

FRIENDLY BACTERIA

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BACKGROUND: So far, we have been discussing harmful bacteria. But there are bacteria that help us as well. Some make food, some make vaccines, and some help decay dead things and return the nutrients to the soil.

PURPOSE: In this lab you will devise an experiment to show how bacteria decay and remove nutrients from an apple.

BACKGROUND SEARCH: look up these words and write definitions that will help you when you explain what happened to your apples.

Decomposing

Decaying

Dehydration

Oxidation

PROCEDURE: you will be given three apples – one will be the control, the other two will be the experimental apples. You will keep these apples side by side on the same tray and observe them over the next few weeks. You will keep a log of your observations. You need to make quantitative and qualitative measurements every other day. In making your observations, use all of your senses but DO NOT TASTE the apples. Make a chart that includes the following information: weight, height, color, smells, state of matter, appearance (texture), temperature, etc. Pictures will be taken with the digital camera and posted on the computer at the end of each week.

YOUR PART:

1. You must determine how to introduce the bacteria to one of the experimental apples.
HINT – Apples have skin like humans.
2. On the third apple – introduce the bacteria in the same fashion as you did with apple #2 but think of what you could do to retard the growth of the bacteria or think of a location you could use.
3. All three apples must be kept covered to discourage fruit flies but they must be open to air and clear enough for light to pass through.
4. Write up your lab – use “Create A Lab” on the Germantown Academy’s website under Academics, Middle School, Science. Give a written copy to your teacher for approval before you begin.

B.

D.

10 Choose two ways of preserving from #9 and explain chemically or physiologically how they work to preserve food. List your source(s).