

# ACTIVITY 1:

## Observing a royal albatross/toroa



Year 1–8: Levels 1–4 of the New Zealand Curriculum

*Learning observation skills using the DOC ‘royal cam’ (live footage of an albatross nest)*



### Curriculum links

#### Achievement objectives

**Science: Nature of Science:**  
**Investigating in science**

Ask questions, find evidence, explore simple models and carry out investigations to develop simple explanations

**Living World: Ecology**

Recognise that living things are suited to their particular habitats

#### Learning intentions

**Students are learning to:**

Make observations and inferences to describe royal albatross features

#### Success criteria

**Students can:**

Describe in writing their observations of royal albatross features

#### Minor curriculum links

**English:** Speaking, Writing

**Science capabilities:** Gather and interpret data, Engage with science

## TEACHER NOTES

### The ‘royal cam’ and the royal albatross/toroa

The ‘royal cam’ is a camera set up at a royal albatross/toroa nest at Taiaroa Head near Dunedin. The nest is filmed for the entire breeding season.

What you see and hear on the royal cam will depend on the time of year, weather conditions, the stage the albatross(es) are at in their life cycle, events in the recent past, and ranger schedules.

For further information, a student activity on life cycles, and what is happening at different times of the year, see pages 4–7:

**Life cycle of a royal albatross/toroa.**

#### Useful vocabulary

- **Observation** is the skill of using our senses to notice the world around us to gain information.
- **Observations** are statements that describe natural events that are



sensed (eg “the apple is round and hard”).

- **Inferences** are statements that set out conclusions based on what is directly sensed or observed (eg “the albatross must be older than a few weeks because it has lost its soft downy feathers”). Inferences often rely on prior knowledge about the topic.

## LEARNING EXPERIENCE

*Focus question: What can we observe about royal albatrosses/toroa?*

### Resources for this activity

- Royal cam live feed (real-time footage via a video camera): [doc.govt.nz/royalcam](https://doc.govt.nz/royalcam)
- Reliable internet connection
- Royal albatross observations sheets/note paper
- Pencils/pens

### Suggested instructions

- Discuss what observation is (see teacher notes).
- Introduce the royal cam website [doc.govt.nz/royalcam](https://doc.govt.nz/royalcam) and explain how it works. Students can observe real, live albatrosses via this site.
- Which senses will students use to observe the footage? Encourage them to use their eyes to see what is going on in both the background and the foreground, and their ears to hear what is happening.
- Predict what they might observe at a royal albatross nest. Establish prior knowledge and experiences. For students new to observation, focus on looking at the body parts and special features (adaptations) of an albatross. The recording sheet: **Royal albatross observations** (page 3) can be used to guide the students when observing these features. For younger students, revise the names of the birds’ body parts (bill, wing, feet, body, eye, feathers) before starting the activity. More skilled observers can note down their observations.
- Ask students to observe (look carefully and listen) to the royal cam live feed for 5-20 minutes. Record ideas and observations while viewing.
- Share ideas and observations, eg “the parent albatross had a large, pinkish bill”.
- Use the observations and students’ prior knowledge to make inferences (see teacher notes), eg “the chick’s feathers must be soft because they blow around so much in the wind”, or “the chick might be hungry because we observed it moving and getting out from under the parent several times”.
- Draw conclusions from the observations and inferences.
- Use words and thoughts recorded during the observation as a basis for poetry or transactional writing.

### Extension/further learning

- What new ideas or questions did students have after observing the albatross/toroa?
- How could students find out more information (to support or challenge their ideas)?
- Gather more detailed data (eg how albatross behaviours vary throughout the day and night, the parent’s position on the nest, how often the chick comes out from under the parent, etc).
- What new understandings have you developed from your observations and research?
- For more observation activities, see Science Learning Hub – **Observation Activity – learning to see: Science Learning Hub.**

# Royal albatross/toroa observations

Observe a royal albatross/toroa live at [doc.govt.nz/royalcam](https://doc.govt.nz/royalcam)

Describe the *colour, shape, size, structure, textures, patterns* and *movements* of these albatross features

Eyes

Bill

Feet



Wings

Feathers

Egg/chick

# ACTIVITY 2:

## Life cycle of a royal albatross/toroa



Year 1–8: Levels 1–4 of the New Zealand Curriculum

*Learning about the life cycle of the royal albatross/toroa using royal cam live footage*



