

Germs, Germs, Everywhere!



THE SCOOP

Nobody likes germs; some of them can make us sick, or make our food taste bad. But no matter how hard we try to get rid of them, germs are everywhere! Bacteria, fungi and viruses, all types of microorganisms, are so small that you can only see individual ones under a microscope. In this challenge you'll find out where germs are hiding right where you live.

WHAT YOU'LL NEED

A raw potato
A sharp knife (younger kids - ask an adult for help)
Soap and water
Cotton swabs
A clean fork
Zip-close plastic sandwich bags
A pen or marker

THE CHALLENGE

Investigate whether there are microorganisms living on common surfaces in your house by growing them on potato slices.

- 1) Wash your hands with soap and warm water for a full 20 seconds.
- 2) Wash the potato and cut it into ½-inch thick slices.
- 3) Using only the fork, put each slice into its own plastic bag – don't touch the potato with your hands!
- 4) Take a cotton swab and rub it on a surface where you live. You can try anything – the floor, a doorknob, a shoe, even your own mouth!
- 5) Take the swab and rub it onto one of the potato slices (don't touch the potato with your hands!). Label the bag with the name of the surface and throw the swab away.



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THE CHALLENGE (continued)

- 6) Repeat with a fresh swab and pick a new surface for each potato slice.
For one slice, don't rub anything at all, just close the bag and label it "nothing."
- 7) Put all the bags in a dark place, like a kitchen cabinet, for 4-7 days. Look at them each day and describe what you see.

Are there different kinds of microorganisms growing? Describe their colors, shapes, smells and sizes. Why do you think they are different?

STUFF TO THINK ABOUT

- Why did you have one potato slice that did not touch a swab at all?
- Was there any surface that didn't have any microorganisms? What does that mean?
- Why did you have to wash your hands first?
- Why does it take so long to see things growing on the potatoes?
- Are all microorganisms bad? Can you think of any ways they might be useful?



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