PLANTING FOR *Bees*

Early Years - Year 2

Complete Unit of Work
11 Lessons (approx 60 minutes each)
Aligned to the Australian & Victorian Curriculum

Proud Partners
Inspiring a love of bees
through learning

WHEEN BEE FOUNDATION

BEE SCHOOL by BEECHWORTH HONEY

ABOUT

Guide students to discover the invaluable relationship between honey bees and plants in this extensive unit of work. Aimed at students from Early Years to Year 2, this unit of work provides a variety of experiences to suit all learners.

Explicit teaching on the needs of living things, pollination, and the life cycle of a honey bee provide students with knowledge and awareness to see the importance of the action; planting their own 'bee friendly' seeds.

Hands-on collaborative learning experiences such as the Bee Play, where students engage with props and represent the various roles of a worker bee through play, allow for authentic learning about the importance of the honey bee in pollination and food security.

Planting for Bees provides students with opportunities to:

- Learn through immersion in a bee focused picture story book.
- Explore the workings of a beehive through an interactive, play-based opportunity.
- Learn about honey bees as living things and what they need to survive.
- Discover the life cycle of a honey bee.
- Explore pollination and how honey bees are vital pollinators.
- Enjoy a honey tasting experience to explore how nectar sources create unique taste profiles of different honey.
- Learn about the importance of honey bees for our food security.
- Discover what 'bee friendly' flowers are and how we can encourage bees into our environments.

Students apply their new learning by:

- Planting 'bee friendly' seeds in an environment within the school grounds that has food, water, and shelter to encourage honey bees to visit.
- Participating in a 'bee play' to investigate the different roles and workings within a beehive by taking on the responsibilities of a queen bee, guard, cleaner, wax producer, or forager bee.

Planting for Bees (Early Years to Year 2) is aligned with the Australian and Victorian Curriculum. It has been developed to include the Science Understanding, Science as a Human Endeavour, Inquiry Skills Standards, and the Sustainability Cross-curriculum Priorities. The unit of work has been created by a team of qualified and experienced teachers from Bee School by Beechworth Honey in collaboration with the Wheen Bee Foundation. With minimal adaptations required, this unit of work can be used by primary school teachers, science specialists, homeschool groups, and school holiday programs.

Everything you need to deliver this engaging and inspiring learning experience will be provided - including lesson plans, assessment opportunities, seeds for planting, honey for tasting, reading material, videos and printables.

ABOUT

What's included:

- **Background information for educators on the topics of honey bees and plants.**
- **11 x 1 hour lessons including:**
  - Learning intentions and outcomes
  - Resource list (all resources included and noted below)
  - Assessment opportunities
- **Curriculum links:**
  - Australian Curriculum - Science
  - Victorian Curriculum - Science
  - Science Inquiry Skills
  - Sustainability Cross-curriculum Priorities
- **All resources needed to teach the lessons are included:**
  - Complete unit of work - 11 x 1 hour lesson plans
  - Worksheets and assessment templates
  - Supporting videos and sound clips
  - 30x Bee Friendly Seed packets*
  - 30x Mini Honey Tasting Kits*
  - 'Bee: Nature's Tiny Miracle' by Britta Teckentrup (Illustrator) & Patricia Hegarty (Author)
  - 'Bee Play' props including; cleaning gloves, bee figurine, drawstring bag with wax*, shield, headbands, buckets, prop pollen, and a crown.

Disclaimer
While all reasonable efforts have been taken to ensure the contents of this educational resource are factually correct and aligned with the Australian and Victorian Curriculum, it is the responsibility of the individual educators and schools to ensure these lessons meet their curriculum needs and are suitable for their students.

All videos, photographs, and resources have been created by Bee School by Beechworth Honey in collaboration with the Wheen Bee Foundation, unless otherwise stated and referenced, and are to be used for education and training purposes only.

