

A STEM in the Park

Take Home Activity

STEM

in the **PARK**™

Science, Technology, Engineering, and Mathematics

Growing Germs

Germs can be found just about everywhere, but some places have more germs than others. Try this experiment to see where germs are hidden. *(Note: This experiment takes a week to complete.)*

What You Need:

- An adult helper
- Sharp knife
- Gloves
- 4 Ziplock bags
- Potato
- Marker



What To Do:

1. Have your adult helper wash his or her hands, put the gloves on, and then cut the potato in four equal pieces.
2. Take the first potato piece and put it in one of the bags. Seal the bag. Use the marker to write on the masking tape and label this bag as 'control'.
3. Pick a surface - such as a countertop, sink, or a floor - and while wearing the gloves, rub the second potato piece on it. Place the potato slice in a bag and label it with the surface it was rubbed on.
4. Take the third potato piece outside and lay it in a flower bed, a puddle, or something similar. Place the potato slice in a bag and label it with the outside area it was placed in.

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What To Do continued:

5. Finally, touch the fourth potato piece all over with your bare hands. Place the potato slice in a bag and label it 'touched with hands.'
6. Take all four bags and place them in a dark area at room temperature, like a closet or cupboard. Leave them there for a week. After the week has passed, pull the bags out and look at the potato pieces. (Don't take the potatoes out of the bags.) What do you see on the pieces? Which potato has the most growth on it? Which potato has the least? Why do you think this is?
7. When you are done looking at the potatoes, have an adult pour a little bleach into each bag, seal the bags, and then throw them away.

What Happened:

Do you see black, green, or white fuzzy stuff on your potato slices? These are germs, called mold or bacteria, growing on the pieces. The number of germs has grown so large that now you can see them without a microscope. The potato pieces that were handled by you, rubbed on a surface, and placed outside probably had the most growth on them. That's because the potatoes picked up germs from those places. The potato piece that did not touch anything probably has the least amount of growth on it, because it didn't touch anything that had germs. But that potato piece is important, because it lets you see how many germs already existed on the potato. The other potato pieces probably had just as many germs on them from the start, but once they touched other things, the potato pieces picked up more germs and the germs began to grow more than the germs on the first potato.

This activity is brought to you by Wood County Hospital

