

Life size penguins

More about how others look after their young

Revisit wonderings

What do penguins look like when they lay their egg? Egg appearance.

<p>Week 7/8 Monday Resources: 4 metre rulers.</p>	<p>Reflection: what did we learn from Suzanne?</p> <p>Discuss units of measure (m, cm) Ask if students can remember how tall our Antarctic Penguins are (refer back to wonderings). Split students back into their initial penguin groups and work with them to measure a scrap piece of paper to the height of our Antarctic penguins.</p> <p>Emperor 1.1 – 1.3 m Adelie: 70 cm Chinstrap: 70 cm Gentoo: 90 cm</p> <p>Work as a group to draw a picture of each penguin.</p> <p>Determine some comparisons between our heights, heights of other animals and our Antarctic penguins.</p>
<p>Week 7 Wednesday</p>	<p>Carry on with Monday's penguin height activity- building on comparisons of heights the penguins compare to.</p> <p>Discuss units of measure (m, cm) Ask if students can remember how tall our Antarctic Penguins are (refer back to wonderings). Split students back into their initial penguin groups and work with them to measure a scrap piece of paper to the height of our Antarctic penguins.</p> <p>Emperor 1.1 – 1.3 m Adelie: 70 cm Chinstrap: 70 cm Gentoo: 90 cm</p> <p>Work as a group to draw a picture of each penguin.</p> <p>Determine some comparisons between our heights, heights of other animals and our Antarctic penguins.</p>
<p>Week 6 Monday Resources: 4 metre rulers.</p>	<p>Revisit wonder wall: What questions are still unanswered?</p> <p>Discuss units of measure (m, cm)</p>

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	<p>Ask if students can remember how tall our Antarctic Penguins are (refer back to wonderings). Split students back into their initial penguin groups and work with them to measure a scrap piece of paper to the height of our Antarctic penguins.</p> <p>Emperor 1.1 – 1.3 m Adelie: 70 cm Chinstrap: 70 cm Gentoo: 90 cm</p> <p>Work as a group to draw a picture of each penguin.</p> <p>Determine some comparisons between our heights, heights of other animals and our Antarctic penguins.</p>
Week 6 Wednesday	<p>Continue work from Monday. If complete, students work together to display the facts they have learnt about each penguin around the outline of the penguin.</p> <p>Scientist Susanne coming to teach us about penguins, she works with Dean who is an expert on Adelie penguins.</p> <p>Questions for Susanne:</p>
Week 5 Monday	<p>Recap on how Adelie penguins take care of their young. Go outside and get students to recap their knowledge through role play. Test the drainage of the nests to see if the water drains onto a piece of paper OR a container/cup under the stone/rock nest. <i>Take photos of this for artefacts.</i></p> <p>Focus: Adelie penguins-Looking after young <i>Taking care of an egg and baby chick- role play</i> <i>Nest Building.</i></p> <p>Students who have not finished their activity from last week the opportunity to do so.</p> <p>Go over wonderings- answer any unanswered wonderings as a class.</p>
Week 4 Monday	
	<p>Ask students to share what they have been learning about for</p>

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their inquiry.

What do we know about Adelie penguins? Brainstorm ideas on the whiteboard.

Explain that students have the opportunity to act out how Adelie penguins take care of their young. Ask students to change groups from the last session.

Use the information below to support students in working together to build nests (from stones already outside the playground) and act out how Adelie penguins take care of their eggs and chicks.

Focus: Adelie penguins-Looking after young

***Taking care of an egg and baby chick- role play
Nest Building.***

Adelie penguins.

Male and penguins take turns at sitting on a pair of eggs to keep them warm and protect them from predators.

