**Agents of Disease Study Guide:**

**Viruses:**

-Viruses are considered non-living

-Viruses are just DNA covered in Protein shielding

-Viruses need a host cell to survive and replicate

-Viruses usually have a Reservoir: a place where they can survive and persist

-Vaccines are used to prevent viruses

-Influenza is one of the most common and deadly viruses

**Bacteria:**

-Bacteria are living organisms

-Bacteria are Prokaryotes, meaning they have no Nucleus or Membrane-Bound Organelles

-Bacteria are extremophiles, meaning they can survive very harsh conditions (heat/cold, etc.)

-Bacteria reproduce through Binary Fission, meaning they split asexually at exponential rates

-Bacteria are becoming resistant to antibiotics due to over prescribing and use in foodstock

**Fungi:**

-Fungi are Non-Photosynthetic Eukaryotes (They have a Nucleus and can grow without light)

-Black mold is a dangerous form of Fungi

-Fungi can reproduce both sexually and asexually

**Parasites:**

-Parasites are living, but need a host cell to survive and reproduce

-Parasites are typically associated with dirty water and living conditions (no waste removal)

-Malaria is a disease caused by a parasite injected into a host through a mosquito bite

**Outbreaks:**

-Epidemics are when a disease happens more than usual, but only in certain areas

-Pandemics are when diseases go global on massive scales

-Epidemics can be prevented from becoming Pandemics by climate and preventive measures

-Vaccines stop Viruses; Antibiotics stop bacteria

**Transmission:**

-Direct contact is the most common method of disease transmission

-Any living organism that spreads a disease is a Vector

-Any non-living thing that spreads a disease is a Fomite

-Disease spread through heredity means is Vertical Transmission

-Disease spread through non-hereditary means is Horizontal Transmission