

CHAPTER 18 “CLASSIFICATION” DICHOTOMOUS KEY #1

Imagine that while looking through your microscope you find all the bacteria below in your field of vision. These bacteria are unknown to you and you need to identify all these bacteria and separate the helpful ones from the harmful ones. You can do this by using the Bacteria Dichotomous Key below.

HOW TO USE THE KEY:

Pick the bacteria you want to identify. Observe its shape and characteristics. Start at 1, read the statement and choose the true statement concerning the bacteria. Follow the key to the number it tells you to go to. Continue choosing statements from the key until you arrive at the bacterium's species name. The key also lists the disease caused by the bacterium (harmful) or in what food the bacteria can be found (helpful). Identify the bacterium and tell if it is helpful or harmful. **WRITE ON YOUR OWN PAPER !!!!!!!!!!!**

BACTERIA DICHOTOMOUS KEY

- 1A. IF THE BACTERIA IS ROUND, GO TO 2.
- 1B. IF THE BACTERIA IS NOT ROUND, GO TO 5.

- 2A. IF THE BACTERIA IS PAIRED (IN TWO'S), GO TO 3.
- 2B. IF THE BACTERIA IS NOT PAIRED, GO TO 4.

- 3A. IF THE BACTERIA IS WITHOUT A HEAVY COVERING, IT IS *Diplococcus meningitidis* AND CAUSES MENINGITIS.
- 3B. IF THE BACTERIA HAS A HEAVY COVERING, IT IS *Diplococcus pneumoniae* AND CAUSES PENUMONIA.

- 4A. IF THE BACTERIA IS IN A CHAIN, IT IS *Streptococcus lactis* AND FORMS BUTTERMILK.
- 4B. IF THE BACTERIA IS NOT IN A CHAIN BUT IN CLUMPS, IT IS *Staphylococcus aureus* WHICH CAUSES BOILS AND TOXIC SHOCK SYNDROME.

- 5A. IF THE BACTERIA IS ROD-SHAPED, GO TO 6.
- 5B. IF THE BACTERIA IS SPIRAL-SHAPED, IT IS *Treponema pallidum* WHICH CAUSES SYPHILIS.

- 6A. IF THE BACTERIA IS IN PAIRS, IT IS *Baclactis* WHICH FORMS SAUERKRAUT.
- 6B. IF THE BACTERIA IS SINGLE, GO TO 7.

- 7A. IF THE BACTERIA HAS A BULGE IN THE MIDDLE, IT IS *Bacillus botulinum* WHICH CAUSES FOOD POISONING.
- 7B. IF THE BACTERIA HAS A BULGE AT THE END, IT IS *Bacillus tetani* WHICH CAUSES TETANUS.

