NORWICH SCIENCE FESTIVAL At home

University of East Anglia

PLANT PRINTING

Microbes on leaves:

Many different **microbes** live on the surfaces of leaves. While some of these are harmless to the plant, others can cause disease. In the lab, scientists grow these microbes on agar plates in order to study them and better understand how they infect plants. You can try a version of this at home!

You will need:

- homemade agar plates (see 'Homemade Agar Plates' activity sheet)
- a selection of plant leaves from your garden or local park
- clingfilm
- selotape

Activity:

Remove the clingfilm from your homemade agar plate. Do not touch the set agar, or you will contaminate it with the microbes on your fingers.

Gently but firmly press a leaf onto the surface of the agar. You want to make sure that the whole leaf touches the agar, but do not want to break the surface of the agar plate.

Remove the leaf and cover the plate in a single layer of clingfilm, so you can see the agar underneath.
Use selotape to seal the plate.

Leave the plate at room temperature for 3-5 days and see what microbes are living on the surface of your leaves! Wash your hands carefully after handling the plants.

Although any microbes you grow on your plate are likely to be harmless, as a precaution, do not open your sealed plates and dispose of the entire plate in your household waste.

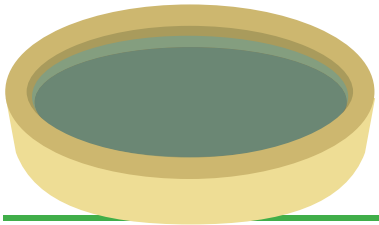
Want to do more?

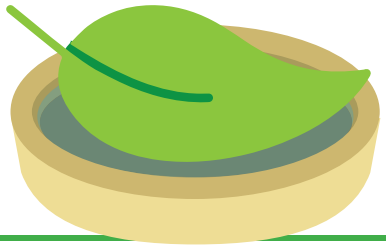
Scientists keep a **lab notebook** where they record all their methods and observations. Why not make your own lab notebook and write down exactly what you did when you made your agar plates, and what you see on your plates every day. You can even take photographs of your agar plates and stick them into your lab notebook!

Can you design an experiment to test whether temperature affects what microbes grow on your agar plate? Or what about an experiment to test whether different leaves have different microbes living on them?

DID YOU KNOW?

Bacteria are too tiny for us to see. In fact, many thousands of bacteria can fit into a space the size of the full stop at the end of this sentence. When we grow bacteria on an agar plate, the bacteria grow and multiply until there are many thousands of bacteria clustered together in a **colony**, which we can see on our **plates.**





This activity sheet was written by Helen Brabham and Josephine Maidment, researchers at The Sainsbury Laboratory.

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