

Lesson Plan for Pacific Invasive Ant Toolkit Lesson 1 - Hi Ants! (45mins)

Prior Skills and Knowledge:

- Understand that they play a role in their community.
- Work well together in groups.

Instructional Objectives:

At the end of the lesson, students will be able to:

- Identify an ant as a living thing.
- Understand that not all ants are invasive.
- List the positive and negative impacts of ants on our environment.
- Use the skills of self-management, responsible decision-making and problem-solving and exhibit the values of care, respect and social-awareness.

Resource Preparation Guide		
Item no.	Description	Remarks
1.	Computer, Projector, Powepoint slides.	For showing of powerpoint slides / Slides to be printed out – 1 copy per 3 students if computer/projector not available
2.	Board or Paper and markers	To use for recording student – teacher interactions during brain storming.
3.	Annex 1 – Graphic organiser	For use during student group discussions.

Est Time	Learning and Development	Resources
5 mins	<p><u>Tuning in</u></p> <p>Slide 1 - 2: Teacher to introduce the lesson and the lesson outcomes for the day.</p> <p>Slide 3: Teacher to recall with the class what an ant is.</p> <ul style="list-style-type: none"> - An Ant is a living thing, it needs air, food and water. - An Ant is an insect. - It has 3 body parts and 6 legs, - It in the same family as wasps and bees, - The queen can lay thousands of eggs a day. 	Computer, Project, Slides
5 mins	<p><u>Introduction</u></p> <p>Slide 4: Teacher to introduce the concept of an invasive ant. At this point, teacher use the question(s):</p>	Computer, Project, Slides, Board/Paper and markers

	<p>1) Has anyone seen an ant before? 2) Where can you usually find ants?</p>	
	<p>Slide 5: Teacher goes on to explain that there are ants that are found outside of their natural home such as the fire ants in the slide.</p> <p><i>Note: Teacher may make use of the Board or paper and markers to record the responses of the students.</i></p>	
10 mins	<p><u>Development 1</u></p> <p>Slide 6: Teacher to ask the question(s):</p> <p>1) Do you think that all ants are invasive? 2) Why do you say so?</p>	Computer, Project, Slides, Board/Paper and markers
	<p>Slide 7: Teacher shares that:</p> <ul style="list-style-type: none"> • Only some introduced ants cause problems. • Some ants are only bad in great numbers. • Most ants do good things for the environment. They cycle nutrients in soil and eat the larvae of household pests like flies and cockroaches. • Ants perform a number of tasks that are good for the environment. Perhaps most importantly they assist in the breakdown of organic materials and nutrient cycling. (Animals that assist in decomposition) • Even ants that are introduced outside of their natural range can benefit the environment. <p>Teacher gives an example of an invasive ant species:</p> <ul style="list-style-type: none"> • The ant in the picture is <i>Odontomachus similimus</i>. It is one of the biggest introduced ants in the Pacific and while it can give a nasty bite and has a painful sting, • It is not aggressive. It is a slow moving solitary hunter that rarely causes people ant bother. • Some ants only become a problem when they reach high numbers. • Others cause problems because they sting or spray acid. 	
20 mins	<p><u>Development 2</u></p> <p>Slide 8: Teacher to ask the question(s):</p>	Computer, Project, Slides, Annex 1,

	<p>1) Do you think that all ants are bad? 2) What are some of the good things ants do? 3) What are some of the bad things? 4) Why do you say so?</p> <p><i>Note: Teacher may make use of Annex 1 - Graphic organiser to get the students to work in groups to discuss their answers.</i></p> <hr/> <p>Slide 9: Teacher shares that when invasive ants reach high abundance, they can be a major nuisance in three ways:</p> <ol style="list-style-type: none"> 1. They farm scale insects, aphids and other honeydew producing bugs, which damage crop plants, reduce yields and spread crop diseases. 2. They can kill or injure local wildlife including birds, crabs, lizards, and insects and can make it difficult for stock animals like pigs and chickens to feed. 3. Many invasive ants sting or bite when disturbed. Stings can form blisters and become infected. Sometimes the ants can grow to such high numbers that people cannot eat, work or sleep because there are always ants crawling all over them. <p><i>Note: Teacher may make use of the Board or paper and markers to record the responses of the students.</i></p>	Board/Paper and markers
5 min	<p><u>Conclusion</u></p> <p>Slide 10: Teacher to recap the lesson key points:</p> <ul style="list-style-type: none"> • Ants are insects. They have 3 body parts and 6 legs. • They are in the same family as wasps and bees and the queen can lay thousands of eggs everyday. • An ant is invasive when it has left its home range and damages the natural environment of its new home. • Not all ants are invasive. Most do good things for the environment like helping decomposition. • Some ants are bad because they can cause harm to our farms, human and our environment. <p><u>Extension:</u></p> <p>Slide11: Teacher to ask the students to think about any stories they may have about ants in their homes, on their family’s crops or that they might have seen in the bush and to share them at the next lesson.</p>	Computer, Project, Slides

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Adapted from:

http://piat.org.nz/uploads/PIAT_content/pdfs/learning_teaching/Invasive%20Ants%20Lesson%20plan%20new%202.pdf