

AUSTRALIAN CURRICULUM LINKS

FOUNDATION



SCIENCE UNDERSTANDING

Biological Science

Living things have basic needs, including food and water (ACSSU002)

- ◻ Recognise the needs of honey bees in a range of situations
- ◻ Explore the process of collecting nectar and pollen
- ◻ Understand honey bee communication systems within the hive.
- ◻ Access to raw materials to make wax to build the hive and to keep the hive clean.
- ◻ Access to water for drinking and to cool the hive.
- ◻ Explore the environmental needs of honey bees to build new hives.

Earth and Space Sciences

Daily and seasonal changes in our environment, including the weather, affect everyday life (ACSSU004)

- ◻ Investigate how changes in the weather affect bees.
- ◻ Discuss changing environments, both daily and seasonally.
- ◻ Explore heating and cooling of the hive.

SCIENCE AS A HUMAN ENDEAVOUR

Nature and development of science

Science involves exploring and observing the world using the senses (ACSHE013)

- ◻ Explore the science behind what bees do and why they act the way they do it.
- ◻ Use their senses to investigate the movement of bees and their processes.
- ◻ Share observations with others and communicate their experiences.

GENERAL CAPABILITIES

Critical and creative thinking

Inquiring – identifying, exploring and organising information and ideas

- ◻ Identify and clarify information and ideas.

Literacy

- ◻ Word Knowledge
- ◻ Understand learning area vocabulary

Science Achievement Standard

By the end of the Foundation year, students describe the properties and behaviour of familiar objects. They suggest how the environment affects them and other living things. Students share observations of familiar objects and events.

YEAR ONE

SCIENCE UNDERSTANDING

Biological Science

Living things have a variety of external features (ACSSU017)

- ⬡ Examine bees as insects and recognise various body parts and their features, including their six legs, head, thorax, abdomen, two pairs of wings, antennae, two large compound eyes and three simple eyes.
- ⬡ Describe the use of these features for particular purposes.
- ⬡ Identify attributes specific to Honey Bees, such as the baskets they have on the larger back pair of legs for the collection of pollen and the internal nectar sack they use to store collected nectar.

Living things live in different places where their needs are met (ACSSU211)

- ⬡ Recognise that different living things live in different places, such as why Honey Bees build their hives in certain places.
- ⬡ Explain how Honey Bees consider local environmental factors such as shelter and safety as well as relying on an abundant source of nectar and pollen in the surrounding region.
- ⬡ Explore what happens when habitats change and the Honey Bees can no longer have their needs met.

Physical sciences

Light and sound are produced by a range of sources and can be sensed (ACSSU020)

- ⬡ Explore how bees can see ultraviolet light and introduce them to the concept of light that the human eye can't identify.
- ⬡ Outline the function of a honey bee's compound eye which enable them to identify the sun's position even when the sky is cloudy.
- ⬡ Explore the adaptation of flowers that reflect UV light off their petals in order to attract bees for pollination.
- ⬡ Explore how the dancing bees shiver their flight muscles to create a vibration on the floor of the hive so that the follower bees can find them on the 'dance floor'.
- ⬡ Explore how bees use their flight muscles to make a beeping sound to communicate to all the bees in the cluster that it is time to warm up in preparation for the flight to a new home.



SCIENCE AS A HUMAN ENDEAVOUR

Nature and development of science

Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE021)

- ⬡ Jointly construct questions regarding events such as bees consuming more pollen or using different communication dances.
- ⬡ Explore how scientists discovered that bees use the sun to navigate to the flowers by observing changes in the waggle dance.

Use and influence of science

People use science in their daily lives, including when caring for their environment and living things (ACSHE022).

- ⬡ Discuss the practise of Beekeeping in the context of honey collection and pollination of crops, explaining the extensive use of science that Beekeepers engage in.
- ⬡ Explore how native plant habitats depend on native bees.
- ⬡ Explore how honey bees produce honey with different flavours depending on the nectar they collect from different types of flowers.

SCIENCE INQUIRY SKILLS

Communication

Represent and communicate observations and ideas in a variety of ways such as oral and written language, drawing and role play (ACSISo29)

- ⬡ Represent and communicate ideas by using role play that illustrates the communication dances, foraging, collecting pollen, caring for the Queen Bee, cooling and heating the hive, guarding the hive, the life cycle and feeding the larvae.

GENERAL CAPABILITIES

Critical and creative thinking

Inquiring – identifying, exploring and organising information and ideas

- ⬡ Identify and clarify information and ideas
- ⬡ Organise and process information

Literacy

- ⬡ Word Knowledge
- ⬡ Understand learning area vocabulary

Science Achievement Standard

By the end of Year 1, students describe objects and events that they encounter in their everyday lives, and the effects of interacting with materials and objects. They identify a range of habitats. They describe changes to things in their local environment and suggest how science helps people care for environments.

Students make predictions, and investigate everyday phenomena. They follow instructions to record and sort their observations and share their observations with others.

YEAR TWO

SCIENCE UNDERSTANDING

Biological sciences

Living things grow, change and have offspring similar to themselves (ACSSU030)

- ⬡ Recognise that Honey Bees, like other living things, have predictable characteristics at different stages of development.
- ⬡ Explore the different characteristics of the life stages of the Honey Bee.
- ⬡ Observe that Honey Bees have offspring and the unique role of the Queen Bee.

