

## Lesson Overview

This lesson introduces the concept that living things can be grouped according to factors affecting reproduction. Students will predict physical and environmental variables connected to the reproductive output of a hen's unfertilised eggs. **Please note that as students will be handling eggs during this lesson we encourage students to wash their hands before and after handling eggs. In addition to that, we encourage you to refer to your school's health and safety policies, and follow any individual allergy action plans.**

## Learning Intentions

- Understand how animals can be grouped into categories based on their physical features and survival needs
- Understand how to form predictions based on the analysis of an animal's natural behaviour versus changed environments
- Understand how the structure of an egg supports the development of a chick
- Understand how physical and environmental factors affect a hen's ability to lay an egg

## Teacher Notes

### Resources and Materials

- Interactive Whiteboard (IWB)
- Supporting Interactive Lesson available at <https://www.australianeggs.org.au/education/primary/eggs-actly-where-do-the-eggs-we-eat-come-from/>
- Tweezers (1 per every 3 students)
- Spoons (1 per student)
- Plates (1 per student)
- Paper and pencils for recording observations
- Cameras or devices with photographic capability (optional)

### Activity 1

- Eggs (Uncooked, 1 per every 3 students)
- Magnifying glasses (1 per every 3 students)
- Torches (1 per every 3 students)

### Activity 2

- Animal cards (located at the end of this lesson plan)

### Conclusion

- Strips of coloured paper (long enough to create a headband, 1 strip per student)

### Differentiation

Teachers are encouraged to modify the activities as required in order to cater to diverse student needs.

### Assessments

There are a number of informal assessment opportunities throughout this lesson including:

- Group discussions
- Group work
- Self assessment activities
- Peer assessment activities

## Language/Vocabulary

air sac, albumen, amphibian, anatomy, aquatic, barn system, behaviour, biosecurity, blood spot, cage system, carnivorous, categories, chalazae, classify, disease, domestic, embryo, environment, features, fertilisation, free range system, germinal disc, healthy, herbivorous, location, mammal, membrane, minerals, monotreme, nocturnal, nutrients, nutrition, omnivorous, organisms, oviparous, physical, produce, protein, reproduction, reptile, shell, stored, survival, temperature, vaccination, vitelline membrane, vitamins, viviparous, welfare, yolk, yolk membrane

## Year 3 Curriculum Links

### Science

**Strand:** Science Understanding

**Sub-Strand:** Biological Sciences

Living things can be grouped on the basis of observable features and can be distinguished from non-living things ([ACSSU044](#))

**Strand:** Science Inquiry Skills

**Sub-Strand:** Planning and conducting

With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment ([AC SIS054](#))

**Strand:** Science Inquiry Skills

**Sub-Strand:** Communicating

Represent and communicate observation, ideas and findings using formal and informal representations ([AC SIS060](#))

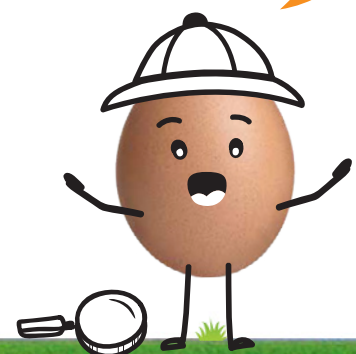
## Cross Curriculum Priorities

Sustainability

## General Capabilities

- Literacy
- Numeracy
- Critical and Creative Thinking
- Personal and Social Capability
- Ethical Understanding

Eggsplora and learn more!



## Lesson Introduction

1. Gather the students as a group. Explain that this lesson will help us understand the needs of chicks and hens in more detail, as well as helping us identify the ways an egg supports the development of a chick before it hatches.
2. Conduct the **pre-lesson quiz** with the students and discuss the students' responses to the questions. This is a good opportunity to assess students' existing knowledge of features of animals and how hens are looked after on egg farms.
  - Three ways hens can be housed on an egg farm are; Cage systems, Barn systems and Free Range systems. **True**
  - Eggs are made up of only a yolk and a white. **False**
  - Living things are categorised by: **Their physical features, environment / survival needs and reproduction.**
  - What is reproduction? **The process by which new organisms are generated.**
  - What physical and environmental conditions affect a hen's ability to lay an egg? **Good living conditions, nutrition and health care.**
3. Explain that eggs are made up of several different parts which all have a specific function. Explore the **Parts of an Egg** interactive and play the **What Parts Make an Egg?** game on the IWB to learn more about each part of an egg and its function in supporting an unborn chick.



