**ACTIVITY: Biotechnology basics quiz**

**Activity idea**

In this activity, students test their knowledge of biotechnology basics with an online or paper-based quiz. The quiz covers three general areas: food (yoghurt and cheese making), composting and biocontrol. It can be used as an introductory tool to gauge prior student knowledge, for summative assessment or as an engaging treasure hunt to introduce students to some of the components of biotechnology in action.

By the end of this activity, students should be able to:

* answer broad questions about biotechnology products and techniques
* check or revise their answers using related web articles.

[Background information for teachers](#Introduction)

[Student instructions](#student)

**Background information for teachers**

Biotechnology has been a fundamental part of human lives for more than 10,000 years – as explained in the article [What is biotechnology?](https://www.sciencelearn.org.nz/resources/1201-what-is-biotechnology) This activity can serve as an introduction to biotechnology to gauge prior student knowledge or as a treasure hunt-type activity to learn about different aspects of biotechnology. Alternatively, use the quiz for summative assessment.

Students can complete the [online quiz](https://www.sciencelearn.org.nz/embeds/77-biotechnology-quiz) or the [paper-based quiz](#student).

The quiz covers three general areas: food (yoghurt and cheese making), composting and biocontrol. The following resources provide background information about the products and techniques mentioned in the quiz. Students can use the resources to check their answers, revise incorrect answers or extend their knowledge about these aspects of biotechnology.

***Food***

[Ancient biotechnology](https://www.sciencelearn.org.nz/resources/1204-ancient-biotechnology)

[The science of cheese](https://www.sciencelearn.org.nz/resources/827-the-science-of-cheese)

[Creating different cheese characteristics](https://www.sciencelearn.org.nz/resources/829-creating-different-cheese-characteristics)

***Compost***

[Biodegradability, compostability and bioplastics](https://www.sciencelearn.org.nz/resources/1473-biodegradability-compostability-and-bioplastics)

[Participatory science and composting – CAPOW](https://www.sciencelearn.org.nz/resources/2384-participatory-science-and-composting-capow)

[Earthworms’ role in the ecosystem](https://www.sciencelearn.org.nz/resources/9-earthworms-role-in-the-ecosystem)

***Biocontrol***

[Biocontrol](https://www.sciencelearn.org.nz/resources/1743-biocontrol)

[Biological control of possums](https://www.sciencelearn.org.nz/resources/1082-biological-control-of-possums)

[Where is the biotechnology in the possum biocontrol story?](https://www.sciencelearn.org.nz/resources/1083-where-is-the-biotechnology-in-the-possum-biocontrol-story)

[Irish wasp to the rescue](https://www.sciencelearn.org.nz/resources/1739-irish-wasp-to-the-rescue)

[Irish wasp gets permit to tackle weevil](https://www.sciencelearn.org.nz/resources/1740-irish-wasp-gets-permit-to-tackle-weevil)

[Weevils eat pesky buddleia weeds](https://www.sciencelearn.org.nz/resources/1578-weevils-eat-pesky-buddleia-weeds)

[Biocontrol of the New Zealand pea crab](https://www.sciencelearn.org.nz/resources/758-biocontrol-of-the-new-zealand-pea-crab)

***Quiz answers***

* + - 1. A
      2. B
      3. C
      4. A
      5. B
      6. B
      7. D
      8. B
      9. A
      10. C
      11. A
      12. B
      13. C

**Student instructions**

Answer the questions in this quiz to find out how much you know about biotechnology.

**1. Biotechnology is?**

1. Using living organisms to make things for people
2. About making things
3. A new science

**2. What is the living organism used to make cheese?**

1. Rennet
2. Bacteria and sometimes fungi
3. Milk

**3. What is the ‘blue’ in blue cheese?**

1. Milk
2. Bacteria
3. Fungi

**4. What is the living organism used to make yoghurt?**

1. Bacteria
2. Milk
3. Fungi

**5. In biotechnology, people make worm farms because they**

1. Want to have pet worms
2. Want to both produce a fertilser for plants and also want somewhere to put food scraps
3. Want to produce a fertiliser
4. Want somewhere to put their food scraps

**6. The fastest way to make a compost is to**

1. Add lots of shredded newspaper
2. Mix it every day
3. Add lots of worms

**7. Compost is a good way to**

1. Reduce rubbish
2. Recycle rubbish
3. Reuse rubbish
4. Both reduce and recycle rubbish

**8. Biological control or biocontrol is**

1. Using chemicals to control pests
2. Using living organisms to control the population size of another living organism, usually a pest
3. Biological warfare

**9. A pest is**

1. A living thing that is unwanted because it is damaging or harmful
2. A substance for destroying insects
3. A disease

**10. A possum is a pest because it**

1. Is cute and furry
2. Destroys insects
3. Destroys forests, affecting wildlife, and spreads diseases

**11. The Irish wasp was released in New Zealand to kill the clover root weevil. This is an example of**

1. Biocontrol
2. Biosecurity
3. Cultural control

**12. A biocontrol agent must**

1. Be new to the area
2. Only affect the pest it is supposed to target
3. Affect the pest it is supposed to target but may also harm other organisms

**13. To be a biotechnologist you must**

1. Know how to make money
2. Like wearing a white lab coat
3. Want to understand how living organisms work