

Alternatives to chicken hatching projects in Queensland schools



A presentation by Animal Liberation Queensland
for the Queensland Schools Animal Ethics Committee – August 2012

Growing concerns about Chicken hatching projects

- "From what I have read of chicken hatching projects, these have too many uncertainties with regard to the welfare of the animals concerned, and their subsequent fates, to outweigh whatever educational purposes they are supposed to serve".

*- Professor Barry Spurr, University of Sydney,
Fellow, Australian College of Educators*

What the Code of Practice says

- Section 6.1.1 Australian code of practice for the care and use of animals for scientific purposes - 7th Edition 2004: Animals are not to be used for teaching activities unless there are no suitable alternatives for achieving all of the educational objectives.

Animal Liberation Queensland's position regarding Ethics Committee approvals of chicken hatching projects:

- Educationally sound, suitable alternatives currently exist in the following contexts:
 - All P-10 Subject areas of the Curriculum
 - Teaching of General Capabilities / Social skills programs
 - Religious education
- Ethics committees must not approve chicken hatching applications where alternatives exist, in order to comply with the Code .
- 'Replacement' is the intent of the Code where alternatives exist.

Educational objectives related to Curriculum content

- Some schools apply to undertake chicken hatching projects to achieve Learning objectives related to Subject or Learning area knowledge, understanding & skills
- The main subject in which chicken hatching may be considered relevant in the P-10 curriculum is Science (Biology strand)

<http://www.australiancurriculum.edu.au/Science/Curriculum/F-10>

- In other subject areas - for example, English - many alternative contexts besides 'chickens' could readily be considered

Australian Curriculum: Science

- The Australian Curriculum makes clear what all young Australians should learn as they progress through schooling.
- Content Descriptions (knowledge, understanding and skills) are provided for each P-10 year level and specify what teachers are expected to teach.
- Content Elaborations provide illustrative examples of how the content descriptions could be enacted or taught

Australian Curriculum Alternatives to Chicken Hatching for P-10

- What alternatives to chicken hatching are given in the Content Elaborations of the Australian Curriculum (Science)?



National Science Curriculum: Foundation (Prep) Biology

Content description:

- Living things have basic needs, including food and water

Elaborations:

- Identifying the needs of humans such as warmth, food and water, using students' own experiences
- Recognising the needs of living things in a range of situations such as pets at home, plants in the garden or plants and animals in bushland
- Comparing the needs of plants and animals.

Comment

- **Elaborations offer a variety of contexts through which understanding of this broad content description can be achieved.**
- **Chicken hatching projects are NOT required for Prep Biology lessons because the content descriptions can be achieved with ethical alternatives and contexts.**

National Science Curriculum: Year 1 Biology

Content descriptions:

- Living things have a variety of external features
- Living things live in different places where their needs are met

Elaborations:

- Recognising common features of animals such as head, legs and wings
- Describing the use of animal body parts for particular purposes such as moving and feeding
- Identifying common features of plants such as leaves and roots
- Describing the use of plant parts for particular purposes such as making food and water

Comment

- **Mention of wings in the Elaborations may lead to consideration of chicken hatching projects.**

However, chicken hatching projects are NOT required for Year 1 Biology lessons because the content descriptions can be achieved with ethical alternatives and contexts such as plants or non-sentient animals.

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National Science Curriculum: Year 2 Biology

Content description:

- Living things grow, change and have offspring similar to themselves

Elaborations:

- Representing personal growth and changes from birth
- Recognising that living things have predictable characteristics at different stages of development
- Exploring different characteristics of life stages in animals such as **egg**, caterpillar and butterfly
- Observing that all animals have offspring, usually with two parents .

Comment

- **Mention of egg in the Elaborations may lead to consideration of chicken hatching projects.**

However, chicken hatching projects are NOT required for Year 2 Biology lessons because the content descriptions can be achieved through studies of human beings or non-sentient animals such as insects.