## Lesson Activities

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Teachers are encouraged to select from the below activities to best suit the needs of their students and modify as required. Please note that some of the following activities will need to be set up prior to the lesson.

### Activity 1

1. Following any individual support plans for existing allergies and your school's health and safety policies around the use of food, split the students into small groups of 3-4 and provide each group with a plate, an egg, pairs of latex-free gloves, spoons and some magnifying glasses.
2. Encourage the students to carefully break apart their egg and explore the contents to identify each part. Challenge them to separate each part of the egg to clearly display the layers. Encourage the students to use correct terminology to describe each part of the egg; **outer shell, albumen, yolk, chalazae, air sac, blood spot, germinal disc and yolk membrane (vitelline membrane)**. **Teacher note:** *If candling has been done correctly, a blood spot may not be present.*
3. Direct students to record their findings in photographs or observational drawings with detailed labels. Ensure students have enough time to explore their egg fully.
4. **Extension Activity:** To support Mathematics outcomes challenge students to make estimations and then weigh their whole egg and each part of their egg to determine if these measurements match up.

### Activity 2

1. As a class, explore the click and reveal **Animal Features** activity on the IWB and discuss the needs of each animal.
2. Ask the class, **'What kind of animal is a hen?'** Use correct terminology to describe a hen's features and needs.
3. Split the class into small groups of 3-4 students. Direct them to choose three other animals and brainstorm the features and needs of each. Challenge students to think about what each animal needs to survive as well as whether they need anything from humans to be able to thrive. Encourage the use of correct terminology to describe these features. Some language students might need is: **omnivorous, carnivorous, herbivorous, oviparous, nocturnal, aquatic, domestic**. Please see the vocabulary section of this lesson plan for other possible appropriate terms.
4. Invite each group to present the needs and features of an animal that they have chosen. Discuss as a class.

## Lesson Activities *(continued)*

### Activity 3

1. As a class, watch the **What Affects Egg Production** video on the IWB and discuss the physical and environmental factors that affect a hen's ability to lay eggs, for example; shelter, highly nutritious diet.
2. Invite a discussion analysing the responsibilities of farmers towards the hens they look after, compared to our responsibilities towards the pets we have at home. How are these responsibilities similar or different? Which responsibilities are more important?
3. Ask students to create a Venn diagram labelling the responsibilities for each and consider any that overlap.
4. As a class, discuss what might happen if certain animals did not have access to these needs. For example, what might be the effect on the supply of eggs in our supermarkets if the hens on egg farms did not have access to a highly nutritious diet?

### Activity 4

1. Distribute an animal card (attached) to each student, ensuring students are familiar with the animals displayed. Students use a large space and move around freely.
2. Challenge students to classify themselves into groups. Students are not limited to classifying by feature or need but are encouraged to be creative in the way they choose to classify themselves. This activity requires clear communication and good collaboration skills and some students may need more scaffolding by adults. Allow students adequate time to complete their classifications.
3. Encourage a volunteer to explain the choices of the class, for example, "the hen is with the cow because they both require a diet high in nutrients". If time permits, repeat the activity, allowing other students to make choices around how the animals could be classified.



## Lesson Closure

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1. Redistribute the animal cards so that each student has a different one to Activity 3 but do not allow the students to look at the animal on their card yet.
2. Make headbands with strips of coloured paper for students to wear and attach the animal card to the front of the headband so the student cannot see what animal they have but other students can.
3. Challenge the students to play a forehead guessing game with their animal cards. In pairs, students wear their headband and take turns to ask their partner a yes/no question to determine what animal they have. Encourage the use of correct terminology when asking about features, for example, “is my animal oviparous?” “Does my animal need a diet high in nutrition?” The winner is the person who correctly identifies their animal first.
4. Conduct the **post-lesson quiz**. This is a good opportunity to assess student learning from the lesson.
  - The germinal disc is: **where a chick develops in a fertilised egg**
  - A hen will lay fewer eggs if: **they have decreased access to daylight**
  - If an animal is aquatic, it cannot lay eggs. **False**
  - Hens are nocturnal animals. **False**
  - Humans and hens share some similar classifying features. **True**

