



# Wild Ways Well and Funky Fungi

Today's Wild Ways Well task is to go for a walk in your local greenspace and look out for fungi... Remember to follow the guidelines on Social Distancing, stay 2m apart from other people and only walk in your local area – and remember to wash your hands!

You'll **Be Active** by carefully walking outdoors (observing social distancing) keeping your mind busy and occupying your time looking for the tiny signs of fungi that are all around you. Fungi live in all sorts of different habitats and just a short walk can lead you to types that you would never see in your back garden.

We can **Connect** with fungi simply by looking for them and observing how they live their lives. We can also think about some of the folklore they are featured in and how they have affected humans over the years.

We can **Keep Learning**, Fungi are a really understudied subject and there is lots to learn about them, even scientists, researches and experts don't know everything there is to know – by studying them you might learn something that no one else has!

Fung play a vital role in the ecosystem and we really couldn't live our lives without them but we rarely **Take Notice** and look very closely at them. It's amazing how much we miss out in nature when we just walk through without paying attention to what is around us.

We can **Give** by giving ourselves a break from the drama of the current events and focusing on the little things around us that give us pleasure and by sharing these with others, in person or online.





# Wild Ways Well



**BE ACTIVE** – Take part in health walks and practical outdoor activities. Explore your local paths, woods and greenspaces.

Spending time outdoors, amongst nature, makes people feel better about their lives.

The Wild Ways Well project encourages people suffering from, or at risk of, poor mental health to get outside for some daily exercise and experience nature.

**CONNECT** – Meet new people. Connect with the people, the wildlife and the nature that's all around us.



Remember to observe Social Distancing, stay 2m apart and only walk in your local area.

Whilst out amongst the trees, parks and reserves you have a chance to slow down, relax and take your attention away from current events.

**TAKE NOTICE** – Note the changing cycles of life. Use your senses. Listen to birds, smell the flowers, live in the moment.



This guide will help you to try out some environmental and conservation related activities designed to fit in with the internationally recognised Five Ways to Wellbeing mental health framework.



**LEARN** – Identify plants and wildlife, try new crafts, learn new skills. Discover things about nature and about yourself.







## What's in a name?

What's in a name? Most of us will have heard the terms Mushroom and Toadstool, but what do they mean? And what's the difference?

The truth is there isn't one! You'll hear many theories about the difference between a mushroom and a toadstool—you might even know a few yourself—but there really is no agreed definition or distinction between the two. Whichever you call them they amount to the same thing, both are names for fungi.

Fungi are not plants. They belong to a separate and unique Kingdom of Life of their very own.

Unlike plants Fungi cannot make their own food directly from sunlight, they must obtain their nutrients from the environment around them.

Fungi are the only organism able to break down the structure of wood. Without fungi no wood would rot—we'd be up to our necks in fallen trees!

The mushrooms we see are just fruiting bodies, designed to spread spores. The majority of the fungi exists below ground or inside other organisms in the form of tiny rootlike strands called 'mycelium'.

