

The Science behind the germs Worksheet

Learning outcomes

By doing this activity, you'll learn about the importance of washing your hands with soap, learn how germs work by doing a simple experiment. You can also learn about some careers linked to this type of science.

Introduction

- ★ What is soap? What is it made of and how does it work?
- ★ What are germs? Why do we need to avoid them?

This activity is going to answer these questions and demonstrate them with an experiment almost anyone can do at home! Once you have a basic understanding of germs, you are going to conduct a “germy” treasure hunt and you will discover where germs are most likely to be in your house.

It is always good to have a basic understanding before you experiment to know how it works, so why don't you watch this [video](#)? (1) or read more about [soap](#) (2) and [germs](#) (3).

Activity on next page...

Activity 1

Now it's time for the experiment! It's a good time to get an adult's help with this.

If you would like to watch the experiment first you can [here](#) (4).

Now let's get your equipment, you will need:

- ★ Bowl
- ★ Water
- ★ Pepper
- ★ Soap or washing up liquid
- ★ Oil

The steps are as follows:

1. Fill a bowl with water
2. Sprinkle some pepper flakes into the bowl
3. Dip your finger into the bowl
4. What happens?
5. Now get some soap on your finger
6. Dip your finger into the bowl again
7. What happens now?

Having read about soap and how it works, can you explain how the experiment works?

Do you understand why the pepper is repelled by the soap?

If soap is made of oil, what do you think would happen if we used oil instead of water, or in place of the soap? Try it!

Activity on next page...

Activity 2

Now we know more about germs, where do you think they are most likely to live in your house? It's time to create "The Gergy Top Ten!"

Have a think, look round your house and guess what the top 10 most germiest spots are. Write your answers here!

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Reveal the answers [here](#) (5)

Are there any surprises?

What else can you do to kill germs?

You've learned lots by doing this activity and there are job roles use the same skills as you've used today. You should now spend some time reading more about them.

[Microbiologist](#) (6) [Pharmacist](#) (7) [Pharmacy Technician](#) (8) [Nurse](#) (9)
[Health Promotion Specialist](#) (10) [Doctor – GP or Hospital](#) (11)

There are many more that you can find out about on the My World of Work [website](#) (12).

Website references

1. Microbiologist <https://bit.ly/3dHWy81>
2. Pharmacist <https://bit.ly/30q3djr>
3. Nurse <https://bit.ly/2MD56kv>
4. Health Promotion Specialist <https://bit.ly/3cFcQwV>
5. Apprenticeships.scot www.apprenticeships.scot
6. Scientific Technologies Foundation Apprenticeship <https://bit.ly/2Ugrswv>
7. Social Services and Healthcare Foundation Apprenticeship <https://bit.ly/2XlyD2H>
8. Life Sciences Modern Apprenticeship <https://bit.ly/3cJ3yQo>
9. Healthcare Support Worker Modern Apprenticeship <https://bit.ly/379uA2t>
10. Pharmacy Services Modern Apprenticeship <https://bit.ly/37aWIHL>