Viruses

Characteristics: NOT \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Do not use \_\_\_\_\_\_\_\_\_\_\_\_\_ energy to grow;

Can’t make \_\_\_\_\_\_\_\_\_\_\_\_\_ food or produce \_\_\_\_\_\_\_\_\_\_\_\_\_; Are able to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in host cell

Host: Organism that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of energy for the virus

Parasite: Virus causes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to host cell --- almost \_\_\_\_\_\_\_\_\_\_\_\_ viruses destroy the cell

Shapes: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- virus in a bacteria cell--\_\_\_\_\_\_\_\_\_\_ shape

 Other types- round, bricklike, threads or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Size: \_\_\_\_\_\_\_\_nanometer to \_\_\_\_\_\_\_nanometer

Named: For \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, places

 \_\_\_\_\_\_\_\_\_, or disease they \_\_\_\_\_\_\_\_\_\_\_\_

Structure: Protein coat- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to fit certain host

 Inner core- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ material

Reproduce: Must be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ cell to produce a new virus

Active virus: Immediately \_\_\_\_\_\_\_\_\_\_\_\_\_ and take over cell; ex cold or rhinovirus

Hidden virus: Enter and \_\_\_\_\_\_\_\_\_\_\_\_\_ temporarily;

 Ex. HIV virus and cold sore (herpes) virus

Negative: DISEASE

 Short term- cold & flu

 Long-term- rabies, distemper, HIV

Positive: Gene \_\_\_\_\_\_\_\_\_\_\_\_\_; virus acts as a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to redirect cell for medical treatment: ex Cystic Fibrous

Bacteria

* Cell Structure: \_\_\_\_\_\_\_\_\_\_\_ cell; **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** (no nucleus)
* Cell \_\_\_\_\_\_\_\_\_\_\_ & membrane; cytoplasm &\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Genetic material in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_like a tangled string
* Movement: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**(whiplike tail) OR \_\_\_\_\_\_\_\_\_\_\_ currents OR \_\_\_\_\_\_\_\_\_\_\_\_\_\_ currents
* Shape: Spherical, rod, or spiral
* Size: 0 to ½ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Food: Some are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** so photosynthesis or chemical synthesis for \_\_\_\_\_\_\_\_\_\_
* Some are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** so \_\_\_\_\_\_\_\_\_\_\_\_\_ food like decaying leaves, . . .
* Energy Source: **respiration**—most use \_\_\_\_\_\_\_\_\_\_\_\_\_but some are **\_\_\_\_\_\_\_\_\_\_\_\_**
* Reproduce:Can reproduce as often as every 20 minutes;
* **Asexual** by **\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_**--cell copies & splits into \_\_\_\_\_\_\_\_\_ cells.
* **Sexual-** \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_bacteria combine genetic material thru a threadlike bridge to produce a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ cell. Called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-when trying to survive harsh conditions. It forms a spore within the bacteria cell.
* It contains genetic material and cytoplasm and can survive for many years. Then can be released and carried to a new place. Ex. Clostidium botulinum–when conditions become favorable, they open up and begin to multiply
* Role of Bacteria: **Positive:** \_\_\_\_\_\_\_\_\_\_\_\_ production; recycling and \_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ matter; food production—pickles, vinegar; medicine such as insulin; body processes such as digestion
* **Negative:** \_\_\_\_\_\_\_\_\_\_\_\_\_ food, \_\_\_\_\_\_\_\_\_\_\_\_ such as strep throat
* Pasteurization: method to \_\_\_\_\_\_\_\_\_\_\_ bacteria in foods such as milk products; uses high \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and does not alter taste of food

Infectious Disease

* What is an infectious disease?
	+ Illness that passes from one organism to another
* How are they spread?
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, swallowed or ingested, enter through moist body cavities—ie. Nose
* Bacteria infections are treated with:
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which are chemicals that can kill only the bacteria
* Viral ailments are treated:
	+ Over the counter medications can relieve symptoms of most viral infections such as \_\_\_\_\_\_\_\_\_\_or \_\_\_\_\_\_\_\_\_\_\_\_
	+ Some antiviral drugs are prescription such as ones for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* How prevented?
	+ \_\_\_\_\_\_\_\_\_\_\_\_ are introduced to the body to stimulate the production of chemicals to destroy the virus or bacteria.
* Antibiotic Resistance is:
	+ When bacteria \_\_\_\_\_\_\_\_\_\_\_ to resist the chemical affects of the antibiotic so the bacteria survives the antibiotic

Protists/Parasites

**Eukaroytes that CANNOT be classified in the animal, plant, or fungi kingdoms. Known as “odds & ends” kingdom. All live in moist surroundings. Can be uni or multicellular; may be auto or hetrotrophs; some move and some are stationary.**

* **Unicellular** – composed of only \_\_\_\_\_\_\_ cell.
* **Multicellular –** composed of \_\_\_\_\_\_\_\_\_\_\_\_ than one cell.
* **Eukaryote**: an organism that contains membrane-bound organelles and genetic material within a nucleus.
* **Prokaryote**: a unicellular organism that lacks a true nucleus and membrane-bound organelle.

**Protozoans that are Parasites**

* + **Parasites are things that must have a \_\_\_\_\_ to survive.**
	+ **Move in a wide variety of ways but must have a host to feed on.**
	+ ***Plasmodium* a protozoa that causes \_\_\_\_\_\_\_\_\_\_\_ has multiple hosts.**
		- **Usually spread by a mosquito biting an infected person then biting a healthy person**

Fungi

Fungi are:

Eukaryotes that have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cell structure:

Arranged in structures called \_\_\_\_\_\_\_\_\_\_\_\_\_. These are branching, threadlike \_\_\_\_\_\_\_\_\_\_\_\_ that make up the bodies of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fungi

Food:

Absorb food through the hyphae that grow on food source

Reproduce:

Lightweight spores are surrounded by a protective coating and can be carried easily through water or air to a new site.

Spores reproduce in \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

Most reproduce sexually & asexually.

Cells at the tip of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ divide to form spores & grow into fungi that are identical to parent. \_\_\_\_\_\_\_\_\_\_\_\_\_ yeast undergoes \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (asexual). There are no spores. Yeast buds and breaks away from parent.

When \_\_\_\_\_\_ hyphae from \_\_\_\_\_\_ fungi grow \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ genetic material is \_\_\_\_\_\_\_\_\_\_\_\_\_. Spores are different from either parent. This is sexual reproduction.

Classification:

Grouped according to reproduction—sac fungi, club fungi, or zygote fungi

Role in Nature:

+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in nature-break down the chemicals in dead organisms

\_\_\_\_\_\_\_\_\_\_- yeast in bread; mold to blue cheese

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- penicillin

Lichens- \_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_ in community – sensitive to air pollution & indicate health of an area

Plant roots grow into hyphae underground spread out and absorb water and nutrients from soil, help plant grow better