

Unit outcomes

Marvellous micro-organisms

Science outcomes

Marvellous micro-organisms is a Stage 3 unit. Unit outcomes have been identified for both Level 3 and Level 4 of the *National Scientific Literacy Progress Map*, allowing teachers to cater for the range of abilities in the sixth and seventh years of schooling. Summative assessment will need to take account of the levels of achievement expected for a cohort of students. Summative assessment of conceptual learning outcomes (**c**) occurs in the *Evaluate* phase and summative assessment of the investigating outcomes (**i**) occurs in the *Elaborate* phase.

Level 3

- c** Explain that yeast obtains energy when it breaks down sugars, a process that releases a gas (carbon dioxide).
- c** Explain that yeast grows faster at warm temperatures than when it is cold or hot.
- c** Explain that the gas produced by yeast forms pockets of gas in the dough and this makes bread rise.
- c** Describe the conditions that affect the growth of mould on food.
- i** Plan investigations showing an awareness of the need for fair testing.
- i** Make and record observations, and identify patterns in results.

Level 4

- c** Explain that the pockets of (carbon dioxide) gas made by yeast in bread dough expand when heated in cooking, making the bread light.
- i** Plan investigations involving a control, and repeat trials or replicates.
- i** Analyse and explain patterns in results recorded from investigations.

Literacy focuses

Marvellous micro-organisms engages students in activities that reflect the mutually supportive relationship between science and literacy. Learning activities have been designed to explicitly introduce the literacy focuses and provide students with the opportunity to use them as they think about and represent their understanding of science.

The interdependence of science and literacy learning is demonstrated throughout the unit when students participate in discussions, and use talk to: inquire, report on observations, clarify understanding and reflect on experience. The use of gestures and oral, written and visual language to relate science to students' personal worlds is another important aspect.

The literacy focuses identified for *Marvellous micro-organisms* are:

- word walls
- TWLH charts
- science journals
- tables
- flow charts
- factual recounts
- procedural texts
- summaries
- labelled diagrams
- information reports
- graphs
- writing questions
- oral presentations.