National Science Curriculum: Year 3 Biology

Content descriptions:

- Living things can be grouped on the basis of observable features and can be distinguished from non-living things

Elaborations:

- Recognising characteristics of living things such as growing, moving, sensitivity and reproducing
- Recognising the range of different living things
- Sorting living and non-living things based on characteristics
- Exploring differences between living, once-living and products of living things

Comment

- **Elaborations offer a variety of contexts through which understanding of this broad content description can be achieved.**
- **Chicken hatching projects are NOT required for Year 3 Biology lessons because the content descriptions can be achieved with ethical alternatives and contexts.**

National Science Curriculum: Year 4 Biology

Content descriptions:

- Living things have life cycles
- Living things, including plants and animals, depend on each other and the environment to survive

Elaborations:

- Making and recording observations of living things as they develop through their **life cycles**
- Describing the stages of life cycles of different living things such as insects, birds, frogs and flowering plants
- Comparing life cycles of animals and plants
- Recognising that environmental factors can affect life cycles such as fire and seed germination

Comment

Mention of life cycles in the Elaborations may lead to consideration of chicken hatching projects.

However, chicken hatching projects are NOT required for Year 4 Biology lessons because the content descriptions can be achieved through plant studies, studies of non-sentient animals such as insects, and studies of birds in their natural environment.

National Science Curriculum: Year 5 Biology

Content description:

- Living things have structural features and adaptations that help them to survive in their environment

Elaborations:

- Explaining how particular adaptations help survival such as nocturnal behaviour, silvery coloured leaves of dune plants
- Describing and listing adaptations of living things suited for particular Australian environments
- Exploring general adaptations for particular environments such as adaptations that aid water conservation in deserts

Comment

- **The content description and elaborations appear unrelated to observations of chicks in an artificial environment.**
- **Chicken hatching projects are therefore NOT required for Year 5 Biology lessons.**

National Science Curriculum: Year 6 Biology

Content description:

The growth and survival of living things are affected by the physical conditions of their environment

Elaborations:

- investigating how changing the physical conditions for plants impacts on their growth and survival such as salt water, use of fertilizers and soil types
- observing the growth of fungi such as yeast and bread mould in different conditions
- researching organisms that live in extreme environments such as Antarctica or a desert
- considering the effects of physical conditions causing migration and hibernation

Comment

- **The content description and elaborations appear unrelated to observations of chicks in an artificial environment.**
- **Chicken hatching projects are therefore NOT required for Year 6 Biology lessons.**

National Science Curriculum: Year 7 Biology

Content description:

- There are differences within and between groups of organisms; classification helps organise this diversity
- Interactions between organisms can be described in terms of food chains and food webs; human activity can affect these interactions

Elaborations:

- considering the reasons for classifying such as identification and communication
- grouping a variety of organisms on the basis of similarities and differences in particular features
- considering how biological classifications have changed over time
- classifying using hierarchical systems such as kingdom, phylum, class, order, family, genus, species
- using scientific conventions for naming species
- using provided keys to identify organisms surveyed in a local habitat
- using food chains to show feeding relationships in a habitat
- constructing and interpreting food webs to show relationships between organisms in an environment
- classifying organisms of an environment according to their position in a food chain
- recognising the role of microorganisms within food chains and food webs
- investigating the effect of human activity on local habitats, such as deforestation, agriculture or the introduction of new species
- exploring how living things can cause changes to their environment and impact other living things, such as the effect of cane toads
- researching specific examples of human activity, such as the use of fire by traditional Aboriginal people and the effects of palm oil harvesting in Sumatra and Borneo

Comment

- **The content descriptions and elaborations appear unrelated to observations of chicks in an artificial environment.**
- **Chicken hatching projects are therefore NOT required for Year 7 Biology lessons.**

National Science Curriculum: Year 8 Biology

Content description:

- Cells are the basic units of living things and have specialised structures and functions
- Multi-cellular organisms contain systems of organs that carry out specialised functions that enable them to survive and reproduce

Elaborations:

