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NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

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SUPERVISOR'S USE ONLY

Level 1 Biology, 2012

90927 Demonstrate understanding of biological ideas relating to micro-organisms

9.30 am Thursday 15 November 2012

Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of biological ideas relating to micro-organisms.	Demonstrate in-depth understanding of biological ideas relating to micro-organisms.	Demonstrate comprehensive understanding of biological ideas relating to micro-organisms.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt ALL the questions in this booklet.

If you need more space for any answer, use the page(s) provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–8 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

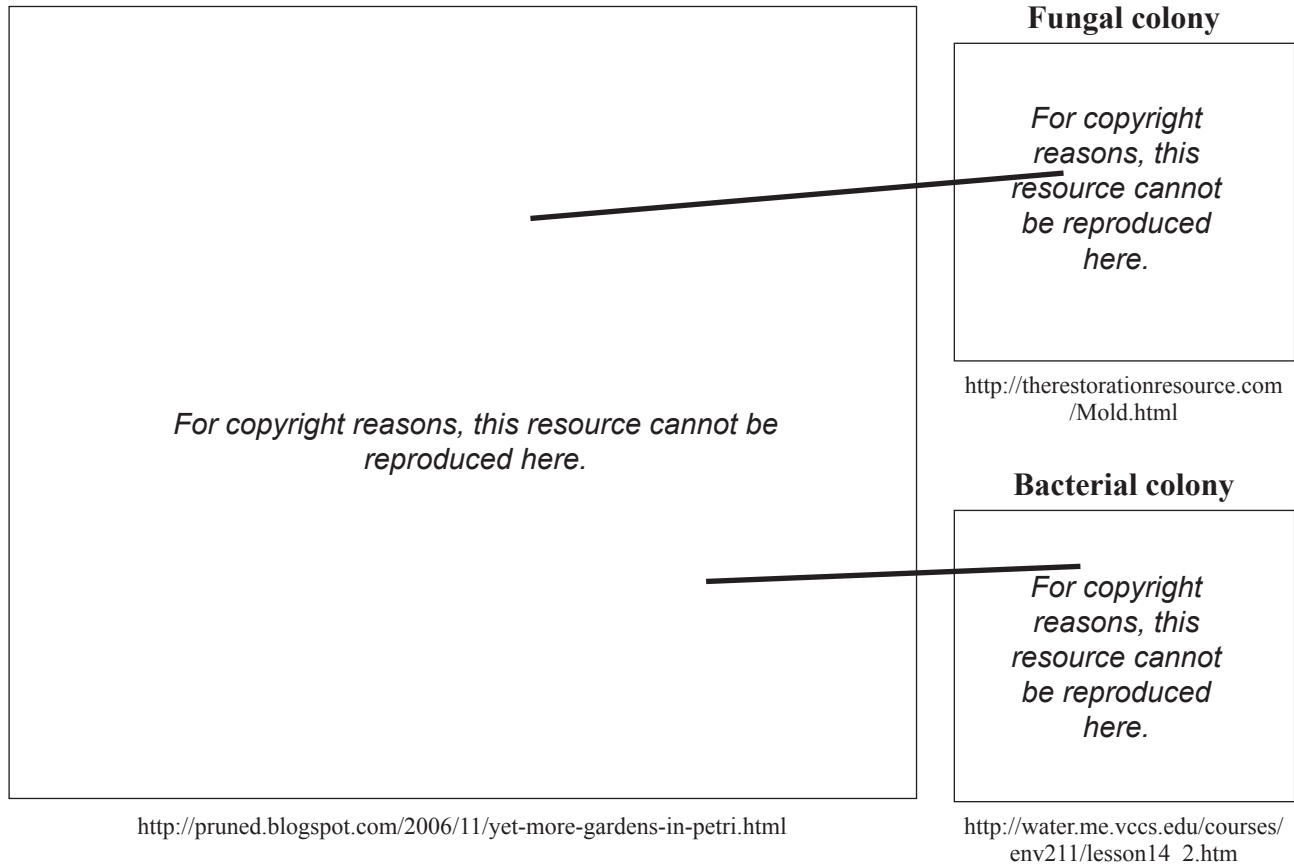
TOTAL

ASSESSOR'S USE ONLY

You are advised to spend 60 minutes answering the questions in this booklet.

QUESTION ONE: CULTURING MICROBES

A nutrient agar plate was left open on the bench in a laboratory. It was then sealed up and incubated at 25°C. The photo below shows the plate after a few days, with smaller images of similar colonies shown magnified under a microscope.



The plate shown has colonies of both bacteria and fungi.

Discuss the growth of colonies shown on the plate.

In your answer you should:

- describe the conditions needed for micro-organisms to reproduce
- describe how the micro-organisms arrived on the plate
- explain the relationship between the structures and functions of the micro-organisms, and how they look on the plate
- explain why bacteria and fungi have survived and reproduced on the agar plate, but viruses have not.
