

Approach: Team

Focus: Conserving resources and problem solving

Resources: Video recording on laptop computer, photo [substitute image shown], team answer sheet

Questions / instructions:

This activity uses the computer.

This activity is about a serious problem for New Zealand. We'll start by watching a video.

Click the *Spud Grub* button. [Still shot only of spud grub.]

Imagine that the spud grub is in the area where you live. Your team has been asked to think through the problem. To help, you will have a worksheet for writing down your ideas. Before you write them down, you will need to talk about things together, then write down what you all agree with.

VOICE-OVER:

A new grub has arrived in New Zealand. It has been called the "Spud Grub" because it kills potato and kumara plants.



This grub breeds very, very quickly. In a short time there could be thousands and thousands of them. Just now, the grub is only in one part of New Zealand, but it could soon spread over the whole country.

The government wants to spray the part of New Zealand where the grub has been found. The spray kills the grub. The trouble is, it also causes cats and dogs to get very sick for about a month, but it doesn't kill them.

The spray costs a lot of money, so the government says the people in the area with the spud grub should pay for it. The people are NOT happy about that.

The people in the area are really upset about the idea of spraying. People in other parts of New Zealand are telling the government to get on with it – and the sooner the better.

Here is the team answer sheet and these are the things you need to decide. [Answer sheet shows questions 1 and 2, as below, with spaces for three problems.]

Give students the photo [same as video above], team answer sheet, and read through each of the headings:

1. What are the problems?
2. What could be done about each problem?

When you have finished, I'll ask you to tell me about what you have decided.

Allow time.

Now it is time for you to tell me about what you have decided. If you think of any further ideas, I'll write them down on your team answer sheet.

Problem 1:

	% response 2009 ('05)	
	year 4	year 8
grubs breed very quickly/are likely to spread around New Zealand quickly	0 (0)	0 (2)
grubs kill potato and kumara plants	22 (25)	19 (22)
spray that kills grubs costs a lot	1 (2)	7 (5)
government does not want to pay for the spray	2 (8)	7 (10)
spray makes dogs and cats very sick	39 (32)	43 (36)
people worry about effects of spraying	18 (17)	14 (12)

Problem described:	very clearly	39 (45)	43 (49)
	moderately clearly	43 (40)	49 (39)

Likelihood that the suggested solution could be implemented and effective:

	% response 2009 ('05)	
	year 4	year 8
high chance of good result	25 (25)	48 (37)
moderate chance of good result	33 (43)	38 (46)
Suggested solution was creative:	yes	31 (43)
	no	69 (57)

Problem 2:

grubs breed very quickly/are likely to spread around New Zealand quickly	1 (0)	3 (0)
grubs kill potato and kumara plants	32 (23)	35 (51)
spray that kills grubs costs a lot	7 (3)	6 (10)
government does not want to pay for the spray	15 (18)	15 (19)
spray makes dogs and cats very sick	12 (17)	14 (7)
people worry about effects of spraying	13 (17)	13 (5)

Problem described:	very clearly	32 (35)	44 (48)
	moderately clearly	45 (47)	47 (48)

Likelihood that the suggested solution could be implemented and effective:

high chance of good result	23 (17)	30 (20)
moderate chance of good result	40 (40)	49 (56)
Suggested solution was creative:	yes	39 (43)
	no	61 (57)

Problem 3:

grubs breed very quickly/are likely to spread around New Zealand quickly	3 (3)	3 (0)
grubs kill potato and kumara plants	17 (15)	25 (14)
spray that kills grubs costs a lot	6 (7)	14 (12)
government does not want to pay for the spray	18 (18)	14 (20)
spray makes dogs and cats very sick	10 (10)	14 (9)
people worry about effects of spraying	19 (23)	18 (24)

Problem described:	very clearly	29 (28)	46 (44)
	moderately clearly	43 (50)	46 (39)

Likelihood that the suggested solution could be implemented and effective:

high chance of good result	15 (10)	32 (17)
moderate chance of good result	33 (48)	39 (47)
Suggested solution was creative:	yes	27 (33)
	no	73 (67)

Total Score:	11–15	12 (15)	33 (19)
	9–10	24 (15)	23 (22)
	7–8	18 (37)	22 (21)
	5–6	14 (13)	14 (31)
	0–4	32 (20)	9 (7)

Commentary:

Year 4 and year 8 students were similar in their identification of the problems associated with the "spud grub", but year 8 students were better able to clearly describe multiple problems, and come up with solutions that were effective and/or creative. Year 4 students performed similarly in 2005 and 2009, but performance increased over this time period for year 8 students.