

Lesson Overview

In this lesson, students will learn how Australian farmers work to create efficient and sustainable practices to ensure minimal impact upon their neighbours and the surrounding environment. Students will further understand that every human activity affects the environment in some way.

Learning Intentions

- Understand the impact of egg farming on the environment
- Understand how farm waste is generated and managed
- Understand that egg farmers are working towards sustainability
- Understand how biosecurity measures are used to manage waste and disease

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/>

Activity 1

- Black paint
- A3 Paper (1 page per student)

Activity 2

- Shredded classroom paper waste (this can be collected over a period of time)
- A range of quick-sprouting seeds (such as cress seeds)

Activity 3

- Sustainable Egg Design Game at <https://www.australianeggs.org.au/education/primary/sustainability-egg-farmers-are-doing-their-bit/interactive/>
- Student devices with access to the internet

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

agriculture, biosecurity, carbon footprint, conflict, consumer, council, development, economy, environment, fertiliser, impact, industry, livestock, location, populated, practices, produce, residents, rural, source, sustainability, urban, vaccination

Year 4 Curriculum Links

Science

Strand: Science Understanding

Sub-Strand: Biological Sciences

Living things depend on each other and the environment to survive [\(ACSSU73\)](#)

Strand: Science Understanding

Sub-Strand: Earth and Space Sciences

Earth's surface changes over time as a result of natural processes and human activity [\(ACSSU075\)](#)

Humanities and Social Sciences (HASS)

Strand: Knowledge and Understanding

Sub-Strand: Geography

The importance of environments, including natural vegetation to animals and people [\(ACHASSK088\)](#)

The use and management of natural resources and waste and the different views on how to do this sustainably [\(ACHASSK090\)](#)

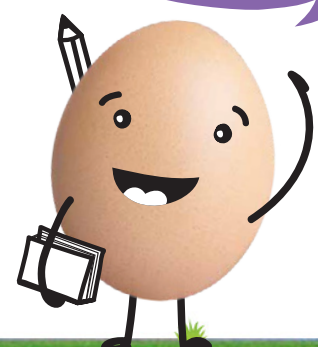
Cross Curriculum Priorities

Sustainability

General Capabilities

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

Follow me, let me Eggsplain!



Lesson Introduction

1. Gather the students as a group. Explain that this lesson will help us understand the impact that egg farming has on the environment and how egg farms generate and manage waste.
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' prior knowledge about environmental geography and sustainability practices.
 - Sustainability means: **meeting human needs in the present while preserving the environment.**
 - Egg farms use electricity. **True**
 - Some different types of environments might be: **dry desert, lush farmland, humid rainforest.**
 - Our carbon footprint is: **how much carbon is released into the atmosphere, as a result of human activity.**
 - Planting trees is a good way to be sustainable. **True**
3. Write the word 'Environment' on the interactive whiteboard or flipchart and invite students to brainstorm its meaning using a mind map.
4. Display the **Different Environments** slide on the IWB and discuss the differences in the environments. Invite students to brainstorm what kind of agriculture would be best suited to each environment and why. Teachers may choose to discuss other environments with the students to further this thinking, such as rainforests or urban areas.
5. Explain that all human activity has an impact on the environment and invite students to brainstorm some activities and how they affect the environment, whether local or global.
6. Explain that egg farmers work hard to ensure their business is sustainable and that their farm has minimum impact on the environment. Using the Think-Pair-Share strategy, invite students to brainstorm how modern egg farms could be sustainable.



Lesson Activities

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. As a class, watch the **Environmental Impact** video on the IWB to explore the ways in which modern egg farms are implementing sustainability practices.
2. Discuss the meaning of 'carbon footprint'. Direct students to use the Think-Pair-Share strategy to brainstorm human activities that affect our carbon footprint. Encourage students to think about activities in terms of school-based, home-based and businesses.
3. Create a physical 'carbon footprint' poster with black paint and A3 paper. Direct students to paint and print their footprint in the middle of the paper and then, in the space around the footprint, brainstorm strategies to reduce our carbon footprint and help our planet. Display posters around the classroom or school.

Activity 2

1. As a class, brainstorm the factors that egg farmers need to take into consideration when caring for hens, for example, housing, cost of grain, impact on the environment.
2. Explain that egg farmers can positively impact their surrounding environment as well as caring for their hens by planting crops and trees that provide food and shade for their animals. Egg farmers can combine this practice with the way they manage their recyclable waste on their farm by using the waste as fertiliser for their crops and the natural environment.
3. Direct students to participate in making 'recyclable seed bombs':
 - Collect classroom paper waste across a period of time
 - Shred the paper into small pieces
 - Soak the paper shreds in a large container of water overnight
 - Drain the water and squeeze the pulp to get as much water out as possible
 - Mix in a range of seeds, ensuring a good spread throughout
 - Direct students to shape the paper pulp and seed mixture with their hands into balls
Alternatively, students could use shaped cutters to create imaginatively shaped seed bombs
 - Let the seed bombs dry on a sunny windowsill or overnight
4. Plant the seed bombs in the school's natural environment or encourage students to take them home to plant in their own gardens. Rain will break down the pulp, releasing the seeds and allowing them to grow.

Lesson Activities *(continued)*

Activity 3

1. Direct students to explore the **Sustainable Egg Farm Design** game, either in pairs or individually, on devices at the following link: <https://www.australianeggs.org.au/education/primary/sustainability-egg-farmers-are-doing-their-bit/interactive/>
2. Encourage students to explore how egg farms can be designed to make the least impact on the surrounding environment while contributing to hen welfare and reducing their carbon footprint.
3. As a class, discuss the decisions students made throughout the game and how these decisions might apply in real life farms.

Lesson Closure

1. Reflect on the sustainable and responsible farm practices explored throughout the lesson and discuss students' ideas and opinions on what would happen if these practices were not implemented.
2. Direct students to write a letter persuading their community that egg farmers are using sustainable practices to reduce their carbon footprint, support hen welfare and contribute to their surrounding natural resources.
3. Conduct the **post-lesson quiz**. This is a good opportunity to assess student learning from the lesson.
 - Egg farmers can be sustainable by: **Repurposing their farm waste and planting trees to support hen welfare.**
 - The egg industry uses modern farming methods to: **Minimise the impact on the environment.**
 - One way we could reduce our Carbon Footprint is: **to walk and cycle instead of travelling by car.**
 - Who can egg farmers work closely with to manage their impact on the environment? **Communities and local government.**
 - What would happen if sustainable and responsible farm practices were not followed? **We may not have enough food or a nice environment for people in the future.**

Going Further

1. As a class, plan and present a campaign to inspire the wider school community to reduce their carbon footprint. Allow students to be creative in their presentation ideas and encourage them to collaborate with school staff, families and experts in the community.
2. Brainstorm further ideas about paper recycling and support this work with the story book *The Great Paper Caper* by Oliver Jeffers.
3. Explore online carbon footprint calculators to understand how big your class's carbon footprint is and ways to reduce it.