

ARTIS MICROPIA

Mushrooms

Spore spreaders

Mushrooms come in all different colours and sizes. You mostly see them in the autumn, for instance in the forest or on dead tree trunks. Even though mushrooms are often not so small at all, they are still considered microbes. That is because they are part of a fungus. Most fungi construct entire underground networks made up of fungal threads. The mushrooms can grow out of these.

The spores, the 'seeds' of the fungus, are found inside the mushrooms. In many mushrooms, the spores are hidden under the cap. When the wind blows, the spores are scattered around. Sometimes they are also dispersed by getting stuck in an animal's fur. New fungi can grow wherever the spore lands.

Spores are extremely small. To be able to see them nonetheless, you are going to make a spore print and a spore viewing box.



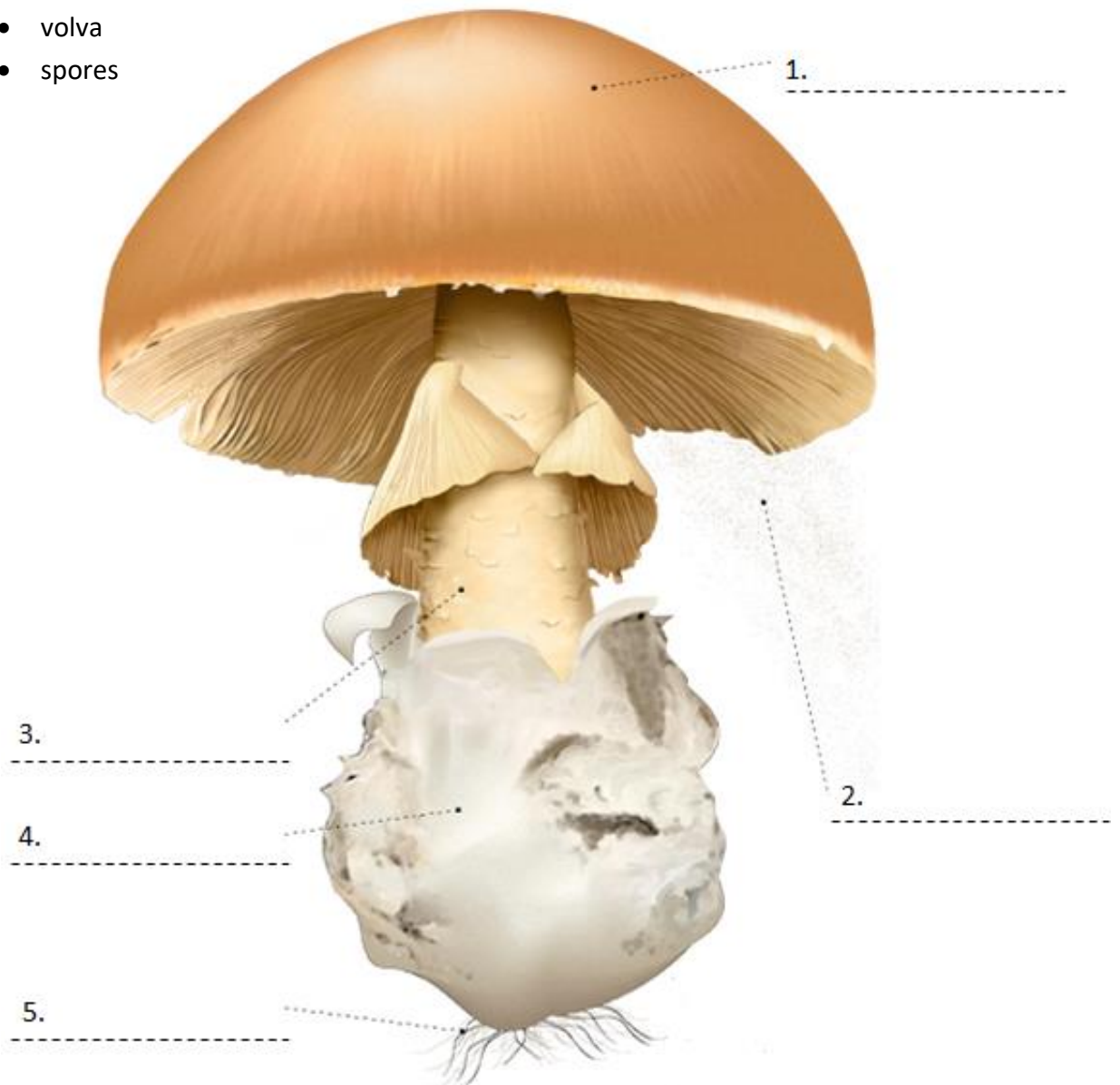
Part 1

Name the parts of the mushroom

Mushrooms come in all different shapes. Some are round, and others are long and thin. The most well-known mushrooms have a large cap and a long stem, such as the mushroom shown below.