Chemical sciences

Different materials can be combined for a particular purpose (ACSSU031)

- ⬡ Investigate the ways that Honey Bees combine materials, such as producing Royal Jelly through the coalescing of pollen and enzymes and that this Royal Jelly is used to feed larvae during the first few days of life.
- ⬡ Identify how Bee's wax is mixed with resin to facilitate a certain frequency range when vibrations are used for communication in a dark hive.

SCIENCE AS A HUMAN ENDEAVOUR

Use and influence of science

People use science in their daily lives, including when caring for their environment and living things (ACSHE035)

- ⬡ Discuss the practice of Beekeeping in the context of honey collection and pollination of crops.
- ⬡ Identify the ways that humans manage and protect resources, such as reducing the use of pesticides and caring for habitats.

SCIENCE INQUIRY SKILLS

Communicating

Represent and communicate observations and ideas in a variety of ways such as oral and written language, drawing and role play (ACSIS029)

- ⬡ Represent and communicate ideas by using role play that illustrates the communication dances, foraging, collecting pollen, caring for the Queen Bee, cooling and heating the hive, guarding the hive, the life cycle and feeding the larvae.



GENERAL CAPABILITIES

Critical and creative thinking

Inquiring – identifying, exploring and organising information and ideas

- ☐ Identify and clarify information and ideas
- ☐ Organise and process information

Literacy

- ☐ Word Knowledge
- ☐ Understand learning area vocabulary

SCIENCE ACHIEVEMENT STANDARD

By the end of Year 2, students describe changes to objects, materials and living things. They identify that certain materials and resources have different uses and describe examples of where science is used in people's daily lives.

Students pose questions about their experiences and predict outcomes of investigations. They use informal measurements to make and compare observations. They follow instructions to record and represent their observations and communicate their ideas to others

CROSS CURRICULUM PRIORITY – SUSTAINABILITY

ORGANISING IDEAS

Systems

- 1. The biosphere is a dynamic system providing conditions that sustain life on Earth. Students know and understand that:**

- ☐ There are observable cycles in the environment
- ☐ The Earth provides food, water and air to sustain all living things.

- 2. All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival. Students know and understand that:**

- ☐ Living things depend on other types of living things and non-living things as part of a healthy ecosystem.

- 3. Sustainable patterns of living rely on the interdependence of healthy social, economic and ecological systems. Students know and understand that:**

- ☐ People's actions can affect ecosystems

Futures

- 7. Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments. Students know and understand that:**

- ☐ People can show care and respect for the environment by taking actions to look after it.
- ☐ People can explore local environments to understand them and identify how to care for them.

FOUNDATION TO YEAR 2

THE ARTS — DANCE

Foundation to Year 2 Band Description

In Foundation to Year 2, students explore dance. They learn about how dance can represent the world and they make dances to represent their ideas about the world.

Content Descriptors

Explore, improvise and organise ideas to make dance sequences using the elements of dance (ACADAM001)

- ⬡ Exploring fundamental movements safely to improvise dance ideas, for example, flying and dancing like a bee.
- ⬡ Exploring movement possibilities in response to a stimulus, such as imagery, music and shared stories.
- ⬡ Considering viewpoints – forms and elements: For example – What sort of movements do bees perform? What do bees look like? Where do bees perform their movements?
- ⬡ Experimenting with the elements of space, time, dynamics and relationships through movement, for example, what shapes, levels, tempos, rhythms, dynamics are used in the dances to portray bees and their activities?
- ⬡ Viewing and learning videoed dance sequences to extend their dance ideas.

Use fundamental movement skills to develop technical skills when practising dance sequences (ACADAM002)

- ⬡ Practicing and responding to a range of fundamental movements to music, for example, bending and stretching during the lifecycle dance, twisting and turning during the waggle dance, running and skipping during the pollination dance.
- ⬡ Practising fundamental movements to begin to develop technical skills of body control, posture, balance and coordination.
- ⬡ Considering viewpoints – meanings and interpretations: for example – How are you communicating the ideas or intention in this dance? Why huddle together in a small shape when performing the swarming dance? What movements are used to communicate the bee's anatomy and why?
- ⬡ Developing awareness of and taking responsibility for safe dance practices, for example, being aware of self and others in the dance space, moving with care, respecting others dancing in the space; awareness of the boundaries of the dance space; awareness of their bodies' needs, for example, warming up before dancing.



Present dance that communicate ideas to an audience (ACADAM003)

- ⬡ Presenting a learned sequence of movements or performing simple dances, as a group, to classmates, teachers and parents
- ⬡ Expressing ideas to an audience through movement, for example, using movement qualities such as vibratory shoulders to demonstrate a bee heating the hive, and slow, sustained movements to express a bee's metamorphosis.
- ⬡ Considering viewpoints – meanings and interpretations: For example – What did this dance make you think about? How do bees contribute to our society? Compare and contrast bees to other creatures.
- ⬡ Using expressive skills to engage the audience and connect with other dancers/performers, for example, looking at the Queen Bee when feeding and grooming her, using facial expression to enhance the movements as worker bees.

DANCE ACHIEVEMENT STANDARD

By the end of Year 2, students describe the effect of the elements in dance they make, perform and view and where and why people dance.

Students use the elements of dance to make and perform dance sequences that demonstrate fundamental movement skills to represent ideas. Students demonstrate safe practice.