Mighty Minibeasts

Year 3 and 4 Science

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Our vision is for a community that cares for self, others and the environment to achieve enough for all forever.

The Big Idea: Working scientifically.

Students' Blanket Role: They are invited to be **'Entomologists in Training'**

Program Snapshot

This program focuses on two questions that the students can investigate scientifically. Students apply their knowledge to make predictions and conduct experiments to investigate possible solutions. Students take on the role of a scientist as a way of working. They conduct an experiment involving meat ants and participate in a guided bushwalk to investigate insects and other arthropods in a local habitat. Through this program, students learn to appreciate the importance of our invertebrates.

Curriculum– Year 3 and 4 Science

Due to the nature of this program, it will compliment **any Science unit** from Years 3-5, as it covers many aspects of working scientifically, including predictions and fair tests.

Achievement Standard (extract)	**Year 3-** They describe how they can use science investigations to respond to questions. Students use their experiences to identify questions and make predictions about scientific investigations. They follow procedures to collect and record observations and suggest possible reasons for their findings, based on patterns in their data. Students use their experiences to identify questions and make predictions about scientific investigations. They follow procedures to collect and record observations and suggest possible reasons for their findings, based on patterns in their data. **Year 4 -**Students suggest explanations for observations and compare their findings with their predictions. They suggest reasons why a test was fair or not. They use formal and informal ways to communicate their observations and findings.
Content Descriptions (Year 3 and 4 are the same)	Science involves **making predictions** and describing patterns and relationships. Students will: • With guidance, **identify questions** in familiar contexts that can be investigated scientifically and **predict** what might happen based on prior knowledge (Year 3 ACSIS053) (Year 4 ACSIS064). • Use a range of methods including **tables and simple column graphs** to represent data and to identify patterns and trends (Year 3 ACSIS057) (Year 4 ACSIS068). • **Compare results with predictions,** suggesting possible reasons for findings (Year 3 ACSIS215) (Year 4 ACSIS216). • Reflect on the investigation, including **whether a test was fair or not** (Year 3 ACSIS958) (Year 4 ACSIS069).

Cross Curriculum Priorities

Sustainability

Sustainability– addresses the ongoing capacity of Earth to maintain life. Students develop the knowledge, skills, values and world views necessary to contribute to more sustainable patterns of living, which means meeting the needs of the present without compromising the ability of future generations to meet their needs.

Main sections covered: **Systems O1.2-** All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival. **Futures O1.7-** Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments.

Pre-visit:

- Engage in a play about minibeasts holding a meeting discussing their future survival.
- Accept invitation to Amaroo EEC as Entomologists- in- training. The students can respond to this via email or letter.

Visit Day– Program

- Conducting an experiment with the guidance of the teacher to solve a scientific question. The concept of a 'fair test' is emphasised during the setting up of the experiment
- Observe meat ants in bottles - a controlled environment, a cold environment and a warm environment
- Compiling and discussing results of the 'Meat Ant's Favourite Food' experiment
- Tree shake– use eye loupes to observe minibeasts
- Bush walk- observing any evidence of minibeast activity and possible habitats (in particular, termites, native bees and bull ants)
- Observing minibeast specimens

Conclusion:

- Discussion about the integral role of minibeasts in our environment, exploration of some minibeasts with incredible features or behaviours

Call to Action:

- Entomologists-in-training are professionals– this means ongoing learning, incredible observation skills, and a desire to think critically. Check the source of information you find, or do your own research or investigation to learn things.

Post-visit consolidation ideas

- Students graph results of the experiment (teacher to capture data)
- Sequence the steps followed when conducting the experiment
- List the elements of a fair test
- Describe how science investigations can be used to respond to questions and identify where people use science knowledge in their lives
- Design a poster or digital multimedia to make people aware of the importance of mini-beasts in our world

Amaroo EEC pedagogy

Amaroo is guided by the Place-Responsive Pedagogy, in particular Learning Beyond the Classroom.

This particular program uses the strategy of **Learning By Doing.**

Also at the fore-front of our pedagogy is connectedness, real-world context, authentic cultural experiences, sense of place, and recognition of difference, which can lead to other powerful, long-term, lifestyle outcomes, often not assessable in traditional curriculums.

For more information please refer to Amaroo's Pedagogical Framework (amarooeec.eq.edu.au/supportandresources/formsanddocuments/documents/pedagogical-framework.pdf)