- examining a variety of cells using a light microscope, by digital technology or by viewing a simulation
- distinguishing plant cells from animal or fungal cells
- identifying structures within cells and describing their function
- recognising that some organisms consist of a single cell
- recognising that cells reproduce via cell division
- describing mitosis as cell division for growth and repair
- identifying the organs and overall function of a system of a multicellular organism in supporting the life processes
- describing the structure of each organ in a system and relating its function to the overall function of the system
- examining the specialised cells and tissues involved in structure and function of particular organs
- comparing similar systems in different organisms such as digestive systems in herbivores and carnivores, respiratory systems in fish and mammals
- distinguishing between asexual and sexual reproduction
- comparing reproductive systems of organisms

Comment

- **The content descriptions and elaborations appear unrelated to observations of chicks in an artificial environment.**
- **Chicken hatching projects are therefore NOT required for Year 8 Biology lessons.**

National Science Curriculum: Year 9 Biology

Content description:

- Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment
- Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems

Elaborations:

- describing how the requirements for life (for example oxygen, nutrients, water and removal of waste) are provided through the coordinated function of body systems such as the respiratory, circulatory, digestive, nervous and excretory systems
- explaining how body systems work together to maintain a functioning body using models, flow diagrams or simulations
- identifying responses using nervous and endocrine systems
- investigating the response of the body to changes as a result of the presence of micro-organisms
- investigating the effects on humans of exposure to electromagnetic radiations such as X-rays and microwaves
- exploring interactions between organisms such as predator/prey, parasites, competitors, pollinators and disease
- examining factors that affect population sizes such as seasonal changes, destruction of habitats, introduced species
- considering how energy flows into and out of an ecosystem via the pathways of food webs, and how it must be replaced to maintain the sustainability of the system
- investigating how ecosystems change as a result of events such as bushfires, drought and flooding

Comment

- **The content descriptions and elaborations appear unrelated to observations of chicks in an artificial environment.**
- **Chicken hatching projects are therefore NOT required for Year 9 Biology lessons.**

National Science Curriculum: Year 10 Biology

Content description:

- The transmission of heritable characteristics from one generation to the next involves DNA and genes
- The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence

Elaborations:

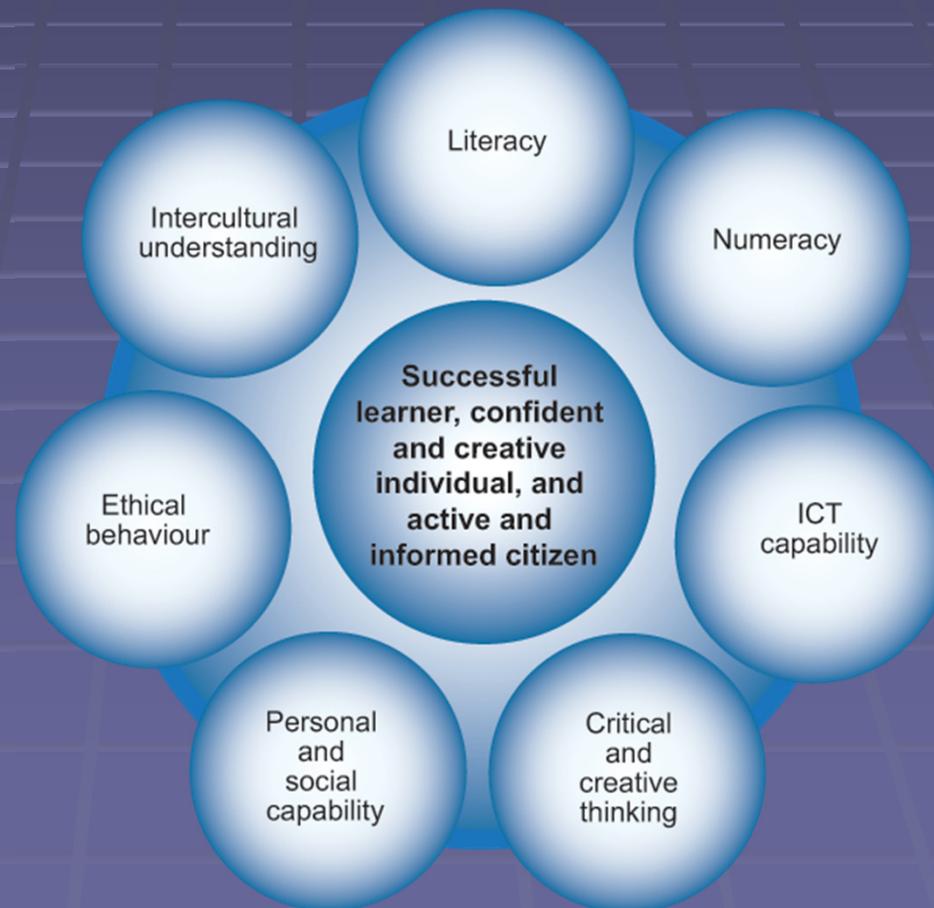
- describing the role of DNA as the blueprint for controlling the characteristics of organisms
- using models and diagrams to represent the relationship between DNA, genes and chromosomes
- recognising that genetic information passed on to offspring is from both parents by meiosis and fertilisation
- representing patterns of inheritance of a simple dominant/recessive characteristic through generations of a family
- predicting simple ratios of offspring genotypes and phenotypes in crosses involving dominant/recessive gene pairs or in genes that are sex-linked
- describing mutations as changes in DNA or chromosomes and outlining the factors that contribute to causing mutation
- outlining processes involved in natural selection including variation, isolation and selection
- describing biodiversity as a function of evolution
- investigating changes caused by natural selection in a particular population as a result of a specified selection pressure such as artificial selection in breeding for desired characteristics
- relating genetic characteristics to survival and reproductive rates
- evaluating and interpreting evidence for evolution, including the fossil record, chemical and anatomical similarities, and geographical distribution of species