Any reference to 'bee' throughout this unit of work refers to the European Honey Bee unless otherwise stated.

***Please note:** Due to domestic quarantine resstrictions Bee Friendly Seeds, Mini Honey Tasting Kits, and wax cannot be shipped to Tasmania or Western Australia and will not be included in the Planting for Bees learning kit.

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CONTENTS

AUSTRALIAN CURRICULUM LINKS

The Early Years Learning Framework

Outcome 1 Children have a strong sense of identity.	Children feel safe, secure and supported: • Openly express their ideas in their interactions with others. • Explore aspects through role play.
	Children develop their emerging autonomy, interdependence, resilience and agency: • Open to new challenges and making new discoveries. • Increasingly cooperate and work collaboratively with others. • Show initiative by seeking information and asking questions.
	Children develop knowledgeable and confident self-identities: • Explore different identities, roles, and points of view in dramatic play. • Show curiosity and growing confidence in their identity as a learner. • Take calculated risks in play and learning and begin to cope with the unexpected.
Outcome 2 Children are connected with and contribute to their world.	Children develop a sense of connectedness to groups and communities and an understanding of their reciprocal rights and responsibilities as active and informed citizens: • Broaden their understanding of the world in which they live. • Understand the different ways of contributing through play and projects.
	Children become socially responsible and show respect for the environment: • Use play to investigate , project and explore new ideas. • recognise they are part of ecosystems and care for local biodiversity. • Participate with others to identify and address environmental challenges and problems, and contribute to group ideas and plans. • Express their views about important topics and work together to problem solve and enact solutions within their communities. • Develop an awareness of the impact of human activity on environments and the interdependence of living things. • Explore the basic needs of living things and how to protect them. • Demonstrate an increasing knowledge of, and respect for natural and constructed environments. • Explore, infer, predict and hypothesise in order to develop an increased understanding of the interdependence between land, people, plants and animals.
Outcome 4 Children are confident and involved learners.	Children develop a growth mindset and learning dispositions such as curiosity, cooperation, confidence, creativity, commitment, enthusiasm, persistence, imagination and reflexivity: • Express wonder and interest in their environments. • Curious and enthusiastic participates in their learning. • Contribute to play experiences. • Participate in a variety of rich and meaningful inquiry-based experiences. • Share their ideas with others and ask questions of adults. • Use play to investigate, experiment, test hypotheses, imagine and explore ideas. • Revisit previous learning experiences and plan new challenges. • Use their senses to play, explore and try new things.
	Children develop a range of learning and thinking skills and processes such as problem solving, inquiry, experimentation, hypothesising, researching and investigating: • Use reflective thinking to consider why things happen and what can be learnt from these experiences. • Explore their environment. • Apply a wide variety of thinking strategies to engage with situations and solve problems, and adapt these strategies to new situations. • Make predictions and generalisations about aspects of the natural world and environments. • Explore their environment through asking questions, experimenting, investigating and using digital technologies.
	Children transfer and adapt what they have learnt from one context to another: • Make connections between experiences, concepts and processes. • Use the processes of play, reflection and investigation to solve problems.

	Children resource their own learning through connecting with people, place, technologies and natural and processed materials: • Use their senses and body movements to explore natural materials and environments. • Explore ideas and theories using imagination, creativity, and play. • Retell or create simple stories using materials or drama to represent ideas.
Outcome 5 Children are effective communicators.	Children interact verbally and non verbally with others for a range of purposes: • Contribute their ideas and experiences in play and small and large group discussion. • Convey and construct messages with purpose and confidence, building on home/family and community literacies. • Respond verbally and non-verbally to what they see, hear, touch, feel and taste. • Use language and representations from play, music and art to share and project meaning • Listen to and act upon simple directions. • Interact with others to explore ideas and concepts, clarify and challenge thinking, negotiate and share new understandings.
	Children engage with a range of texts and gain meaning from these texts: • Actively use, engage with and share the enjoyment of language and text in a range of ways.
	Children express ideas and make meaning using a range of media: • Use language, sounds, gestures and movement to engage in play to imagine and create roles, scripts and ideas. • Use materials to create art works (e.g. drawing, painting, sculpture, drama, dance, movement, music and storytelling) to express ideas and make meaning.
	Children use digital technologies and media to access information, investigate ideas and represent their thinking: • Use digital technologies to access images and information, explore diverse perspectives and make sense of their world.

