



Certificate of Achievement

Sreenidhi K

has completed the following course:

SMALL AND MIGHTY: INTRODUCTION TO MICROBIOLOGY
UNIVERSITY OF READING

This online course included a general introduction to the field of microbiology and the significant roles microbes play in health, food, and the environment through a wide range of activities including lab demonstrations, home-based practicals and interviews with university experts.

3 weeks, 3 hours per week



Dr Glyn Barrett
Postdoctoral Research Associate
University of Reading



The person named on this certificate has completed the activities in the attached transcript. For more information about Certificates of Achievement and the effort required to become eligible, visit futurelearn.com/proof-of-learning/certificate-of-achievement.

This certificate represents proof of learning. It is not a formal qualification, degree, or part of a degree.



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STUDY REQUIREMENT

3 weeks, 3 hours per week

LEARNING OUTCOMES

- Describe the key differences between the five groups of microbe.
- Explain how microbes replicate and why environmental conditions affect where they live.
- Differentiate between beneficial and harmful effects of microbes.
- Discuss ways that microbiology research has, and will continue to, benefit human health, food production and the environment.
- Explain how microbes evolve and discuss the potential implications of this on the future health of the population and our planet.
- Conduct simple microbiology experiments and analyse the results in order to draw conclusions.

SYLLABUS

- What microbes are: recognise the differences between the 5 major groups (Viruses, Bacteria, Archaea, Fungi and Protists) and where they appear in the tree of life.
- How microbes function: understand how microbes replicate, grow and exchange genes with each other.
- Where microbes live: learn how microbes survive and thrive throughout the world, from extreme environments to the surface of our skin.

- How to study microbes: watch practical demonstrations of common microbiology techniques and learn how microbiologists can identify the culprit of an infection.
- How to test a hypothesis: carry out your own microbiology experiments and find out how to analyse your results.
- Why studying microbes is so important: explore how microbiology research benefits society in three key areas - Medical, Food and Environment.
- How studying microbes can answer questions about evolution: discover how a microbe can rapidly rewire its genes following a life-threatening mutation.