Comment

- **The content descriptions and elaborations appear unrelated to observations of chicks in an artificial environment.**
- **Chicken hatching projects are therefore NOT required for Year 10 Biology lessons.**

Educational objectives related to The Australian Curriculum's General Capabilities

- The Australian Curriculum includes 7 General Capabilities:



What General Capabilities might be seen to be relevant to chicken hatching applications?

- Personal and social capability (includes developing empathy)
- Ethical behaviour (includes *applying* empathy)

Why General Capabilities should NOT be taught using a chicken hatching context

- **General capabilities are developed, taught and assessed through *Subject specific* contexts.**
<http://www.australiancurriculum.edu.au/GeneralCapabilities/Overview/General-capabilities-in-the-learning-areas>
- Implications:
 - General capabilities are not taught in isolation.
 - Alternatives to chicken hatching exist in the *Subject* areas of the curriculum; therefore the same alternatives can be used to teach associated General Capabilities.
 - If, for example, studying the needs of pets or wildlife is an alternative context to studying chicks in the Prep Science curriculum, then this alternative context should likewise be used to develop their personal and social capabilities.
 - Chicken hatching projects therefore should not be undertaken for the sole objective of developing empathy or other General Capabilities' skills or dispositions outlined in the Australian Curriculum.

Interaction with animals: educational objective or teaching method?

- The opportunity for students to interact with animals in a 'hands-on' way is apparently one common justification given by schools which seek approval to undertake chicken hatching projects.
- However, Animal Liberation Queensland argues that the following should be considered *teaching methods*, not educational objectives:
 - *Hands-on learning*
 - *Kinaesthetic learning*
 - *Experiential learning*



Hands-on, kinaesthetic & experiential learning

- These pedagogies can be useful **tools** for student engagement **but they are not educational objectives or outcomes in themselves.**
- Observation or handling of live chicks may be engaging for students, but other pedagogies and contexts can also deliver good learning outcomes!
- What's really essential in a good lesson?
 - A clear lesson objective that's communicated to the students
 - An appropriate ethical resource or stimulus (e.g. a video, a kit, an excursion)
 - An appropriate learning sequence
 - Good teaching.