Science

Foundation	Year 1	Year 2
Living things have basic needs, including food and water (ACSSU002)	Living things have a variety of external features (ACSSU017)	Living things grow, change and have offspring similar to themselves (ACSSU030)
Daily and seasonal changes in our environment affect everyday life (ACSSU004)	Living things live in different places where their needs are met (ACSSU211)	Earth's resources are used in a variety of ways (ACSSU032)
Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE013)	Observable changes occur in the sky and landscape (ACSSU019)	People use science in their daily lives, including when caring for their environment and living things (ACSHE035)
	People use science in their daily lives, including when caring for their environment and living things (ACSHE022)	

Science Inquiry Skills

	Foundation	Year 1	Year 2
Questioning and Predicting	Pose and respond to questions about familiar objects and events (ACSIS014)	Pose and respond to questions, and make predictions about familiar objects and events (ACSIS024)	Pose and respond to questions, and make predictions about familiar objects and events (ACSIS037)
Planning and Conducting	Participate in guided investigations and make observations using the senses (ACSIS011)	Participate in guided investigations to explore and answer questions (ACSIS025) Use informal measurements to collect and record observations (ACSIS026)	Participate in guided investigations to explore and answer questions (ACSIS038) Use informal measurements to collect and record observations (ACSIS039)
Processing and Analysing Data and Information	Engage in discussions about observation and represent ideas (ACSIS233)	Use a range of methods to sort information, including drawings and provided tables and through discussion, compare observations with predictions (ACSIS027)	Use a range of methods to sort information, including drawings and provided tables and through discussion, compare observations with predictions (ACSIS040)
Evaluating	N/A	Compare observations with those of others (ACSIS213)	Compare observations with those of others (ACSIS041)
Communicating	Share observations and ideas (ACSIS012)	Represent and communicate observations and ideas in a variety of ways (ACSIS029)	Represent and communicate observations and ideas in a variety of ways (ACSIS042)

Sustainability Cross-Curriculum Priorities

Systems	All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival (OI.2)
	Sustainable patterns of living rely on the interdependence of healthy social, economic and ecological systems (OI.3)
World Views	World views that recognise the dependence of living things on healthy ecosystems, and value diversity and social justice, are essential for achieving sustainability (OI.4)
	World views are formed by experiences at personal, local, national and global levels, and are linked to individual and community actions for sustainability (OI.5)
Futures	Actions for a more sustainable future reflect values of care, respect and responsibility and require us to explore and understand environments (OI.7)
	Sustainable futures results from actions designed to preserve and/or restore the quality and uniqueness of environments (OI.9)

VICTORIAN CURRICULUM LINKS

The Victorian Early Learning & Development Framework (VEYLDF)

