

Magnificent Microbes Follow-up Activities & Teacher Notes



If you'd like to explore the world of microbes further with your class we encourage you to try one of the following activities. Many of these activities use basic supplies found in the kitchen or classroom and can be done as a class demonstration or in groups or pairs.

Even though these activities are quite basic you can use them to illustrate scientific inquiry skills, including:

- **Recording information** - you can use paper or computers to note your results, and video, photographs or drawings to illustrate them
- **Variables** - if an experiment asks you to add sugar, why not try honey instead? Why not salt? Changing these ingredients allows students to explore what it is that contributes to the results they are seeing. Just don't forget to keep your control the same!
- **Hypothesis** - what do you think your results will be? Ask students to make predictions before they start based on what they already know. Afterwards, if they were wrong, see if you can work out why



Cross-curricular collaboration

There are plenty of ways to incorporate other areas of the curriculum in your science experimentation. Why not try:

- Plotting your measured results on a bar chart or graph for numeracy
- Looking up current affairs and news items relating to the subject matter
- Interviewing a scientist who works on your topic and learning about their life and their day-to-day work
- Creating presentations to communicate your learning with others
- You could make a poster, video, or even a song!



Remember that we would love to see your projects so please share them with the College of Life Sciences Schools Outreach team when you've finished!



Magnificent Microbes – Introduction

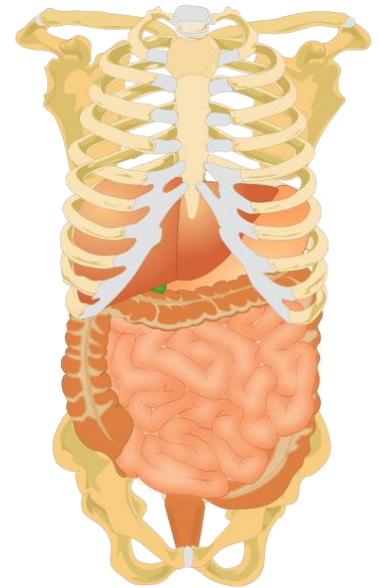
'Microbe' is a term that refers to a group of microscopic organisms that includes bacteria, fungi, protozoa and algae. For this project we will mainly be referring to bacteria, but the microbe world is wide and varied.



Bacteria are found everywhere - from the human body to the surfaces around us, and even floating in the air!

We all have bacteria called 'commensals' that live with us and help us in our everyday lives

There are approximately 2kg of microbes in the average adult's gut. The *E.coli* in your gut helps you generate vitamin K and keeps you healthy!



Having bacteria growing on you does not make you 'dirty'!

This is also the case on our skin. 'Friendly' commensal bacteria can help protect us from harmful bacteria.

Magnificent Microbes



GLOSSARY:

Agar – type of jelly used to grow microbes

Bacteria – type of microbe (note: bacteria is the name of a group of microbes, the name for one individual is a bacterium)

Commensals – bacteria that live with us and help us in our everyday lives

Microbe – small single-celled organisms that include bacteria and fungi

Microbiologist – person who investigates things in the field of microbes and viruses

Microbiology – the study of microbes and viruses

Pathogenic – harmful/potential to cause disease

Virus – small infectious agent that only grows inside another cell e.g. a human, plant or bacterial cell



Wellcome Images