**Prokaryote Guided Notes**

1. **Characteristics of Prokaryotes**
2. No \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Organized by their need for \_\_\_\_\_\_\_\_\_\_\_\_.
   1. Obligate anaerobe:
   2. Obligate aerobes:
   3. Facultative aerobes:
4. Prokaryotes are classified by their \_\_\_\_\_\_\_\_\_. (Draw each shape below)
   1. Bacillus-
   2. Coccus-
   3. Spirillius-
5. Prokaryotes may group together. Describe each grouping below:
   1. Diplo-
   2. Strpto-
   3. Staphylo-
6. Draw an example of a bacillus shaped prokaryote in each type of grouping.
7. **Structure of Prokaryotes**
8. Prokaryotes are microscopic because they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
9. In addition to having NO nucleus, prokaryotes also do not have any \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
10. They contain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that make protein
11. A single circular chromosome floats around in an area called the \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_.
12. DNA fragments called \_\_\_\_\_\_\_\_\_ float in the cytoplasm.
13. For protection and support, a \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ made of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
14. One or many \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for movement.
15. Some prokaryotes have a sticky coating called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that helps to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to host cells or other bacteria.

\*\* Be sure you can identify each prokaryotic structure on an illustration\*\*

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to host cells or other bacteria.

\*\* Be sure you can identify each prokaryotic structure on an illustration\*\*

1. **Types of Prokaryotes**
2. Archaea

a.

b.

c.

d.

2. Eubacteria

a.

b.

c.

d.

1. **Variety in Prokaryotes**

Describe each type of prokaryote:

Photoautotroph:

Chemoautotroph:

Nitrogen fixing:

Halophiles:

Thermophiles:

Decomposers:

Methanogens:

1. **Reproduction & Survival Methods**

**Reproduction:**

Describe & draw Binary Fission:

Describe & draw conjugation:

**Survival**:

Describe what an endospore is.

1. **How bacteria help us?**
2. Symbiotic relationships: E. Coli make \_\_\_\_\_\_\_\_\_ for us, which is absorbed by the \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ produces yogurt, \_\_\_\_\_\_\_\_\_\_ and pickles.
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ clean up all the Earth’s dead things, putting elements like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ back into the \_\_\_\_\_\_\_\_\_\_\_\_.
5. Bioremediation: the use of bacteria to clean \_\_\_\_\_\_ spills.
6. Medications like \_\_\_\_\_\_\_\_\_\_\_ are produced in a lab through bacteria.
7. **How do bacteria harm us?**

Some prokaryotes produce \_\_\_\_\_\_\_\_\_\_\_\_ that build up in the body, killing cells.

1. **How to prevent bacterial infections?**
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ break down the \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ of the bacteria.
3. Always fully \_\_\_\_\_\_\_\_\_\_ your \_\_\_\_\_\_\_\_\_\_\_\_\_\_,
4. Wash Your \_\_\_\_\_\_\_\_\_\_\_\_\_! Don’t touch your \_\_\_\_\_\_\_\_\_\_\_\_!

Note: Only use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ when absolutely necessary. Overuse of them leads to bacterial \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. **How do you know which bacteria made you sick?**
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ staining turns a bacteria’s cell wall either \_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in color.
3. Gram Positive bacteria will turn \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and Gram Negative bacteria will turn \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Gram positive bacteria turn purple because they have more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in their cell walls and peptidoglycan absorbs the Crystal Violet stain better.
5. Gram positive bacteria are \_\_\_\_\_\_\_\_\_\_ treated with antibiotics. Gram negative bacteria are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ treated with antibiotics.