

## Growing in the Mighty Forest

**Approach:** One to one

**Level:** Year 4 and year 8

**Focus:** Understanding the life cycle functions and parts of a forest tree (roots, leaves, trunk and bark).

**Resources:** 3 pictures: young tree in the native bush, mature tree, transverse slice of tree trunk.

**Questions/instructions:**

In this activity we will be thinking about the New Zealand bush. Here is a picture showing a young tree growing in the forest.

Show picture 1.



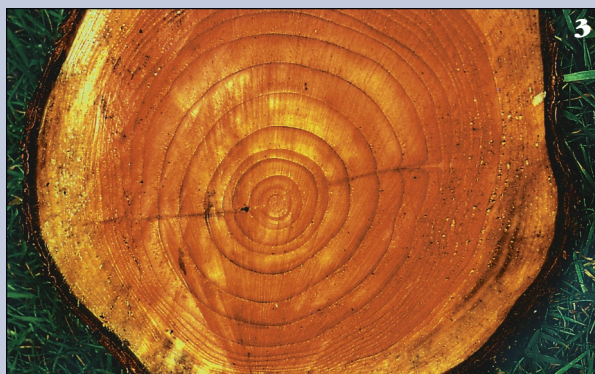
I want you to think about how the forest helps and protects a young tree as it grows.

**Point to the young tree in the picture.**

1. How might this tree have got there?

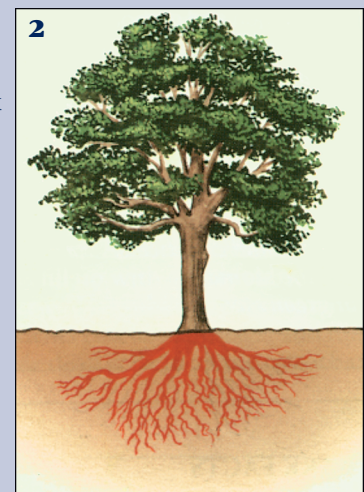
*Prompt: What might have made it grow there?*

		% responses	
		y4	y8
seed dispersal:	2 or more good ideas	5	17
	1 good idea	43	56
	"someone planted it"	38	17
2. How does the forest help the young tree to grow?	appropriate conditions for germination	11	10
	nutrients	9	20
	moisture	41	33
	protection/shelter	43	64
	cyclical nature of growth/decay	7	12



3. Now let's talk about the different parts of trees. Look carefully at this picture of a big tree to help you answer the questions.

Show student picture 2.



**Point to the roots.**

4. Here are the tree roots. How do the tree roots help the tree to live and grow?

		% responses	
		y4	y8
moisture		69	54
nutrients		24	35
stability/anchorage		25	20

**Point to the leaves.**

5. Now look at the leaves of the tree. How do the leaves help the tree live and grow?

moisture		13	19
"breathe" for tree		5	16
convert sunlight into a chemical energy (photosynthesis)		5	9

**Give the student picture 3.**

Look carefully at this picture of the tree trunk.

**Point to the bark layer.**

6. Try to explain to me the main jobs of the bark layer.

protection		62	85
carries moisture and nutrients up/down tree		3	3

**Point to the rings in the trunk of the tree.**

7. Try to explain to me what these rings might mean.

explains one ring per year and why rings occur (seasonal change)		4	2
only mentions one ring per year		74	70

**Commentary:**

There were quite small differences in responses from year 4 and year 8 students.