Can you enter the correct names on the dotted lines?

- stem
- hypha
- cap
- volva
- spores



Part 2

Make a spore print

Conjure the spores from the cap of a mushroom and make your own spore print!

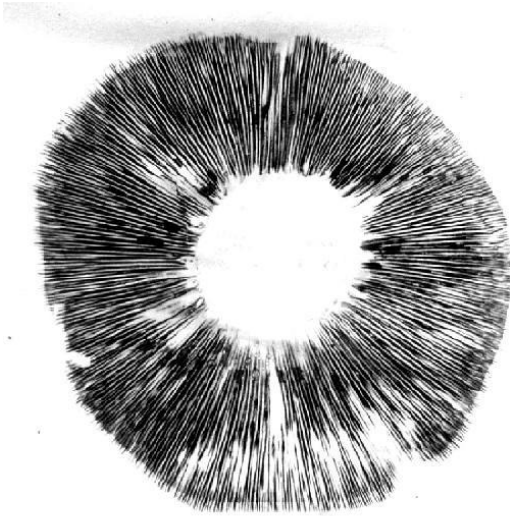
What do you need?

- a large mushroom, such as a portobello
- a sheet of paper
- a glass or bowl
- a knife
- hairspray

Getting started!

1. Carefully cut the cap off of the mushroom.
2. Allow the mushroom to dry for a few hours on the heater or windowsill.
3. Then place the mushroom cap on the paper.
4. Place the bowl (or the glass) upside down over the mushroom.
5. Leave the mushroom cap under the bowl for two days. Do not touch it – as your print can then easily be ruined.
6. After two days, remove the bowl from the paper and carefully lift the mushroom off of the paper. And the print will appear!
7. Take care, the spores are now loose on the paper. If you want to keep the print, carefully spray some hairspray on it. This will make the spores stick to the paper.
8. Briefly allow this to dry and then your print will be ready.

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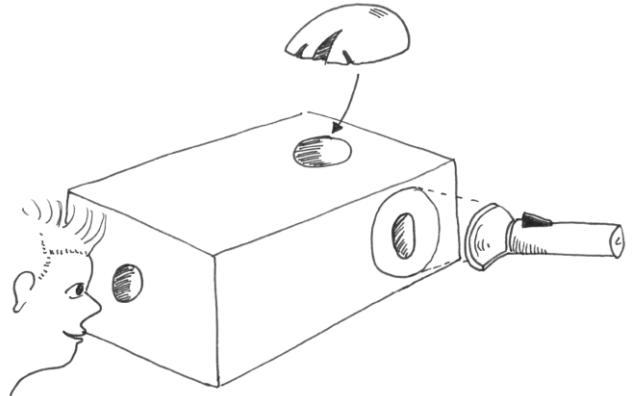
Part 3

Make your own spore viewing box

You can also make your spores visible with a spore viewing box. You will even be able to see the spores as they drift out of the mushroom cap.

What do you need?

- a shoe box
- a pair of scissors or puncture pen
- a paint brush
- black paint
- a powerful lamp, such as a high-quality torch
- a mushroom



Getting started!

1. Take a good look at the drawing above.
2. Use the scissors or the puncture pen to make a hole in the lid of the shoe box. This hole should be slightly smaller than the mushroom cap.
3. Make a peep-hole in the front of the box.
4. Make a third hole in the side of the box. Make sure this hole aligns precisely with the hole in the lid, so that it is the same distance from the back of the box.
5. Paint the inside of the shoe box totally black. Remember to paint the inside of the lid too!
6. Allow the paint to dry.
7. Carefully cut the cap off of the mushroom.
8. Then place the cap of the mushroom on the hole in the lid.
9. Shine the torch through the hole in the side of the box. Look through the hole at the front.
10. Tap on the mushroom cap. Do you see the spores falling out yet?

Would you like to find out more about mushrooms and their spores? Or would you like to do additional experiments? Then go to micropia.nl.