### Curriculum links

#### Achievement objectives

##### Science: Nature of Science: Investigating in science

Ask questions, find evidence, explore simple models and carry out investigations to develop simple explanations

##### Living World: Life processes

Recognise that there are life processes common to all living things and that these occur in different ways

#### Learning intentions

##### Students are learning to:

Make observations and inferences about the life cycle of the royal albatross

#### Success criteria

##### Students can:

Put in order the stages of the royal albatross life cycle, and identify which stage royal cam footage is showing

#### Minor curriculum links

**English:** Listening, reading and viewing

**Science capabilities:** Gather and interpret data, Interpret representations, Engage with science

## TEACHER NOTES

### Royal albatross life cycle summary

Royal albatrosses are migratory seabirds. They spend most of their lives at sea and come ashore only to breed, and only in New Zealand. During the breeding season, northern royal albatrosses are found at Taiaroa Head near Dunedin, and in the Chatham Islands.

Royal albatrosses will raise one chick every 2 years. Pairs return to the same nest to breed. They take turns to incubate the egg for about 11 weeks. Once hatched, the pair constantly share duties of guarding and feeding the chick until it is 5–6 weeks old. They then leave it unguarded but come back to feed it regularly. The juvenile (a young albatross bigger than a chick) is left alone for longer periods, until it fledges at 8 months old. In around September, after bringing up their chick, royal albatrosses migrate across the Pacific Ocean to the warmer coasts of southern South America. Young albatrosses will also spend several years there until they are ready to return to New Zealand to breed, aged 6–10 years old.

### Useful vocabulary

- **Life cycle:** the series of stages a living thing passes through during its lifetime – from birth to death
- **Fledge:** take flight on their own for the first time
- **Juvenile:** young albatross (bigger than a chick but not yet an adult)
- **Breed:** produce offspring/have young (eggs/chicks)
- **Incubate:** keep eggs warm and safe (usually by sitting on them!)

# LEARNING EXPERIENCE

*Focus question: What would it be like to be a royal albatross?*

## Resources for this activity

- Royal cam live feed (real-time footage via a mounted camera): [doc.govt.nz/royalcam](http://doc.govt.nz/royalcam)
- Reliable internet connection
- Royal albatross/toroa life-cycle diagram

## Suggested instructions

- Watch highlights of Moana the albatross's life, from an egg to a fledgling: **RoyalCam Highlights – Moana has fledged!** Moana was the 2015-2016 royal albatross chick featured on the royal cam.
- Use the **Royal albatross life cycle diagram** (see page 6) while watching, to follow the process of life from egg to adult.
- Make A3 copies of the life cycle diagram and A4 copies of the photos with descriptions (page 7). After watching the highlights videos, students can cut out the photos and descriptions and put them in the correct order.
- Choose one of the following videos from the royal cam highlights page:  
**RoyalCam Highlights page** Use student observations and inferences to help decide which stage of the royal albatross life cycle was captured by the video clip. Which stages come before and after this part of the life cycle sequence?
- Ask students to draw or produce their own representation of the royal albatross life cycle, or write about what it would be like to be an albatross adult or chick.

## Extension/further learning

- Explore other seabird species' habitats and life cycles.
- What questions do students have about seabird life cycles? How can they answer these questions?
- For more activities to support learning about royal albatross/toroa, visit, **Royal Albatross Centre – Educational Resources**
- Learn about bird migrations:  
**Bird Hotel Activity: Science Learning Hub**  
**Bird Migration: Te Ara Encyclopedia of New Zealand**
- For more information on the royal albatross and other seabirds, see: **Birds A-Z: DOC.**

# Royal albatross/toroa life cycle

Print this page to fit A3 to ensure that the photos on page 7 will fit into the life cycle.



# Royal albatross/toroa life cycle continued

Print this page to A4, cut out the photos and the descriptions, and place them in the correct segment on the life cycle diagram.



Grown-up juveniles (8 months old) fledge.



New adult pairs arrive at breeding grounds. Each pair sets up a nest.



The chick has grown even bigger and is now called a 'juvenile'. Parents no longer guard it but come back for feeding visits.



The female lays one egg. The pair take turns to incubate it for 80 days.



Parents continue to take turns to guard and feed the chick as it grows.



The chick hatches. Parents feed the chick often and guard it carefully, taking turns.