***Viruses & Bacteria***

A virus is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that can invade living cells.

Ex. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Ex. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The Structure Of a Virus**

Viruses are composed of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The Nucleic acid core is surrounded by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The Nucleic core is either made up of \_\_\_\_\_\_\_\_\_\_ OR RNA but \_\_\_\_\_\_\_\_ both

**Reproduction of Viruses--- Lytic and Lysogenic Cycles**

**Prokaryotes**-- Cells that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Exist almost \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on Earth

Grow in numbers so great you can see them with the unaided eye

Are placed in either the \_\_\_\_\_\_\_\_\_\_\_ or the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Kingdoms

Make up the smaller of the two kingdoms

Bacteria Cell ex. Escherichia Coli

**Archaebacteria**

Lack important \_\_\_\_\_\_\_\_\_\_\_\_\_\_ found in cell walls

Have different lipids in their cell membrane

Different types of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ with very different gene sequences

Archaebacteria can live \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

They do not require \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and can live in extremely \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_environments as well as extremely \_\_\_\_\_\_\_\_\_\_\_\_\_ environments.

Ex. Cyanobacteria

Bluish-green photosynthetic bacterium

Contain membranes that carry out photosynthesis

Do not contain the same type of chloroplasts as plants do

This bluish-greenish algae can be found nearly everywhere on earth.

Can survive in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Eubacteria**

Make up the larger of the two prokaryote kingdoms

Generally are surrounded by a cell wall composed of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ carbohydrates

**Identifying Prokaryotes**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Bacterium Shapes**

\_\_\_\_\_\_\_\_\_\_ ~ Sphere shaped

\_\_\_\_\_\_\_\_\_\_ ~ Rod shaped

\_\_\_\_\_\_\_\_\_\_ ~ Spiral shaped

**Movement**

\_\_\_\_\_\_\_\_\_\_\_ ~ Tail-like structure the whips around to propel the bacterium

\_\_\_\_\_\_\_\_\_\_\_\_ ~ hair-like structures that surround the cell & help it to “swim”

**Bacteria and their energy**

Autotrophs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Ex. Cyanobacteria

Chemotrophs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Ex. Archaebacteria

Heterotrophs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Ex. E-coli

**Bacteria Reproduction**

Binary Fission-- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Conjugation-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Spore Formation-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Immune System**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – foreign protein (bacteria, virus, fungus, transplanted organ)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_– proteins your body makes to defend itself against antigens

**Cells of the Immune System**

B cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

T cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and Kill infected cells

**Types of Immunity**

Active \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Ex: having the disease, getting a vaccination

Passive \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Ex: from mother thru the placenta or mothers milk, from a shot (rabies shot)

**Vaccines** Given a shot of dead or weakened pathogens

Your body makes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

You are left with memory cells