

# Mould Growth Experiment

You might have spotted mould around your house before, perhaps on food or around tiles in your bathroom, and normally it's something we want to get rid of! In this experiment however, we want to try and grow some mould, figure out which conditions are best for it to thrive in and what might stop it growing at all. Mould is a fungus that sends out spores which can grow in damp and dark conditions. We are going to use some pieces of bread to test whether anything can preserve the bread and stop mould from growing.

## You will need:

- Slices of bread
- Sealable food bags
- Different preservatives to add to your bread: water, sugar, salt, vinegar, oil
- A warm place in your house

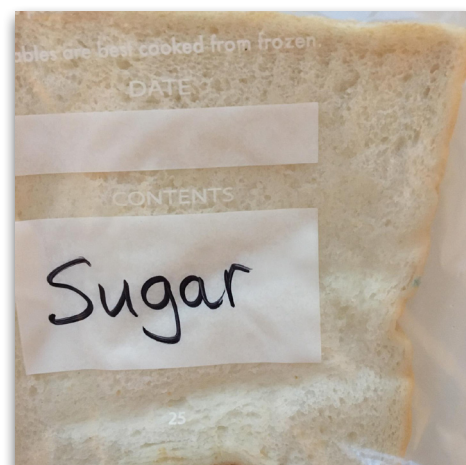
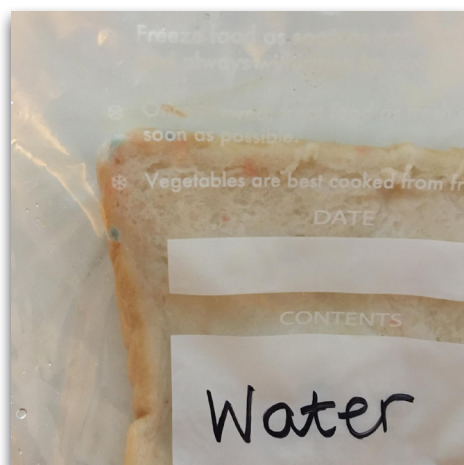
## What to do:

1. Decide which preservatives you will add to your slices of bread.
2. Taking one slice of bread at a time, add one of your chosen preservatives to the bread. We soaked one slice of bread in vinegar, one in water, and then made a sugar and water mix to add to the third slice. Remember to leave one slice of bread plain with nothing added to it!
3. After soaking each piece of bread, place it inside a food bag, seal it up and write clearly on the outside which preservative you used.
4. Find a warm location in your house! Maybe you have a warm boiler cupboard or a sunny windowsill. Place your bags of bread there, but make sure that no people or pets will try to eat them over the course of the experiment!
5. Can you make a prediction about which slices of bread will start to grow mould first? Are there any slices that you think won't grow any mould at all? Why do you think this?
6. You will need to leave your bags of bread for at least a week before you can expect to see any mould developing. Make sure to have a peek every day to see if you can spot anything starting to grow!
7. Record any changes that you see happening.
8. Share your mouldy results photos with us using the hashtag #DynamicEarthOnline
9. REMEMBER! When you have finished your experiment, DO NOT open the bags! Mould spores can be dangerous, so please put the sealed bags straight into the bin.



### Our results:

It took about 6 days before we spotted any mould on our bread, the slices with water and sugar added had both started to grow some tiny spots. We expected this, as we know that mould grows well in damp environments, so the slice soaked in water provided perfect conditions. Sugar in a warm environment provides lots of food for mould so it helps it to grow very quickly.



After another 4 days, the slices covered in water and sugar had grown a LOT of mould!

However the plain slice of bread had only one small spot of mould, as it was very dry and this inhibited mould growth. Similarly, the slice of bread soaked in vinegar was preserved perfectly and there was no mould in sight! Eventually mould would have appeared on all the pieces of bread, but we eventually reached our limit of having mouldy bags of bread around the house! See how long you can run your experiment for! Good luck!

### Did you know?

Slime mould is a very fast growing type of mould that grows towards food sources along the easiest and most efficient routes. It is sometimes used by designers to figure out the best places to build motorways and transportation links on scale models, such as the Japanese rail system. Little pieces of food were placed on a map corresponding with Japanese cities and the slime mould grew and connected the food sources together, showing the most efficient routes for the railway to take!