Outcome 1 Children have a strong sense of identity.	Children feel safe, secure and supported: • Openly express their ideas in their interactions with others. • Explore aspects through role play.
	Children develop their emerging autonomy, inter dependence, resilience and sense of agency: • Open to new challenges and making new discoveries. • Work collaboratively with others.
	Children develop knowledgeable and confident self-identities: • Celebrate and share their contributions and achievements with others.
	Children learn to interact in relation to others with care, empathy and respect: • Engage in and contribute to shared play experiences.
Outcome 2 Children are connected with and contribute to their world.	Children become socially responsible and show respect for the environment: • Use play to investigate, project and explore new ideas. • Participate with others to solve problems and contribute to group outcomes. • Demonstrate an increasing knowledge of and respect for natural and constructed environments. • Explore, infer, predict and hypothesise in order to develop an increased understanding of the interdependence between land, people, plants and animals. • Explore relationships with other living and non-living things and observe, notice and respond to change. • Recognise they are part of ecosystems and care for local biodiversity. • Participate with others to identify and address environmental challenges and problems, and contribute to group ideas and plans. • Express their views about important topics and work together to problem solve and enact solutions within their communities. • Develop an awareness of the impact of human activity on environments and the interdependence of living things. • Explore the basic needs of living things and how to protect them.
Outcome 4 Children are confident and involved learners.	Children develop dispositions for learning such as curiosity, cooperation, confidence, creativity, commitment, enthusiasm, persistence, imagination and reflexivity: • Express wonder and interest in their environments. • Curious and enthusiastic participants in their learning. • Use play to investigate, imagine and explore ideas. • Participate in a variety of rich and meaningful inquiry-based experiences.
	Children develop a range of skills and processes such as problem solving, inquiry, experimentation, hypothesising, researching and investigating: • Use reflective thinking to consider why things happen and what can be learnt from these experiences. • Make predictions and generalisations about aspects of the natural world and environments. • Explore their environment.
	Children transfer and adapt what they have learnt from one context to another: • Make connections between experiences, concepts and processes. • Use the processes of play, reflection and investigation to problem-solve.
	Children resource their own learning through connecting with people, place, technologies and natural and processed materials: • Use their senses to explore natural and built environments. • Use feedback from themselves and others to revise and build on an idea.

Outcome 5 Children are effective communicators.	Children interact verbally and non verbally with others for a range of purposes: • Contribute their ideas and experiences in play and small and large group discussion. • Use language and representations from play, music and art to share and project meaning. • Contribute their ideas and experiences in play and small and large group discussion. • Interact with others to explore ideas and concepts, clarify and challenge thinking, negotiate and share new understandings. • Exchange ideas, feelings and understandings using language and representations in play.
	Children express ideas and make meaning using a range of media: • Use language and engage in symbolic play to imagine and create roles, scripts and ideas. • Use the creative arts, such as drawing, painting, sculpture, drama, dance, movement, music and story-telling, to express ideas and make meaning.
	Children engage with a range of texts and gain meaning from these texts: • Actively use, engage with and share the enjoyment of language and text in a range of ways.
	Children use information and communication technologies to access information, investigate ideas and represent their thinking: • Use information and communication technologies to access images and information, explore diverse perspectives and make sense of their world.

Science Understanding

Foundation - Level 2
People use science in their daily lives (VCSSU041)
Living things have a variety of external features and live in different places where their basic needs, including food, water and shelter, are met (VCSSU042)
Living things grow, change and have offspring similar to themselves (VCSSU043)

Science Inquiry Skills

	Foundation - Level 2
Questioning and Predicting	Respond to and pose questions, and make predictions about familiar objects and events (VCSIS050)
Planning and Conducting	Participate in guided investigations, including making observations using the senses, to explore and answer questions (VCSIS051)
Recording and Processing	Use informal measurements in the collection and recording of observations (VCSIS052)
	Use a range of methods, including drawings and provided tables, to sort information (VCSIS053)
Analysing and Evaluating	Compare observations and predictions with those of others (VCSIS054)
Communicating	Represent and communicate observations and ideas about changes in objects and events in a variety of ways (VCSIS055)