Religious learning & chicken hatching projects

- An egg is a common symbol of Easter so chicken hatching projects are commonly undertaken around this time.
- The same welfare concerns exist for the animals used in this context as any other.
- Videos of chicks hatching out of eggs would be an ethical alternative resource.
- It could be argued that undertaking chicken hatching projects might be at odds with the important Christian value of compassion.

Thoughts around the use of animals in education

- Interactions with animals may be engaging for students, BUT...
 - Sentient chicks' survival prospects and long-term welfare are placed at risk with chicken hatching projects.
 - A sentient being's whole life is surely more valuable than a few lessons about its beginnings.

Ethical alternatives to chicken hatching projects in the classroom

- Alternative contexts as outlined by ACARA were discussed earlier in this presentation
- The following slides show further ethical alternative resources and contexts which are available for use in Queensland schools.

Alternatives to chicken hatching: 'Hands-on' opportunities

- Australian Veterinary Association Pets and People program
<http://petpep.ava.com.au/> (responsible pet ownership, safety around animals, animal welfare; supported by 15 Councils throughout Qld)
- Animal Welfare League Qld classroom visits with specially trained animals
<http://www.awlqld.com.au/education/school-programs/classroom-visits/>
- Visits to farms (e.g. Farm Animal Rescue, Dayboro)
<http://www.farmanimalrescue.org.au/Site/Home.html>
- Observing birds, insects and wildlife in their natural environment
- Excursion to the Ekka or other agricultural shows

Alternatives to chicken hatching

- RSPCA Qld EMU Van
- Borrow Queensland Museum specimens (mammals, marsupials, birds etc)
<http://www.qm.qld.gov.au/Learning+Resources/QM+Loans/Catalogue>
- Model
 - The Chicken Lifecycle Kit [supplier: *Modern Teaching Aids*]
http://www.teaching.com.au/servlet/au.mta.ns.is.ItemDetailServlet?KEY_ITEM=LER2733&KEY_ALIAS=LER2733
- VIDEOS:
 - Professionally produced nature documentaries about birds
 - You Tube videos about chicken hatching:
 - <http://www.youtube.com/watch?v=XCdbRR8FbX0> Chick Hatching
 - http://www.youtube.com/watch?v=tof5b1Qs_OE&feature=related Chick Hatching
 - <http://www.youtube.com/watch?v=somaPV5c2m4> Sesame Street - Film of a chicken hatching

Alternatives to chicken hatching

- **Videos continued:**
<http://www.youtube.com/watch?v=nhqxYUebjAl&NR=1>
Chickens Hatching
- <http://www.youtube.com/watch?v=hETkUfhG5qI>
Adorable Baby Chicks and Mother Hen
- <http://www.youtube.com/watch?v=1go0XaCfXf0&feature=related> Missing hen found with ten baby chickens.AVI
- <http://www.youtube.com/watch?v=cu0TrkZ7ypU&feature=related> Hen and chicken
- <http://www.youtube.com/watch?v=ZErg8G9TjMA&feature=related> Chicken Egg Hatches In Incubator (Realtime)

Ethical education; ethical students?

- ‘Building capability in learning to behave ethically ... will assist students to engage with the more complex issues that they are likely to encounter in the future and to navigate a world of competing values, rights, interests and norms.’
 - ACARA Ethical Behaviour General Capability
- Schools and the education system need to lead by example in developing students’ ethical behaviour.
- As Jeffrey Masson, author of *When Elephants Weep* says, “**You must practise compassion in order to teach it**”.

The future of chicken hatching projects in Queensland schools?

- Revisiting Section 6.1.1 [Australian code of practice for the care and use of animals for scientific purposes - 7th Edition 2004](#): Animals are not to be used for teaching activities unless there are no suitable alternatives for achieving all of the educational objectives.
- Summary of Animal Liberation Queensland's position: There ARE suitable alternatives. Chicken hatching applications by Queensland schools no longer warrant approval by the QSAEC.

