

**Video 2**

***The World of Microbes: Viruses***

**Summary:**

Students will discover the common pathogens responsible for disease spread and methods to prevent the spread of disease caused by pathogens.

**Target Grades:**

6th – 9th

**TEKS**

Biology 11 (A) summarize the role of microorganisms in both maintaining and

disrupting the health of both organisms;

Biology 4 (C) compare the structures of viruses to cells, describe viral reproduction, and describe

the role of viruses in causing diseases

**Learning Objectives:**

* Define and describe virus.
* Describe where viruses are found.
* Describe benefits of viruses.
* Describe viral reproduction and spread.
* Describe how pathogenic viruses cause disease
* Identify methods of protection against pathogens.

**Outline:**

1. Virus Characteristics
   1. Living or non-living
   2. Germs
   3. **Microbes**
   4. Tiny: 200 x smaller than bacteria
2. Virus Invasions
   1. Inhaled
   2. Ingested
3. Virus Habitat/Reproduction
   1. Inside body cells
   2. Reproduce and grow until cell bursts
4. Attacking Virus Reproduction Consequences
   1. Host cells are killed when they rupture.
   2. Replicated viruses enter other cells to continue reproducing.
   3. Body has sores/irritations where cells are killed off (the ruptured cells).
      1. Throat > Sore throat and/or cough
      2. Irritated digestive tract > vomiting or diarrhea
   4. Body may develop a disease as a result of the damage.
   5. Infected cells may become cancerous.
5. Fighting bad viruses (pathogens)
6. Wash often with soap and warm water.
7. Get **vaccinated** to prevent the virus from successfully attacking you.

**Prior to Viewing the Video**

* Have students work in small groups to create a Venn diagram of bacteria and viruses. They will have two minutes to compare and contrast these two microbes including definitions, structures, examples, habitats, etc.

**After Viewing the Video**

* Students should return to groups and correct and/or add to their Venn diagram. In addition to creating a more detailed diagram, students should also list three methods to protect from viral attacks.