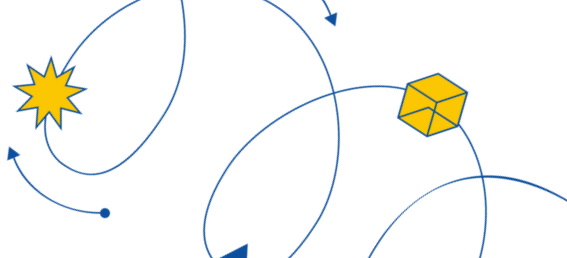


Mini Watch: In Bloom



SCIENCE
ALIVE

Flowers add colour and beauty to our gardens, homes, and towns – but have you ever wondered what’s happening as they slowly bloom? This mini is perfect for sparking curiosity about how flowers change over time, the role of pollination, and the plant life cycle.

WATCH:

1. Āta mataki (carefully watch) the video clip.
2. Ākonga use their rongo (senses) to observe and describe what they notice. Consider:
 - What is happening in the video?
 - What details can you see? Think about the shapes, colours, and patterns.
 - Can you label the different parts of the flower?
 - Do all the petals open at the same time, or do some move before others?
3. Ākonga share their observations (you might choose to write these down).
4. Encourage ākonga to use precise language to describe what they observe, rather than inferences or opinions, and use questioning to help them focus on the details.

DISCUSS:

Engage ākonga in scientific discussion using the following pātai (questions).

Ākonga elaborate:

1. Why do you think flowers bloom instead of staying closed?
 - How did you come to that conclusion?
2. Do you think all flowers bloom in the same way or at the same speed?
 - Can you explain your thinking?

Ākonga give evidence:

1. Why might it be important for the petals to open slowly instead of all at once?
 - What evidence do you have to support your answer?
2. How do blooming flowers support other living things, like insects, birds, or humans?
 - Is that true for all flowers? What makes you think that?

Ākonga think with others:

1. What do you think the flower is preparing for as it blooms?
 - Who can add on to this idea?
2. How might weather, light, or temperature affect when flowers bloom?
 - Does everyone agree with this answer? Why?

Science Alive Learning Portal

This printable supports an online resource found on the Science Alive learning portal.

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Scan the QR code to visit the lesson library:

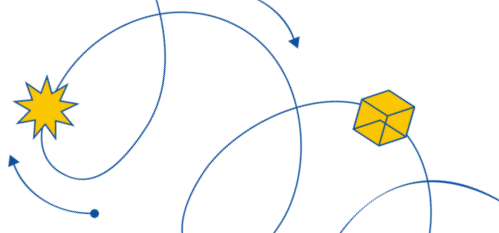


www.sciencealive.co.nz

This lesson was developed with generous support from NEX and NZASE.

www.nzase.org.nz



**DISCOVER THE SCIENCE:**

Flowers bloom as part of a **plant's reproductive cycle** and usually starts when we experience **seasonal changes** such as longer **daylight hours**, **warmer temperatures**, and **rainfall**. Flowers require the right conditions to thrive and blooming in **spring** gives plants the best chance to **attract pollinators** and successfully **produce seeds**.

The bright **colours, scents, and nectar** of flowers attract **insects and birds**, which **transfer pollen between plants**. This not only ensures **reproduction** but also supports **wider ecosystems**, as spring blooms provide a **critical food source** for many animals.

While all flowering plants go through the **same life cycle stages**, the timing **varies between species**. **Annuals** complete their cycle in less than a year, **biennials** take two years, **perennials** live for three or more years.

Regardless of the species, **most flowers** share the **same basic parts**. These include **petals** (which attract pollinators), **sepals** (which protect the bud), **stamens** (the male parts producing pollen), and the **carpel or pistil** (the female structure where fertilisation occurs).

COMMON MISCONCEPTIONS:

Students' prior knowledge can help them connect with new ideas, but it can also lead to misconceptions if their earlier understanding is inaccurate. Below are some possible misconceptions that may arise from the images used in this mini:

"All flowers bloom in the same way or at the same speed."

The Science: Flowering plants all go through the same life cycle, but different species have unique blooming patterns depending on things like daylight, temperature, water and nutrients.

"Flowers open quickly and fully bloom within minutes."

The Science: Blooming is a slow process and varies between different species. Some bloom in hours, while others take days or even weeks.

"Petals are on a flower to make it look pretty."

The Science: While the petals of a flower are pretty, they have a purpose, which is to attract pollinators (like bees and butterflies) with their colour, scent, and patterns. This helps the plant reproduce.



Connect: In Bloom

SCIENCE
ALIVE

ART



You could take younger ākonga on a nature walk to observe flowers around your school or local gardens. Encourage them to sketch the flowers they find, noting features such as shape, colour, and size.

Senior ākonga could collect flowers and press them between sheets of paper using a flower press or heavy books. Once dried, use the pressed flowers to create an art piece.

SOCIAL SCIENCES



Discuss with junior learners how flowers are used in everyday life, such as for food, medicine, or as symbols. Then they could create a poster showing these different uses.

Older tamariki could research the cultural significance of local flowers in Aotearoa, including traditional uses for food, medicine, and symbolism, then compare these with another culture of their choice.

MATHEMATICS



Younger tamariki could explore transformation in spring flowers using [this mini unit](#), which focuses on key concepts like rotation, reflection, symmetry, and translation.

Senior ākonga could calculate the average time for flowering plants across a variety of different species and represent it on an appropriate graph, analysing the results.

FUTURE FOCUS



The skills and knowledge developed in this mini could inspire learners to explore pathways beyond the classroom! If your ākonga were engaged in this activity, it could be a great opportunity to connect with experts or someone from your local community to learn more. You could also explore the skills and school subjects involved in some of the related careers listed below:

- Landscape Architect
- Botanist
- Florist
- Horticulturist