- **Adelie penguins live in colonies.**
- **When it is the time of year for breeding, adelie penguins build a nest. They build this from small stones and rock chips. The penguins add to the nest when the egg is being incubated.**
- **Stones are important because they can drain water (cold and wet eggs or chicks die quickly).**
- Adelie penguins lay 2 eggs.
- The male (Dad) **incubates** for the first two weeks while the female is at sea. The penguins then take turns at sitting on the egg with shorter trips to sea.
- The first egg will hatch and then about a day after the second egg will hatch.
- The parents alternate between being on the nest and going out to sea every 1-3 days. This is called **guarding**.
- After around 3 weeks as the chicks are getting bigger, both parents go to get food and can leave their chicks on their own.. The Adelie chicks then gather in large groups

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	<p>to protect themselves while their parents are away. This is called Crèching.</p> <ul style="list-style-type: none">• Individual chicks chase their parents when they return from sea, noisily begging for food, which the parents regurgitate. <p>Once students have acted this out, give them the Follow up activity and ask students to firstly put their name on it. Encourage students to draw labelled pictures (e.g. labelling their nest pictures with what the nests are made of) that match the sentences below. Show them the gaps which they need to fill in. Please collect this in at the end (regardless of how far through students have got).</p>
Week 4 Wednesday	
	<p>Recap: What have we been learning for our inquiry? Revisit wonder wall and ask students if they have any answers to the wonderings or any more wonderings to add.</p> <p>Get students to open their inquiry books and work together as a class to find the answers to those questions that are unanswered.</p> <p>Continue with work from Monday if incomplete.</p>
Week 3 Term 4	
<p>Wednesday</p> <p>Some round things to be eggs.</p> <p>Stones from outside the playground.</p> <p>https://www.landcareresearch.co.nz/science/plants-animals-fungi/animals/birds/penguins/facts-and-figures/breeding-in-adelies</p> <p>https://www.tandfonline.com/doi/pdf/10.1080/0301423.1982.10423856</p> <p>Colonies: Large groups of</p>	<p>Revisit the wonder wall- ask students if they have anything to add to the wonder wall, or if they can answer any of their questions or wonderings about Antarctic penguins already.</p> <p>Go over students' answers to their questions. Take note of those which are still unanswered.</p> <p>Focus: Adelie penguins-Looking after young <i>Taking care of an egg and baby chick- role play Nest Building.</i></p> <p>Adelie penguins. Male and penguins take turns at sitting on a pair of eggs to keep them warm and protect them from predators.</p> <ul style="list-style-type: none">• Adelie penguins live in colonies.• When it is the time of year for breeding, adelie

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<p>birds.</p> <p>Incubates- Keeps the eggs warm to bring them to hatching.</p> <p>Female and male penguin (parents) 2 Chicks (2)</p> <p>Female and male penguin (parents) 2 Chicks (2)</p> <p>Female and male penguin (parents) 2 Chicks (2)</p> <p>Extras: penguin parents.</p> <p>Go outside to the concrete by the senior playground, bring 6 tennis balls and something to represent krill, fish or squid that Adelie penguins eat. Determine an area which is the sea.</p> <p>Ask students to share what they know about how Adelie (or other) penguins take care of their young.</p> <p>Read out the information to the right, first. Then read it again, encouraging students to act out how Adelie penguins take care of their young in their respective characters (chicks have not been born yet)</p> <p>Role Play- Adelie Penguins looking after their young (14 tamariki) Split tamariki into different roles</p>	<p>penguins build a nest. They build this from small stones and rock chips. The penguins add to the nest when the egg is being incubated.</p> <ul style="list-style-type: none">● Stones are important because they can drain water (cold and wet eggs or chicks die quickly).● Adelie penguins lay 2 eggs.● The male (Dad) incubates for the first two weeks while the female is at sea. The penguins then take turns at sitting on the egg with shorter trips to sea.● The first egg will hatch and then about a day after the second egg will hatch.● The parents alternate between being on the nest and going out to sea every 1-3 days. This is called guarding.● After around 3 weeks as the chicks are getting bigger, both parents go to get food and can leave their chicks on their own.. The Adelie chicks then gather in large groups to protect themselves while their parents are away. This is called Crèching.● Individual chicks chase their parents when they return from sea, noisily begging for food, which the parents regurgitate. <p>Chick moulting As the chicks develop they loose their soft down, which is replaced with waterproof feathers. After 50 days the birds are nearly fully feathered.</p>
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<p>3 different penguin families- all part of a colony.</p> <p>Take photos of this for possible artefact.</p> <p>Make sure any stones go back into the playground.</p>	
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<p>Week 2 Term 4</p>	
<p>Monday</p>	<p>Life on Ice Streaming video: view online David Attenborough Antarctic Penguins 03:16</p> <p>Discuss what we have learnt from this video. Revisit the wonder wall- ask students if they have anything to add to the wonder wall, or if they can answer any of their questions or wonderings about Antarctic penguins already.</p> <p>Explain to students that they are going to come up with a question about their chosen Antarctic penguin. Ask students if they know the difference between an open and closed question (support them in understanding that a closed question only requires a simple yes/no or one word answer, whereas an open question requires more detail to answer)</p> <p>Ask students to share examples of closed questions e.g. "What is the name of the largest penguin in Antarctica?" "How many types of penguins live in Antarctica?" and record these on the whiteboard/ on a large piece of paper. Ask students to then share an example of some possible open questions, explaining that they need to develop an open question to find out about their Antarctic penguin (refer to the wonderings). Students share their chosen question with a buddy and once it has been checked by the teacher, students can record their questions on the printed sheet here.</p>