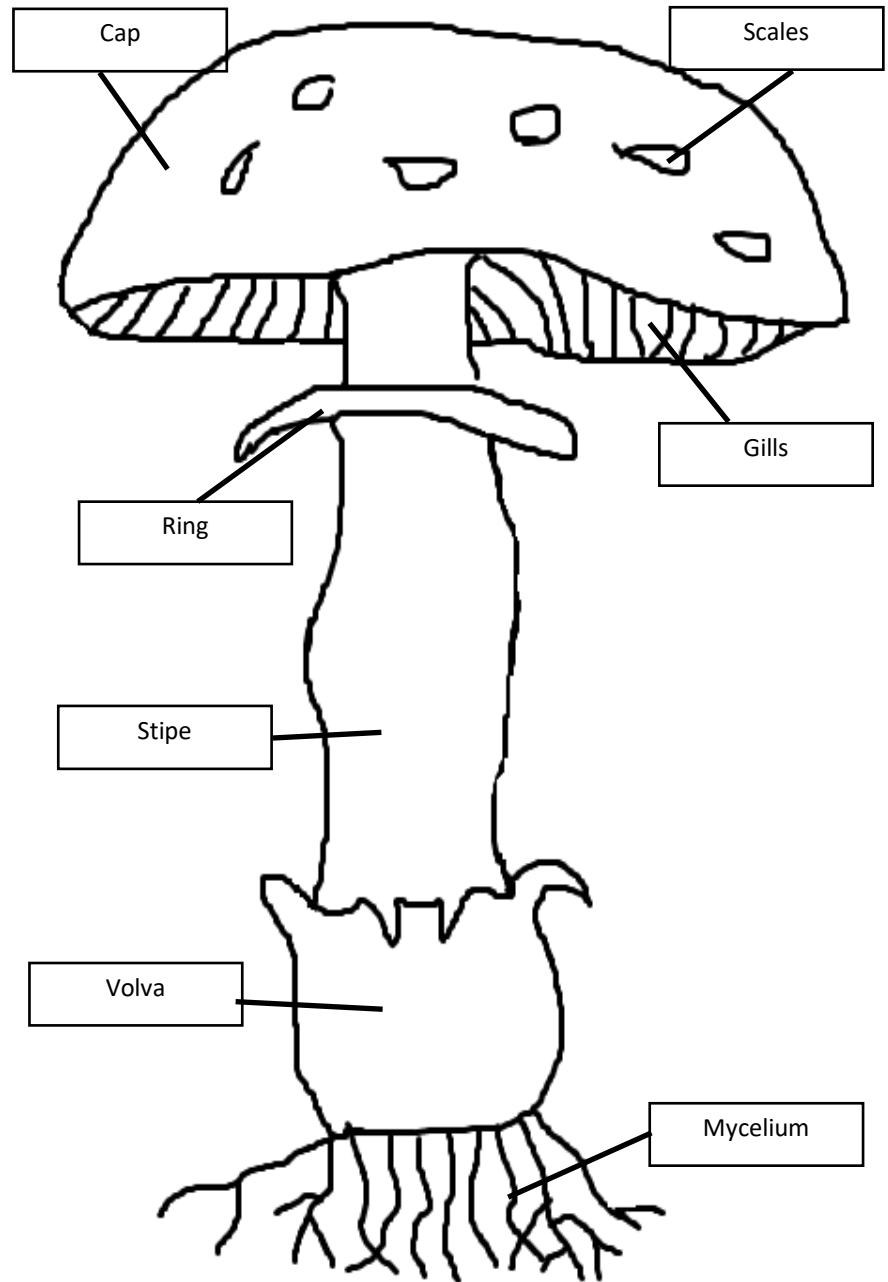
### Fungi Factoids

- The largest organism on Earth is believed to be a Honey Fungus in Oregon USA which is 3.8 miles in diameter.
- Many species of tree and plant—such as orchids—live in symbiosis with fungi—they literally couldn't live without them.
- Fungi are vital for humans—Bread, wine, beer and even pizza bases depend on yeast, a type of fungus.
- There are believed to be at least 15,000 species of fungi in the UK alone, it is doubtful if anyone knows them all.





## Parts of a mushroom





Fungi can be divided into three main groups depending on how they get their nutrients. **Symbiotic**, **Saprophytic** or **Parasitic**.

**Symbiotic** mushrooms are those who live in beneficial association with a plant species, often a tree root system. The two species will grow together exchanging water and nutrients between them, each able to access a source that the other cannot. One famous symbiosis is between Fly Agaric mushrooms and Silver Birch trees.

**Parasitic** fungi are also able to tap into another species nutrient supply but they do so in a parasitic way, at the expense of the host plant. They leach off nutrients and destroy the living tissue eventually leading to the death of the plant. This is a natural process and can be very beneficial to a woodland, killing off damaged or stressed trees and creating space for other, younger trees to grow. It can be damaging however when it affects a specimen tree or is able to infest large numbers unchecked. One example would be Honey fungus or the *Ophiostoma novo-ulmi* fungus—better known as Dutch Elm Disease.

**Saprophytic** fungi eat dead organic matter, often dead wood. They are the only organism able to break down lignin, the tough material which gives wood its strength. Without saprophytic fungi no wood would ever rot or disappear.

The part of the fungi which people usually see is actually just the fruiting body. This fruiting body is the mechanism by which the fungi spreads itself via spores. The main bulk of the mushroom is made of tiny threadlike mycelium which spread like roots through the earth or host plant.

Fungi can be further divided by their spore dispersal method into either '**droppers**' or '**shooters**'.

**Droppers** are generally the classical umbrella shaped mushrooms which '**drop**' their spores through slats and pores (gills) on the underside.

**Shooters** carry their spores under pressure and when conditions are right, or they are disturbed they '**shoot**' their spores into the air to be dispersed by the wind. One famous example is the puffball mushroom whose scientific name, *lycoperdon*, means the farting wolf...







