by students in Year 2 and above should be for the purposes of measuring, weighing, monitoring and moving.**

Clear and careful instructions and staff modelling will encourage students' understanding of their duty of care for the chicks.

Chicks should only be handled by competent staff members as required. If students are assisting a teacher during routine maintenance of the chicks' housing, chicks must be transferred from the brooder to a holding box or crate. This will minimise stress placed on the chicks by students unnecessarily handling them for long periods. In any circumstance, chicks are only to be handled for a short amount of time to reduce the risk of heat stress.

Anyone in contact with chickens and/or eggs should always remember to wash their hands with soap and water and dry thoroughly before and after handling.

Teachers will provide students with information on appropriate methods of handling and caring for the eggs, the egg-hatching process and the hatchling brooding procedures (teachers' discretion will be used for all handling activities).

### 3.7. REHOMING OF THE CHICKS

---

At the end of the 'brooding' period, from hatching to seven days old, all chicks that are not to form part of a school flock (approved under separate animal ethics application) must be returned to the supplier. Any variation to this must be approved by the QSAEC prior to the activity being conducted.

### 3.8. SIGNS OF ILLNESS OR DISTRESS

---

Chicks are easily stressed. Stress may be related to temperature, water, food or other environmental conditions. Students should learn how to recognise signs of stress (noise, huddling) and take action to reduce it.

Chicks expect to be, and are comfortable as, part of a flock. Crowded conditions in the incubator should not occur.

'Those responsible for the care of domestic poultry should be aware of the signs of ill-health and distress. Signs of ill-health in poultry include reduced food and water intake, changes in the nature and level of their activity, abnormal condition of their feathers or droppings, or other physical features. Evidence of behavioural changes may indicate ill-health or distress or both.' (Poultry SCARM Code, s. 12.1).

If a chick is showing any signs of ill-health, deformity or distress the school must seek advice from a veterinarian, hatching company or person competent to diagnose ill-health and distress in chicks.

'Dead birds must be removed and disposed of promptly and hygienically.' (Poultry SCARM Code, s. 12.8)

'Birds with an obvious sickness or significant deformity should be removed from the flock and euthanased as soon as possible'. (Poultry SCARM Code, s. 12.10).

### 3.9. ANIMAL EMERGENCY ARRANGEMENTS

---

The school must have an emergency management plan to deal with events in and out of school hours. Details of the plan will vary according to the needs of each school and must include:

- signage that includes emergency contacts, animal identification details
- monitoring of animals, including on weekends and school holidays
- a first aid kit for animals
- at least one local veterinarian on call
- strategies to withdraw individual animals (e.g. due to illness or death) or all stock (e.g. due to equipment issues, leaks, natural disasters, vandalism)
- strategies for animals to be easily identified and returned to schools (e.g. due to escape, theft, or displacement in natural disasters)
- arrangements for power outages (e.g. checking on back-up power, battery level checking)
- a list of who is competent to euthanase animals if necessary (this is likely to be the local veterinarian but may also be an Agricultural Science HOD/TIC or Agricultural Assistant or experienced teacher)
- a schedule of persons authorised to respond to emergencies and engage veterinary assistance.

### 3.10. HUMANE KILLING AND EUTHANASIA

---

If chicks need to be euthanased, for example by neck dislocation, which is considered an acceptable method of euthanasia, this should be undertaken by someone who is competent and confident to do it efficiently. These activities should not be undertaken in public view.

Where a chick is born deformed or has become so sick, diseased or injured that recovery is unlikely or undesirable on humane grounds, euthanasia must be arranged with a local veterinarian or a person competent in euthanasia techniques for chickens.

It may be necessary to prepare for the likelihood to sensitively discuss with students what happens with eggs that have failed to hatch, chicks that are frail, weak and dying, and situations that may require euthanasia. There are opportunities here to carefully and sensitively relate these important facts of life in an age appropriate manner.

Notify the QSAEC of deaths and other unexpected adverse events within 7 days of the incident's occurrence, using the [Unexpected adverse event report](#). The signed hardcopy should be held in the school's animal activity register.

## SECTION 4 | APPROVED ACTIVITIES

All activities must be conducted in line with industry and veterinary standards. Chemicals and drugs used must be judged to be required by a qualified instructor, must be registered products, and must be used in accordance with Safety Data Sheet information and manufacturer's instructions.

**Note:** Instructor:student and student:animal ratios cannot always be specified with accuracy given the wide variety of class sizes, student ages and settings in which activities are being conducted. While ratios stated in this document are suggested minimum requirements, careful consideration must be given to determine ratios that are most effective in supporting and safeguarding animal wellbeing.

### 4.1. INCUBATION

Category 3 – moderate impact				
Activity	Objective	3R activities	Ratios	References
Incubation	To observe the incubation process	Theoretical learning, modelling, videos, simulations	<b>Instructor:Students</b> 1:30 supervising <b>Students:Animals</b> 30:10-13 observing	<a href="#">3.3 Incubation equipment supply and operation</a>

The incubation period is usually for a period of 21 days. An incubator is a controlled environment to regulate the temperature of the eggs and protect the developing chick. It is important to regulate the temperature and the humidity of the incubator to ensure a successful hatch. The incubator must not be opened until the hatch is complete, usually 24-48 hours. Do not be tempted to intervene in the hatching process – it can take many hours for the chicken to hatch successfully after it has pipped a hole in the shell.