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Wednesday	<p>Revisit the wonder wall- ask students if they have anything to add to the wonder wall, or if they can answer any of their questions or wonderings about Antarctic penguins already.</p> <p>Students sit in their penguin groups and share their questions with the other students in their group. Encourage them to consider these questions- Is there anyone in the group with the same question as you? Are there any other questions you've heard that interest you? If so, why?</p> <p>Students work in their penguin groups to research their penguin using the QR codes. Model how to use the QR code reader on the iPads. Explain that they are to share the iPads in their penguin groups. Before beginning their research, encourage students to identify the key words they are going to be looking for while reading (model this based off the wonderings) e.g. If my question was "What do chinstrap penguins eat?" possible key words I would be looking for would be diet, food and eat.</p> <p>Students may also use the library books about penguins to research their questions.</p> <p>Students write their notes in their inquiry books. Check in with students as they are doing this, supporting them to record information relevant to their question.</p> <p>Once students have done this encourage students to reflect: Have I answered my question? If so, is my answer detailed?</p> <p>Encourage students to identify one new thing they learned today and to share this with a buddy. Ask students to share their new understandings to the whole group, answering any wonderings on the wonder wall if possible.</p> <p><i>If time allows: Work as a group to create large drawings of the Antarctic penguins- of life size/height.</i></p>
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Week 1 Term 4	
Monday	Activating Prior Knowledge: Ask students to show what they know using the SOLO hand symbols. Students write what they know about Antarctic Penguins on the

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	<p>SOLO hexagons. http://pamhook.com/wiki/SOLO_Hexagons</p> <p>Once they have written on the SOLO hexagons, students can work as a group to arrange the hexagons and join them together to show connections. Stick these on a large piece of paper.</p> <p><i>Show students the Emperor Penguin Book and the images inside, asking what they notice about the Emperor Penguin.</i></p> <p>Show students All about penguins</p> <p>Share student wonderings from last term and use these to begin a 'Wonder Wall' on a large piece of paper. Record any additional questions/wonderings students have about Antarctic penguins.</p> <p>Encourage students to share the names of the four penguins that live in Antarctica. Show them Antarctic Penguins and explain to students that they can choose a penguin they would like to learn about to begin their inquiry. Record down names next to the penguins students have chosen, aiming for an even spread.</p>
Wednesday	<p>Show students All about penguins</p> <p>Revisit the wonder wall- ask students if they have anything to add to the wonder wall, or if they can answer any of their questions or wonderings about Antarctic penguins already.</p> <p>Encourage students to share the names of the four penguins that live in Antarctica. Show them Antarctic Penguins and explain to students that they can choose a penguin they would like to learn about to begin their inquiry. Record down names next to the penguins students have chosen, aiming for an even spread.</p> <p>Life on Ice Streaming video: view online David Attenborough Antarctic Penguins 03:16</p> <p>Explain to students that they are going to come up with a question about their chosen Antarctic penguin. Ask students if they know the difference between an open and</p>

