



## **The Kitchen Garden Classroom: Educating Children for a Healthy Future 13 October 2008 Abbotsford Convent**

### **Session A4: Learning Standards and the Kitchen Garden Classroom**

#### **Garden Class Activity – Bugs in Our Garden**

Level 3: Health and Physical Education, Interpersonal Development, Civics and Citizenship, the Arts, English, Science, Design, Creativity and Technology.

#### **Introduction**

In the *Bugs in Our Garden* activities, students examine, draw and discuss bugs collected from the kitchen garden. They also prepare their own home-made bug repellent and spray the repellent on the kitchen garden plants.

Students develop knowledge about and skills in how to safely interact with insects.  
They work in groups to communicate ideas about features of the insects and their purpose.  
They produce art works and present them to the class.  
They discuss the use and combination of different ingredients in repelling insects.

This unit provides opportunities for students to demonstrate achievement against the standards in Physical Education, Personal Learning, Civics and Citizenship, the Arts, Science, Design, Creativity and Technology, and Thinking Processes.

#### **Learning focus**

This unit addresses learning focus statements from all three strands and seven domains. These include:

#### **Physical, Personal and Social Learning**

##### **Health and Physical Education**

Students learn about outdoor activities to enable them to better understand the nature of outdoor environments and how they can prepare themselves for safe involvement in such activities (eg how to avoid hazards in the garden, how to safely handle insects).

##### **Interpersonal Development**

Students work in teams, discuss their insects in a small group and present their findings to the rest of the class.

##### **Civics and Citizenship**

Students explore issues of sustainability and participate in activities to care for natural and built environments (their kitchen garden).

#### **Discipline-based Learning**

##### **The Arts**

Students explore ways to communicate the world around them (ie to communicate about insects in the garden).  
Students look at purpose of artworks and experiment with different ways to present art (ie the role and nature of scientific drawings as opposed to creative drawings).

##### **English**

Students develop skills in speaking and listening by participating in small groups and then presenting to the class.

##### **Science**

Students investigate questions about the natural world.  
Students learn to use scientific vocabulary in place of everyday language to describe and explain their observations (i.e. parts of insect).  
Students learn to classify things as living or non-living.

## Interdisciplinary Learning

### Design, Creativity and Technology

Students identify a need (to protect plants from insects) and develop a solution (an insect spray).

### Victorian Essential Learning Standards

*Bugs in our garden* can be used to assess a range of Victorian Essential Learning Standards.

The table below is an example of how this unit might be used to assess some Level 3 standards.

Strand	Domain	Dimension	Standard
Physical, Personal and Social Learning	Health and Physical Education	Movement and Physical Activity	Participate regularly in physical activities for the purpose of improving skill and health
		Health Knowledge and Promotion	Identify basic safety skills and strategies at home, school and in the community, describe methods for recognising and avoiding harmful situations.
	Interpersonal Development	Building Social Relationships	Sharing ideas and materials, offering assistance
		Working in Teams	cooperate with others in teams for agreed purposes, taking roles and following guidelines established within the task
	Personal Learning	The Individual Learner	-
		Managing Personal Learning	-
	Civics and Citizenship	Civic Knowledge and Understanding	Explain why protection and care for the natural and built environment is important.
		Community Engagement	Participate in activities to protect and care for the natural and built environment.
Discipline Based Learning	The Arts	Creating and making	Planning arts works for different purposes and audiences
		Exploring and Responding	Exploration, development and presentation of their arts works, including the use of specific arts elements, principles and/or conventions, skills, techniques and processes.
	English	Reading	-
		Writing	-
		Speaking and Listening	Students vary their speaking and listening for a small range of contexts, purposes and audiences, project their voice adequately for an audience
	Languages Other Than English	Communicating in a Language other than English	-
		Intercultural knowledge and language awareness	-
	Humanities	Economic knowledge and understanding	-
		Economic reasoning and interpretation	-
		Geographical knowledge and understanding	-
		Geospatial skills	-
		Historical knowledge and understanding	-
		Historical reasoning and interpretation	-
	Mathematics	Number	-
		Space	-
		Measurement, chance and data	-
		Structure	-
		Working mathematically	-
	Science	Science knowledge and understanding	Students identify and describe the structural features of living things, including plants and animals; identify how these features operate together to form systems which support living things to survive in their environments; distinguish between biotic and abiotic factors in their environment and describe interactions that occur between them. describe natural physical and biological conditions, and human influences in the environment, which affect the survival of living things.
		Science at work	Students plan, design, conduct and report collaboratively on