### 4.2. HATCHING

Category 3 – moderate impact				
Activity	Objective	3R activities	Ratios	References
Hatching	To observe the hatching process and observe the movement of chicks	Theoretical learning, modelling, videos, simulations	<b>Instructor:Students</b> 1:30 supervising <b>Students:Animals</b> 30:10-13 observing	

After the eggs have hatched, it is recommended that the chicks are placed onto newspaper for 24 hours with feed and water. If some feed is scattered on the paper it will stimulate pecking. Chicks must be placed into a secure, draught-free brooding enclosure with at least 50 cm<sup>2</sup> of floor space for each chick. Discarded egg shells and unhatched eggs should be disposed of hygienically.

### 4.3. BROODING

Category 3 – moderate impact				
Activity	Objective	3R activities	Ratios	References
Brooding	To demonstrate the procedures for moving chicks to the brooder and for monitoring the brooding conditions	Step-by-step guides, modelling, videos, simulations	<b>Instructor:Students</b> 1:30 supervising 1:2 performing <b>Students:Animals</b> 30:1 observing 2:1 performing (not Prep or Yr 1)	<a href="#">Poultry SCARM Code ss. 5.1, 7.1.1, 9.2, 12.11;</a> <a href="#">3.4 Brooding and feeding systems</a>

All egg-hatching activities run with Prep and Year 1 students are to be observation only. Any handling of chicks by students in Year 2 and above should be for the purposes of measuring, weighing, monitoring and moving. **There is to be no experiential holding of chicks.**

Brooding may last from birth to 7 days and sometimes longer, depending on the climate and location.

Ensure that the following basic needs are provided:

- brooders that provide protection from the weather and predation, and meet the specifications outlined in section 3.4 of this SOP.
- brooders should be large enough to allow chicks to move away from the heat source if the need arises
- readily accessible food and water to maintain health and vigour. As chicks grow, feed and water

- containers should be raised to stop bedding fouling feed and water supplies
- freedom to move, stand, turn around, stretch, sit and lie down
- visual contact with other members of the species
- clean dry litter
- prevention of disease, injury and undesirable behaviours, and their rapid treatment should they occur.

#### 4.4. MEASURING, WEIGHING, MONITORING AND MOVING

Category 2 – low impact				
Activity	Objective	3R activities	Ratios	References
Measuring, weighing, monitoring and moving of chicks	To demonstrate and instruct students in the procedures for the examination of chicks	Step-by-step guides, modelling, videos, simulations	<b>Instructor:Students</b> 1:30 supervising 1:2 performing <b>Students:Animals</b> 30:13-16 observing 2:1 performing (not Prep or Yr 1)	<a href="#">3.6 Handling of chicks</a>

All egg-hatching activities run with Prep and Year 1 students are to be observation only.

Any handling of chicks by students in Year 2 and above must be for the purposes of measuring, weighing, monitoring and moving only.

**There is to be no experiential holding of chicks.** As chicks easily overheat, students must not hold the chicks for long periods.

#### 4.5. TRANSPORT OF HATCHLINGS

Category 3 – moderate impact				
Activity	Objective	3R activities	Ratios	References
Transport of hatchlings	To move the hatchlings to another location	Step-by-step guides, modelling, videos, simulations	<b>Instructor:Students</b> 1:30 supervising <b>Students:Animals</b> 30:13-16 observing	<a href="#">Code of practice for transport of livestock (Schedule 5 of the Animal Care and Protection Regulation 2023)</a>

Any transport or movement of hatchlings should be undertaken humanely and in suitable, clean and stress-free conditions. Hatchlings should:

- be treated humanely
- be healthy and fit for the intended journey
- be transported in a way that does not cause injury or undue suffering. Containers should be designed and maintained to prevent injuries to poultry
- not travel for more than 72 hours, if less than 3 days of age, with a maximum time off water of 72 hours. If more than 3 days of age, the maximum journey time is 24 hours with 24 hours off water.

Weather conditions should be considered when determining loading densities with additional space being allowed on hot or humid days. Reasonable measures must be taken by the driver of chicks less than 5 days of age to minimise the risk of harm to the bird from chilling or overheating during the journey. The animals should be protected from direct sunlight and adverse weather conditions.

Schools that own or keep 100 or more hatchlings are required to register as a [biosecurity entity](#) with Biosecurity Queensland and will be allocated a property identification code for the property where the animals are kept.

There are a number of restrictions relating to the movement of chickens. Contact DPI directly for more information.

