

Marvellous micro-organisms

Level 3 and 4 investigating outcomes

Student	Stage	Key Learning Area	Date
		Science	

Task	Students investigate the conditions that affect mould growth on food
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	Investigating unit outcomes	Beginning	Developing	Achieving
Level 3	Plan investigations showing an awareness of the need for fair testing.	Students can identify what makes a test unfair.	Students can describe what a fair test is.	Students can describe what a fair test is and explain the importance of a fair test.
	Make and record observations, and identify patterns in results.	Students can make observations.	Students can make and record observations.	Students can make and record observations, identifying patterns in the data.

	Investigating unit outcomes	Beginning	Developing	Achieving
Level 4	Plan investigations involving a control, and repeat trials or replicates.	Students can plan an investigation identifying a controlled variable.	Students can plan repeat or replicate trials identifying a controlled variable.	Students can plan repeat or replicated trials, explaining the purpose and need for each type of investigation.
	Analyse and explain patterns in results recorded from investigations.	Students can identify patterns in investigation results.	Students can identify and analyse patterns in investigation results.	Students can identify, analyse and explain patterns within the findings of their investigation.

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Level 3 and 4 conceptual outcomes

Student	Stage	Key Learning Area	Date
		Science	

Task	Students reflect on their learning and represent what they know about micro-organisms
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	Conceptual unit outcomes	Beginning	Developing	Achieving
Level 3	Explain that yeast obtains energy when it breaks down sugars, a process that releases a gas (carbon dioxide).	Students can describe how yeast makes a gas.	Students can explain that yeast makes a carbon dioxide gas when it breaks down sugars.	Students can explain that yeast needs energy which it obtains from breaking down sugars to release carbon dioxide gas.
	Explain that yeast grows faster at warm temperatures than when it is cold or hot.	Students can explain that for yeast to be active it needs to be warm.	Students can explain that yeast grows faster in warm than cold conditions.	Students can explain that yeast grows faster in warm than cold conditions and uses evidence from their observations to support their statements.
	Explain that the gas produced by yeast forms pockets of gas in the dough and this makes bread rise.	Students can explain that bread has small spaces in it.	Students can explain that the spaces in bread are formed by the activity of yeast.	Students can explain that yeast makes a gas which forms pockets in the dough and this makes the bread rise.
	Describe the conditions that affect the growth of mould on food.	Students can observe the conditions that affect mould growth.	Students can identify and describe the conditions that affect mould growth.	Students can describe and explain how conditions affect mould growth.

	Conceptual unit outcomes	Beginning	Developing	Achieving
Level 4	Explain that the pockets of (carbon dioxide) gas made by yeast in bread dough expand when heating in cooking, making the bread light.	Students can describe some of the steps in making bread.	Student can describe the steps of making bread and summarise the steps in a flow chart.	Students can describe the steps of making bread and gives a summary of bread making steps in a flow chart, including explanations supported with evidence.