			experiments related to their questions about living and non-living things and events. Students describe safety requirements and procedures associated with experiments.
Interdisciplinary Learning	Communication	Listening, viewing and responding	-
		Presenting	-
	Design, Creativity and Technology	Investigating and designing	Students identify simple systems components and common materials/ ingredients and explain the characteristics and properties that make them suitable for use in products. students think ahead about the order of their work and list basic steps to make the product.
		Producing	Students use their list of steps and are able to choose appropriate tools, equipment and techniques to alter and combine materials/ingredients and assemble systems components.
		Analysing and evaluating	Consider how well a product or simple system functions and/or how well it meets the intended purpose.
	Information and Community Technology	ICT for visualising thinking	-
		ICT for creating	-
		ICT for communicating	-
	Thinking Processes	Reasoning, Processing, Inquiry	-
		Creativity	-
Reflection, evaluation and metacognition		-	

## Teaching and learning activities

Throughout these activities, students work in groups (see 'Collaborative learning strategies' in the Teaching and learning resource and 'Group assessment' in the Assessment resource).

At appropriate times, students reflect on group work. Prompts to assist reflection include:

What are the benefits of working in teams to gather information?

How do teams ensure that everyone contributes?

What is the role of a spokesperson in groups?

### Activity 1: “What are the bugs in our garden?”

The purpose of this activity is to:

- provide an opportunity to study insects
- provide an opportunity to make a scientific drawing
- develop student understanding of the interactions in the natural environment
- remove pests from the garden
- provide an opportunity for children to work in groups
- provide a fun activity to break up the normal classroom routine

Students are given instruction on how to safely collect insects (eg wear gloves, avoid spiders, ask teacher before handling insects etc). They then go on a “bug hug”, searching the kitchen garden for interesting bugs, caterpillars, mites and other insects.

They bring them back to the classroom and observe and discuss them in small groups. They then draw one of the bugs.

Students present their findings to the rest of the class, in groups, pairs or individually. Caterpillars and snails are then fed to the chickens.

### Activity 2: “Making an organic bug spray”

The purpose of this activity is make a chilli, garlic & pepper sprays to kill or repel insects.

The purpose of this activity is to:

- involve students in a discussion about the pros and cons of organic gardening
- provide an opportunity for children to develop solution (organic spray) to a problem (pests in garden)

Students are involved in a discussion about different ways to deal with pests in the garden – chemicals, organic sprays, handpicking etc. Students make the chilli, garlic & pepper sprays in small groups, and then use it in the kitchen garden.

## Assessment

The Victorian Essential Learning Standards supports a combination of assessment practices:

- Assessment of learning (summative)
- Assessment for learning (formative)
- Assessment as learning (ongoing)

Further information on these can be found at: <http://www.sofweb.vic.edu.au/blueprint/fsl/assessment.asp>

When assessing student achievement, assessment criteria can be developed from relevant standards and associated tasks or activities. The table below shows a range of assessment criteria, tools and strategies applicable to this unit. Teachers could choose to use some or all of these or use the unit to assess other stands.

Standards	Assessment criteria (examples)	Evidence
Interpersonal Development Working in teams	Ability to: <ul style="list-style-type: none"><li>• take on different roles and responsibilities within a group</li><li>• contribute ideas to class and group discussion</li></ul>	Teacher observations and records of student contributions to class discussion and working in different roles in teams
Discipline Based Learning	Ability to: <ul style="list-style-type: none"><li>• identify and describe the structural features of insects</li><li>• identify how these features form systems which support insects to survive in their environments</li><li>• identify how human influences in the environment affect the survival of insects</li></ul>	Drawing produced by students Contributions to small group and class discussion