## Take a Closer Look

Go for a walk in some greenspace and find some fungi (a great place to look is on some dead wood). What can you tell about it? Is it a dropper or a shooter? How does it get its nutrients? Make some notes here – you could sketch it if you like. Some fungi can be dangerous, remember to wash your hands afterwards and before eating or drinking





*The Mushroom is the  
Elf of Plants -  
At Evening, it is not  
At Morning, in a  
Truffled Hut  
It stop upon a Spot*  
Emily Dickinson



Scarlet Elf Cup fungus





## Folklore

The ability for fungi to appear out of nowhere overnight—and also the tendency of some varieties make circular patterns in the ground lends itself to people's desire to tell stories.

In the UK circles of mushrooms were often called 'fairy rings' and they were believed to be where fairies came to dance. People claimed to have seen fairies dancing in these rings right up until the 20th century .

It was generally believed that people who entered a fairy ring were putting themselves in great danger. A trespasser might be stolen away by the fairies, sent flying backwards or forwards through time or just struck dead on the spot. Another belief was that fairy rings marked the location of fairy gold—but digging down after it was a huge risk.

One intriguing piece of folklore around fungi concerns the Fly Agaric (*Amanita muscaria*) - the traditional red and white 'toadstool' found in woodlands and fairy stories.

Fly Agaric is a very dangerous mushroom to eat, but certain human cultures have learned special ways of preparing it so that those who consume it can have 'visions' as part of religious ceremonies. In parts of Finland tribal shamans would consume the fungi during midwinter festivals, the hallucinogens within the mushroom would cause them to have dreams of the future which they would gift to the people they dreamed about, entering each hut through a special hole in the ceiling to do so.

The discarded mushrooms would be scattered in the fields around the village where they were quickly eaten by reindeer kept by the villagers as livestock. Fly Agaric also has a hallucinogenic effect on reindeer, interfering especially with their sense of depth perception. The reindeer would see small holes in the ground and interpret these as great chasms which they had to leap over. Soon the fields would be full of reindeer leaping into the air.

Lapland. Midwinter. Red and White. An old man delivering gifts to each family through a hole in the roof (chimney). Flying reindeer...

Could some of the traditions that surround the (totally real) story of Santa Claus originate with fungi?







An Autumn Haiku  
Lorraine Margueritte  
Gasrel Black

*Autumn leaves falling  
creating a brown carpet  
mushrooms spring  
upwards*





## Deadly Fungi

Foraging for mushrooms is a traditional pastime and it can be a fun way to spend some time in the countryside. Many people enjoy collecting and eating mushrooms but it should be done with caution.

With names like Destroying Angel, Death Cap, Deadly Webcap, Funeral Bell, Fools Funnel and Angel's Wings, it is no wonder why mushroom experts advise people to be very careful when handling fungi.

All of these aforementioned species can be found in UK woodlands and all can be deadly if not treated with respect. Even a small part of a species like Destroying Angel if ingested can kill via liver and kidney poisoning. Other species cause nausea, diarrhoea, breathing problems, brain injuries, convulsions and loss of vision.

Many of the most deadly species can look very similar to benign or even desirable species. Panther Cap which looks almost identical to Fly Agaric can cause confusion, hallucinations, convulsions and even death.

The Fool's Funnel which causes sickness and diarrhoea is often found in amongst clumps of the edible Scotch Bonnet.

The Death Cap is considered one of the most deadly mushrooms in the world and it is common in the UK. It is often mistaken for the edible Straw mushroom. Death Caps are even more dangerous because the amatoxins contained within them are not destroyed by cooking—they are even reported to taste very pleasant! Half a mushroom contains enough toxin to kill an adult human via kidney and liver failure.

If you do want to forage for mushrooms it is best to go along with an expert and learn the fundamentals of identification first. Until you are very experienced yourself always confirm your identifications using books, photographs, online resources and even by checking smell and using spore prints before you try eating what you've found.

Over the years some of these poisonous mushrooms have found uses by humans. They have been used to control parasites, as antibacterial agents and even as a weapon or assassination tool. In modern times a great deal of scientific and medicinal research is ongoing using the unique compounds contained within some deadly fungi.







## Mushrooms

*by Sylvia Plath*

Overnight, very  
Whitely, discreetly,  
Very quietly

Our toes, our noses  
Take hold on the loam,  
Acquire the air.

Nobody sees us,  
Stops us, betrays us;  
The small grains make room.

Soft fists insist on

Heaving the needles,  
The leafy bedding,

Even the paving.  
Our hammers, our rams,  
Earless and eyeless,

Perfectly voiceless,  
Widen the crannies,  
Shoulder through holes

We diet on water,  
On crumbs of shadow,  
Bland-mannered, asking

Little or nothing.

So many of us!  
So many of us!

