

CONCEPT:	The World Beneath our Feet: Discovering Minibeasts		Curriculum Integration		
			<ul style="list-style-type: none"> • Reading • Writing • Oracy 	<ul style="list-style-type: none"> • Visual language • Science • Technology 	<ul style="list-style-type: none"> • Math • Arts • Social Studies
Key Competencies <ul style="list-style-type: none"> • Thinking • Language, symbols, & texts • Managing self • Relating to others • Participating & contributing 	Unit Focus <ul style="list-style-type: none"> • To investigate a selected minibeast and present to the class using Marvin software a fact file relating to its lifecycle, habitat and characteristics. 		What if?		
Explicit Strategies / Understanding that will develop skills.	Learning Intentions The students are learning...	Success criteria We know we have achieved...	Curriculum Objectives Level 3		
<ul style="list-style-type: none"> • Learning how to use Marvin software (in pairs) • Plan and carry out a short science Inquiry into a selected minibeast • Create text to accurately communicate factual information • Use digital technologies such as digital cameras and/or digital microscopes to record data for use in a presentation 	<ul style="list-style-type: none"> • how to create fertile questions that can help focus their Inquiry into their minibeast ; • about the characteristics, lifecycle and habitat of their selected minibeast; • how to create concise text that will convey with accuracy, facts about their minibeast through their Marvin fact file; • how to use a range of technologies to record information digitally to include in their presentation; • how to work collaboratively in pairs to ensure a successful presentation. 	<ul style="list-style-type: none"> • when we are successful in our research in answering the questions we ask; • when we are able to create a fact file with at least 10 facts about our selected minibeast; • when our facts are accurate and are written in clear language others in the class can understand; • when we are able include images from the digital camera or microscope in our Marvin presentation which help explain the information contained in our fact file . 	Science – Living World: <ul style="list-style-type: none"> • Explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human induced. Nature of science: Ask questions, find evidence, explore simple models and carry out appropriate investigations to develop simple explanations. English <ul style="list-style-type: none"> • Understands that the order and organisation of words, sentences, paragraphs and images contribute to and affect text meaning. 		
Context/Scenario This science unit involves students undertaking a short Inquiry into the life of a minibeast they discover in the playground, and researching 10 facts about the beast, its lifecycle, habitat etc to present to the class using Marvin animation software.			Resources Needed (including IT) Internet, Marvin software, class PCs and laptops, library, bug containers, digital cameras/microscopes etc		

		<p>How to measure the success criteria (assessment)</p> <ul style="list-style-type: none"> • A fact file containing at least 10 accurate facts about the minibeast has been created and presented to the class using Marvin; • The language used to communicate the factual information is clear and concise; • The Marvin presentation is reliable and uses graphical information effectively in conveying understanding. <p>These criteria could be shared and developed further with the class to create specific assessment criteria to be use by the teacher and in the peer assessment (see later)</p>	
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Learning Experiences (starter samples only):

The following is a list of possible learning experiences or activities which could be developed further for the unit of learning. They are only listed here as starter ideas for teachers to develop to best suit to needs of their class, time and resource limitations etc:

- Brainstorm initial ideas about minibeasts. What do you think a minibeast is? Where might they live? Do you know the names of any animals you think might be minibeasts? etc. Create T chart or mindmap to record initial understandings.
- As a class generate some broad questions about minibeasts the children would like to find answers to. Keep these broad at this stage eg: What sort of animals could we call minibeasts? What sort of places do they like living in? Do they all belong to the same ‘family’ of animals? Carry out preliminary research to narrow down focus for investigation. What are we talking about when we refer to minbeasts? (eg: <http://digitool.co.nz/kidzone/webquests/webquests/minibeasts.html> or <http://www.ypte.org.uk/environmental/minibeasts/30>)

- What are some minibeasts that might live in the playground? Allow children the opportunity to explore the playground searching for minibeasts, focusing on where they found them, what they were doing when they discovered them, how they moved etc. Emphasise not to harm the animals in any way. Get children to collect some minibeasts in containers for further study, again emphasising the need to take care as they will be returned to their environment. Take digital photos of the minibeast's habitat, and also, if possible, of the minibeast in its habitat.
- Back in the classroom get children to draw their minibeast. Encourage them to look closely at it (using microscope, digital microscope, hand lense, or magnifying glass) and note and draw its features – number of legs, location and shape of eyes, feelers, colour, parts of its body – how many, shape, how they are joined etc. Try to get each pair to identify and name their minibeast (internet, library etc). Take macro photos of it from all angles (including underneath if possible using clear-bottomed containers).
- Return the minibeast to its habitat– noting features of the habitat and what the best does when it is returned there.
- Gather children's questions about their minibeast. Each pair should create 4-5 questions about their minibeast they can research. These might include what does it eat? Is it a herbivore or a carnivore? How does it see? Can it hear – if so, where are its ears? What other senses does it have? What are its enemies? Is it a pest or is it a helpful minibeast? What conditions does it like living in? etc. Using the Internet, library and other information sources, children undertake pair research to find answers to their questions. Present as 'fact file' cards (A4 pages), using photographs and other images collected during their investigation to supplement the written information. When these have been completed, photograph (macro) or scan them and save them as .jpg image files.
- Using the IWB or data projector, take the students as a class through Marvin – introduce it: what it is, how to use it, and the basics of putting together a presentation etc (importing images, backgrounds, adding text, adding voice, selecting and animating characters etc). Allow adequate time for students to explore Marvin and create some practice presentations, possibly using an alternative scenario.
- Discuss how Marvin could be used to present the minibeast fact file. Discuss how animations are used on television or the internet to promote and sell products, or to get important information across to certain groups. Identify why animations are used and ways in which animations get the message across through movement, voice, expression etc.
- Get children to develop draft storyboards using the photos or scans from their minibeast fact file either as backgrounds, part backgrounds or as props. Develop voiceover script for character to introduce each fact file page, photograph etc. Record on storyboard.
- When storyboards have been checked and approved, pairs should access Marvin and commence first draft of presentation. Teacher should closely monitor progress and offer advice where needed. Presentations should be evaluated for technical reliability, how effectively they communicate what was learnt though use of the animated character and voiceover, accuracy and quality of information presented etc.
- Pairs should have the opportunity to gain feedback from others in the class about their presentation in relation to the peer assessment criteria developed earlier (see above). Using this feedback, they should be given the opportunity to modify their presentation before sharing it with the class via the IWB or projector.
- Carry out final summative assessment of presentation (if necessary).