



INTRODUCTION TO FUNGI: Let's pretend to be fungi



BRITISH MYCOLOGICAL SOCIETY FUNGAL EDUCATION & OUTREACH

PRIMARY RESOURCE

INTRODUCTION

NATIONAL CURRICULUM AREAS COVERED:

Year 1: Seasonal Changes; **Year 2:** Living things and their habitats.

This activity takes children through the life cycle of a filamentous fungus, one that produces a mushroom shaped fruit body; and explains how from a single spore (like the seed of a flowering plant), a fungus grows and feeds and when conditions are just right, makes a fruit body or mushroom (like the fruit of a flowering plant) containing millions of microscopic spores which are dispersed, allowing the fungus to spread its offspring to new environments.

What are fungi and what do they do for us?

Fungi are not Plants and they are not Animals, in fact they have their very own Kingdom. They range in size from microscopic yeasts to the largest living organism on our planet! They have been on our planet for a very long time even before the dinosaurs! Today you will find fungi everywhere – in the Arctic, in the Tropics, the Dessert, in Oceans and Rivers – even in Space!

Fungi do great things for us. They are one of the only groups of organisms that can digest wood and are therefore called 'Primary Decomposers'. Without them we would have lots of waste in our environment and poor recycling of nutrients to make healthy soil. Some fungi help trees and other plants to grow by capturing water and nutrients for them, in return the trees and other plants give the fungi sugars that they made during photosynthesis. Some fungi make medicines such as the antibiotic penicillin and the statins which reduce cholesterol; whilst others make foods such as marmite, cheese, bread and beer. Some fungi can cause diseases of plants and animals yet some provide food for animals in the ecosystem. But some may say that the most important thing that fungi do is to help to make chocolate!



LET'S PRETEND TO BE FUNGI

1. The spore germinates and the fine filaments spread to form mycelium.

Depending on how many children there are in the group, choose 1 or more children to be the spore(s). The child with the ball of string holds the end (**the spore**) and passes the ball to another child. This child in turn unravels the string (**representing growth of the fungus filaments**) then passes the ball on to the next person. This continues until all the balls of string have been unraveled across the room or playground and the children are holding the string at intervals throughout.

The string represents the mycelium growing out in search of food.

2. The fungus mycelium finds food along the way.

The sorts of food that a fungus eats are dead trees and leaves (as well as dead animals).

All the children holding the string (**fungus mycelium**) take out their breadstick (**which represents a dead branch from a tree**). Ask the children to eat the breadstick and describe what they taste.

The breadstick is broken down into simple sugars by special substances in your mouth called enzymes (you can taste the sweetness as the bread dissolves in your mouth). Fungi use enzymes to break down wood. The difference is that we 'take in food' (like bread) and digest it using enzymes in our mouths and stomachs. But fungi send enzymes out of their growing mycelium to break down dead plants, animals and wood - and then 'take in' the nutrients through their mycelium.





LET'S PRETEND TO BE FUNGI

3. The mushroom shaped fruit body appears

When the mycelium has grown and if conditions are just right - fungi produce their fruit bodies. Most are produced in the Autumn when it is cool and damp.

Spray the children with water (all living things need water to grow – even fungi!)

Let's see the fruit bodies! (Everyone opens the cocktail umbrellas).

The fruit bodies of fungi come in all sorts of shapes and sizes. Some are mushroom shaped and others look like cups, flasks, shelves, clubs, trumpets, ears and even brains!

4. The mushroom releases its spores

Fungi produce their fruit bodies when the conditions are just right for them to release their spores and reproduce – remember that spores are the offspring of the fungus and are like the seeds of flowering plants. There are millions of spores produced and released from each fruit body – they are so small that they cannot be seen by the naked eye!

Open the small tubes and sprinkle the glitter around the cocktail umbrella. The glitter represents the spores of the fungus and the cocktail umbrella is the fruit body.

Once the spores are released and find a suitable environment to grow then the life cycle can begin once more.