We are shelves, we are  
Tables, we are meek,  
We are edible,

Nudgers and shovers

In spite of ourselves.

Our kind multiplies:

We shall by morning  
Inherit the earth.  
Our foot's in the door.





## Make a spore pattern

Fungi can be very difficult to identify. One method to tell particularly tough species apart is to take a spore print. Spore prints can also just be very pretty!

Spores are to mushrooms what seeds are to a plant and all have different shapes, colours, textures and dispersal patterns.

Collect a mature 'dropper' type mushroom (the umbrella shaped ones with gills underneath).

Carefully use a sharp knife to cut off the stalk right below the cap. Place the cap gill side down on the paper and cover it with a glass or bowl.

Leave it for 24 hours in a warm place and the spores will fall down onto the paper.

Very carefully lift the cap off the paper and you should be left with a print of the spores. You can 'fix' this into place with hairspray to preserve it.

These spores will fall in specific patterns depending on the species and can often also be told apart by their colour which can be white, black, pink, brown, orange yellow or even green.

The British Mycological Society have a guide to making spore prints which you can find here.

[www.ukfungusday.co.uk/files/6614/7516/0480/How to make a spore print.FINAL.pdf](http://www.ukfungusday.co.uk/files/6614/7516/0480/How_to_make_a_spore_print.FINAL.pdf)



















# Look Out For Fungi

Spotting fungi is a great activity that anyone can try. See how many of these things you can spot this week.

- |   |  |
|---|--|
| • A Brown Fungus                              |  1pt     |
| • A Yellow Fungus                             |  2pts    |
| • A Green Fungus                              |  5pts    |
| • A Red Fungus                                |  10pts   |
| • A Dropper type fungus                       |  1pt    |
| • A Shooter type fungus                       |  1pt   |
| • A Fungus on some dead wood                  |  1pt   |
| • A fungus growing in the ground              |  2pts  |
| • A fungus on a living tree                   |  5pts  |
| • A Fungus an animal has nibbled on           |  5pts  |
| • A Fungus fruit smaller than your fingernail |  1pt   |
| • A Fungus fruit bigger than your head        |  10pts |

Total \_\_\_\_\_

Award yourself an extra point for each different species you find



## Links

Go further with your Wild Ways Well Activity by trying these links once you come home

**Cumbernauld Living Landscape** [www.cumbernauldlivinglandscape.org.uk](http://www.cumbernauldlivinglandscape.org.uk)

**Wild Ways Well** [www.cumbernauldlivinglandscape.org.uk/project/wild-ways-well](http://www.cumbernauldlivinglandscape.org.uk/project/wild-ways-well)

**Activities** [www.cumbernauldlivinglandscape.org.uk/get-involved/activities/](http://www.cumbernauldlivinglandscape.org.uk/get-involved/activities/)

**Facebook** [www.facebook.com/CumbernauldLivingLandscape](http://www.facebook.com/CumbernauldLivingLandscape)

**Twitter** [www.twitter.com/wildcumbernauld](http://www.twitter.com/wildcumbernauld)

**The Conservation Volunteers** [www.tcv.org.uk/scotland](http://www.tcv.org.uk/scotland)

**The Scottish Wildlife Trust** [www.scottishwildlifetrust.org.uk](http://www.scottishwildlifetrust.org.uk)

**SamH** [www.samh.org.uk](http://www.samh.org.uk)

**NHS Five Ways Well** [www.nhsinform.scot/healthy-living/mental-wellbeing/five-steps-to-mental-wellbeing](http://www.nhsinform.scot/healthy-living/mental-wellbeing/five-steps-to-mental-wellbeing)

**MIND** [www.mind.org.uk/information-support/coronavirus/coronavirus-and-your-wellbeing](http://www.mind.org.uk/information-support/coronavirus/coronavirus-and-your-wellbeing)

**Lanarkshire Green Health Partnership** [www.elament.org.uk/media/2229/19-ways-to-stay-connected-2.pdf](http://www.elament.org.uk/media/2229/19-ways-to-stay-connected-2.pdf)

**British Mycological Society** (charity who promote study of fungi)  
[www.britmycolsoc.org.uk](http://www.britmycolsoc.org.uk)

**Woodland Trust guide to mushrooms**  
[www.woodlandtrust.org.uk/blog/2017/08/types-of-mushroom](http://www.woodlandtrust.org.uk/blog/2017/08/types-of-mushroom)

**UK Fungi Forum**  
[www.fungi.org.uk](http://www.fungi.org.uk)



[cumbernauldlivinglandscape.org.uk](http://cumbernauldlivinglandscape.org.uk)