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	<p>closed question (support them in understanding that a closed question only requires a simple yes/no or one word answer, whereas an open question requires more detail to answer)</p> <p>Ask students to share examples of closed questions e.g. “What is the name of the largest penguin in Antarctica?” “How many types of penguins live in Antarctica?” and record these on the whiteboard/ on a large piece of paper.</p> <p>Ask students to then share an example of some possible open questions, explaining that they need to develop an open question to find out about their Antarctic penguin (refer to the wonderings).</p> <p>Students share their chosen question with a buddy and once it has been checked by the teacher, students can record their questions on the printed sheet here.</p>
Wednesday	<p>Revisit the wonder wall- ask students if they have anything to add to the wonder wall, or if they can answer any of their questions or wonderings about Antarctic penguins already.</p> <p>Students sit in their penguin groups and share their questions with the other students in their group. Encourage them to consider these questions- Is there anyone in the group with the same question as you? Are there any other questions you’ve heard that interest you? If so, why?</p> <p>Students work in their penguin groups to research their penguin using the QR codes. Model how to use the QR code reader on the iPads. Explain that they are to share the iPads in their penguin groups. Before beginning their research, encourage students to identify the key words they are going to be looking for while reading (model this based off the wonderings) e.g. If my question was “What do chinstrap penguins eat?” possible key words I would be looking for would be diet, food and eat.</p> <p>Each penguin has a large piece of paper which students can record their notes onto (writing their name next to the notes they make). Check in with students as they are doing this, supporting them to record information relevant to their question.</p> <p>Once students have done this encourage students to reflect: Have I answered my question? If so, is my answer detailed?</p> <p>Encourage students to identify one new thing they learned today</p>

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	<p>and to share this with a buddy. Ask students to share their new understandings to the whole group, answering any wonderings on the wonder wall if possible.</p> <p>Library 2-2:20 Researching question using library books. <i>If time allows: Work as a group to create large drawings of the Antarctic penguins- of life size/height.</i></p>
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Links to New Zealand Curriculum

Nature of science

Students will:

Understanding about science

Appreciate that scientists ask questions about our world that lead to investigations and that open-mindedness is important because there may be more than one explanation.

Investigating in science

Extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models.

Communicating in science

Build their language and develop their understandings of the many ways the natural world can be represented.

Participating and contributing

Explore and act on issues and questions that link their science learning to their daily living.

Living world

Students will:

Life processes

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Recognise that all living things have certain requirements so they can stay alive.

Ecology

Recognise that living things are suited to their particular habitat.

Evolution

Recognise that there are lots of different living things in the world and that they can be grouped in different ways.

Explain how we know that some living things from the past are now extinct.

Student wonderings- end of Term 2

What kind of fish do penguins eat?

What Adelie penguins eat (krill?)

How do Adelie penguins swim?

How do penguins swim fast?

What do chinstrap penguins eat?

How long do penguins live?

How old can penguins get?

What is the smallest penguin in Antarctica?

How do the mother and father penguins protect baby penguins?

How do penguins feed their young/ look after eggs and young?

Key questions:

- Penguins swimming/adaptations
- Sizes
- Lifespan
- Penguin diet
- Penguins and their young

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Possible links

<https://teara.govt.nz/en/penguins/page-8>

<https://www.mfat.govt.nz/en/environment/antarctica/antarctic-haven/>

<https://www.coolantarctica.com/Antarctica%20fact%20file/wildlife/antarctic-penguins.php>

<http://www.antarctica.gov.au/about-antarctica/wildlife/animals/penguins>

<https://antarcticaguide.com/antarctica-wildlife-2/antarctica-penguins/>

<https://www.nationalgeographic.com/animals/birds/a/adelie-penguin/>

<http://nzbirdsonline.org.nz/species/adelie-penguin>

<http://nzbirdsonline.org.nz/species/emperor-penguin>

<https://www.natgeokids.com/nz/discover/animals/birds/emperor-penguins/>

<http://nzbirdsonline.org.nz/species/gentoo-penguin>

<https://www.nationalgeographic.com/animals/birds/g/gentoo-penguin/>

<http://nzbirdsonline.org.nz/species/chinstrap-penguin>

<https://www.nationalgeographic.com/animals/birds/c/chinstrap-penguin/>