## SECTION 5 | GLOSSARY

3R activities	Animals used for teaching and training are not being used to discover, prove or develop new ideas and techniques but to communicate scientific concepts and to develop manual skills and expertise in specific techniques. 3R activities provide alternatives to communicate scientific concepts and develop technical skills and expertise, ensuring animals are used only when necessary and minimising the impact on animals used.
Alternatives to animal use	Replacement of animals with other methods/activities for educative purposes must be sought and used whenever possible.
Code of practice for transport of livestock	<a href="#">Animal Care and Protection Regulation 2023 (Qld)</a> , Schedule 5.
DPI	Queensland Department of Primary Industries
Eggs	Poultry eggs from chickens, ducks, geese, turkeys, quail or guinea fowl. Not eggs from caged birds or native birds.
QSAEC	Queensland Schools Animal Ethics Committee
Poultry SCARM Code	<a href="#">Model code of practice for the welfare of animals – Domestic poultry</a> , 4 <sup>th</sup> edition, SCARM Report 83
Supervision	Supervision in all instances means supervision by a suitably qualified person familiar with the procedures as well as normal and abnormal animal responses.
The Code	<a href="#">Australian code for the care and use of animals for scientific purposes</a> , 8 <sup>th</sup> edition 2013 (updated 2021)

## SECTION 6 | REFERENCES

- Model code of practice for the welfare of animals – Domestic poultry, 4<sup>th</sup> edition, SCARM Report 83  
<http://www.publish.csiro.au/book/3451>
- NSW Department of Primary Industries – Small scale poultry keeping – brooding and rearing chickens  
<https://www.dpi.nsw.gov.au/animals-and-livestock/poultry-and-birds/production-small-scale/brooding-rearing>

## APPENDIX A | ALTERNATIVES TO POULTRY EGG-HATCHING ACTIVITIES

---

Poultry egg hatching can be an appropriate activity to conduct in the classroom in order to achieve the scientific learning outcomes of observing bird hatching and the process of a bird's growth and development.

Although hatching chicks may appear to be a stimulating activity suitable for young students, there may be unintended learning outcomes resulting from this activity, e.g. euthanasia of deformed hatchlings is sometimes necessary.

Where it is determined that the potential benefits of this activity do not outweigh the possible negative impact on the animals, teachers may need to review their curriculum planning to determine if there are other lifecycle and growth and development activities, that will still meet their curriculum requirements, e.g. a farm excursion where egg hatching can be observed.

The following sites may be useful:

- Department of Primary Industries - Alternatives to animal use  
<https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/livestock/animal-welfare/animals-science/using-animals/alternatives>
- United Poultry Concerns - *Hatching good lessons: Alternatives to school hatching projects*  
<http://www.upc-online.org/hatching/alternatives.html>
- Primary Games - *Chick hatching from egg*  
<http://www.primarygames.com/holidays/easter/videos/chick-hatching-from-egg/>
- University of Illinois - Chickscope embryology: The 21-day chick lifecycle  
<http://chickscope.beckman.illinois.edu/explore/embryology/>

This page contains links to websites which are not under the control of QSAEC or the Department of Education. The listing of these websites should not be construed as an endorsement, approval or recommendation by QSAEC or the Department of Education of the owners or operators of these websites, or of any information, data, products or services referred to or contained in the linked web sites. QSAEC and the Department of Education accept no liability in respect of the content of the linked websites.

## APPENDIX B | SUGGESTED LETTER TO PARENTS, PRIOR TO BOOKING AN EGG-HATCHING ACTIVITY

---

Dear Parent/Carer

This letter is to inform you of our proposal to book an egg-hatching activity for

---

<insert details of class and activity>

The decision to conduct this activity has been taken to achieve the following outcomes:

- Students will develop skills in observing the hatchlings to develop an understanding of the process of a chick's hatching, growth and development.
- Students will develop knowledge and skills in responsibly caring for animals.

We will ensure that the activity is run safely and responsibly, with all possible care taken to ensure the welfare of the chicks in our care, however, there is the possibility that some eggs may not hatch, that some chicks may be deformed, or that newly-hatched chicks may die. Should any of these possibilities occur, they will be sensitively discussed with the students in an age-appropriate manner.

After our classroom activity is completed, the chicks must be returned to the supplier of the eggs. We have contacted a possible supplier and they have indicated that, after their return, the chicks will be *<please insert information from supplier about the future of the chicks, specifying any differences in treatment of male and female chicks if relevant>*.

We look forward to your support should this activity proceed and urge you to discuss any concerns you may have with your child's teacher.

Yours sincerely

---

Activity Leader/s



## SECTION 7 | APPLICATION/ACTIVITY NOTIFICATION FORM

---

To seek QSAEC approval for animal use activities covered by this SOP, please complete the online [Activity notification form](#) (ANF) prior to the activities commencing.

Before completing the ANF, please ensure the following documents (if applicable) are available to upload to the online application:

**Privately-owned animal use template agreement:**

- If you are using privately-owned animals a **template agreement** with the details and duration of the owner's responsibility must be attached to your QSAEC application. Note the owner's personal details and signature are not required to be included for the QSAEC, however schools must ensure the agreement is completed by the owner and stored on their school-based animal activity register for 7 years for audit purposes. If there are any changes to the agreement once signed by the owner then a copy of the updated template agreement must be provided to the QSAEC prior to the animal use activities commencing.

***Ensure all required fields are completed in the ANF and submit as per the outlined instructions.***