## Going Further

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1. Challenge students to imagine that they are journalists reporting on a recent strike by hens at the local egg farm! Invite students to create an imaginative piece of writing that reports the story of the hens and the reasons for their strike. Encourage students to allude to the factors explored in the **What Affects Egg Production** video in Activity 1.
2. Further students’ understanding of the practices that egg farmers use to support hen welfare by watching the video at <https://www.australianeggs.org.au/what-we-do/sustainable-production/sustainability-report/hen-welfare/>
3. As a class, collect students’ favourite egg recipes to bake some healthy egg-based snacks and hold a bake sale to raise money for your local animal charity. You can find some great inspirational recipes at <https://www.australianeggs.org.au/recipes-and-cooking/>



ELEPHANT



COW

Australian  
eggs

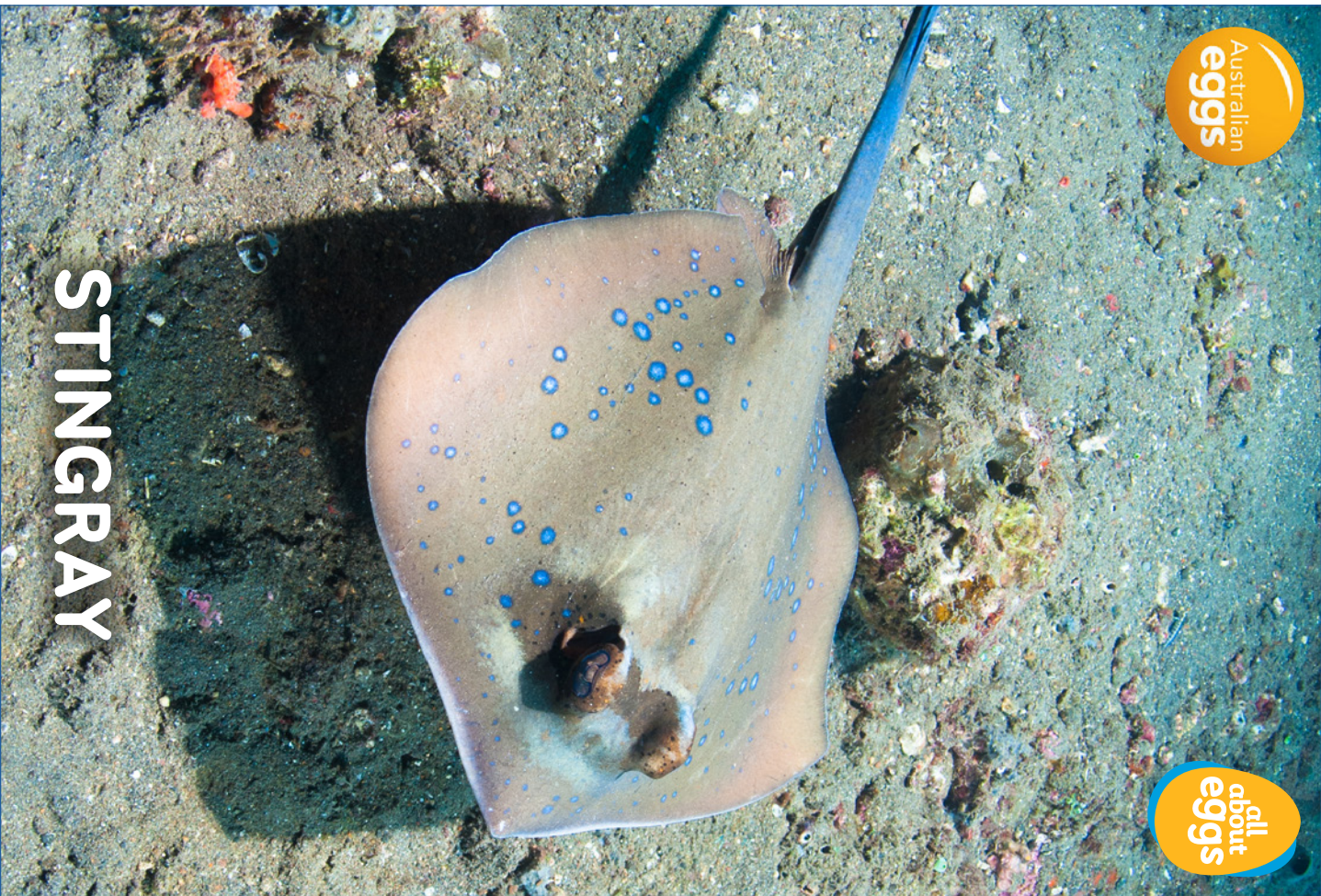
all  
about  
eggs



CLOWN FISH

Australian  
eggs

all  
about  
eggs



STINGRAY





**CROCODILE**



**PEACOCK**