

BACTERIA GROWING SCIENCE FAIR PROJECT

Bacteria is not as gross as you might think, and testing for bacteria (germs) can be a great idea for a science fair experiment since there are so many possibilities for science questions. Carrying out the experiment is pretty easy using widely available bacteria growing kits. Besides, who doesn't like checking out bacteria and fungus?

All good science experiments start with a question – this is what you want to find out by experimenting. Here are a few example questions to get you started using the scientific method for growing bacteria:

- Is a dog's mouth cleaner than a human's mouth?
- Who has the cleanest mouth in the class?
- Do antibacterial soaps really kill bacteria?
- Which door handle in the school has the most bacteria?
- Does toothpaste kill bacteria in your mouth?
- Do dark socks create more bacteria in a shoe than white socks.
- Do hand sanitizers work to kill bacteria?
- What location in the school contains the most bacteria?
- Is there more bacteria in tap water, bottled spring water, rain water, or pond water?



Step 1 – Ask A Question: Let's imagine that you want to answer the question, "Which door handle in the school has the most germs?"

Step 2 – Research: You can't just jump in and start experimenting. It's important to do a little research. Ask the school nurse which door handle he or she thinks the most germs (bacteria) are. Observe and chart which door handles get the most use, survey friends and family to get opinions and write down the results. All this information will help you narrow down which door handles are the most likely to contain germs – and which ones you should choose to use in your experiment.

Step 3 – Make a Hypothesis: This is when you make a prediction based on your research. This is not an "I think..." prediction, it is a statement that will either be proven true or false based on experimenting. An example would be, "The handle to the nurse's room contains the most bacteria."

Step 4 – Experiment: This particular science experiment requires a simple bacteria testing kit. You would choose several door handles that you think might contain the most bacteria. These door handles are considered the Independent Variable in your experiment because each handle is independent and you control which ones are chosen. In a typical kit you would touch a separate cotton swab to each door handle, and then touch it to the bacteria growing Petri dish so that you would have one dish for each handle. Take good notes that would include when you collected each sample and where you collected the sample, and be sure to label everything well in any experiment.

Step 5- Collect Data: In this experiment, bacteria will start to grow in the Petri dish over the next few days, and you may be surprised by just how much gross bacteria is lurking in your school. Take good notes each day and determine which dish has the most bacteria growing in it.

Step 6 – Make Your Conclusion: This is when you decide if your hypothesis is correct. If your hypothesis was, "The handle to the nurse's room contains the most bacteria," your experiment will show if your hypothesis was right. It is not bad at all if your hypothesis is incorrect, what is important is that you answered your question from step 1. Now pat yourself on the back for your fine scientific discovery using the Scientific Method.

Bacteria growing kits can be found at www.sciencebobstore.com