UNIT OUTLINE

Lesson	Overview	Resources
Lesson 1 **Bee Intrigued**	**We are exploring** what we already know about honey bees and pollination **so we can** further our understanding. **Assessment Opportunity** Formative assessment in the form of a pre-assessment.	• 'Honey Bee Sounds' audio • 'Planting for Bees! Pre-assessment' worksheet • 'Bee: Nature's Tiny Miracle' by Britta Teckentrup (Illustrator) & Patricia Hegarty (Author)
Lesson 2 **Living & Non-Living Things**	**We are learning** about living and non-living things **so we can** identify living things and understand what they need to survive. **Assessment Opportunity** Do students show an understanding of the features of living vs non-living things?	• 'Bee: Nature's Tiny Miracle' by Britta Teckentrup (Illustrator) & Patricia Hegarty (Author) • 'Living & Non-living Things' resource
Lesson 3 **Pollinators**	**We are learning** about the needs of living things **so we can** begin to understand pollination. **Assessment Opportunity** Revisit pre-assessment and see if any students' 'What would you like to know?' section has been answered.	• 'Pollinator Cards' resource • 'What Do Living Things Need?' worksheet • Sand (Pollen Prop) • 'Flower Cut Outs' resource • 'What is Pollination?' video
Lesson 4 **Life Cycle of a Honey Bee**	**We are learning** about the life cycle of a honey bee **so we can** understand how a honey bee colony functions. **Assessment Opportunity** Can students accurately sequence the life cycle of a honey bee?	• 'Life in the Hive' video • 'Life Cycle of a Honey Bee (Diagram)' resource • 'Life Cycle of Honey Bee (Sequence)' worksheet
Lesson 5 **Honey Bee Habitats**	**We are learning** about the needs of honey bees as living things **so we can** understand how their survival is affected by their environmental conditions. **Assessment Opportunity** What does a living thing need to survive?	• 'Australian Landscapes' resource • Mini Honey Tasting Kits (30) • 'Honey Bee Needs' video

Lesson 6
Busy Bees
	We are learning about the roles of a worker bee during its life **so we can** understand the importance of worker bees for pollination.
	Assessment Opportunity
	Can students explain the roles of a worker bee throughout their life?
	Why are bees important for flowers?
		• 'Life in the Hive' video
		• Bee Play props
		  • Cleaning gloves
		  • Bee figurine
		  • Drawstring bag with wax
		  • Shield
		  • Headband
		  • Mini buckets
		  • Prop pollen

Lesson 7 **Is Your School Bee-Friendly?**	**We are learning** about what makes a bee friendly garden **so we can** identify if our school is bee friendly by having a range of flowers throughout the year. **Assessment Opportunity** Science inquiry skill - can the students make a prediction? Can they compare the results to their predictions?	• 'Honey Bee Safety' video • 'Discovery Walk' worksheet
Lesson 8 **Flower Power**	**We are learning** how to plant and care for seeds **so we can** ensure our seeds grow to provide a food source for bees. **Assessment Opportunity** Do students have an understanding of what plants need to grow and survive? (water, sunshine, nutrients, pollinator).	• 'Bee Friendly Seeds' (30) • 'Honey Bee Needs' video
Lesson 9 **Plant - Bee Relationships**	**We are learning** that bees and plants have a symbiotic relationship **so we can** understand how to support each one. **Assessment Opportunity** Can the students state the way the bee has helped the flower?	• 'Symbiotic Relationships' worksheet • 'Pollinator Cards' resource
Lesson 10 **Food Security Needs Bee Security**	**We are learning** about the fruits and vegetables that are dependent on bees to grow **so we can** appreciate the importance of bees for our food security. **Assessment Opportunity** Students ability to identify foods that are reliant on bees for pollination. Do students understand that plants need honey bees (and other pollinators) in order to reproduce?	• 'Food Security Needs Bee Security' resource • 'Bee-dependent Fruit & Vegetables' worksheets
Lesson 11 **That's a Wrap**	**We are showing** our understanding of bees and pollination **so we can** discuss what we would like to know further. **Assessment Opportunity** Summative assessment in the form of a post-assessment.	• 'Honey Bee Sounds' audio • 'Planting for Bees Post-assessment' worksheet • 'Bee: Nature's Tiny Miracle' by Britta Teckentrup (Illustrator) & Patricia Hegarty (Author)