



**Grade 9 - Body Systems**

**Unit 2**

**SOLs:**

- 9.1.F Identify types of pathogens that cause disease.  
9.3.D Develop a personal plan for remaining free of communicable diseases.

**Title: Research on Preventing Communicable Diseases**

**Objectives/ Goals:** Students will utilize credible health sites to learn about common and emerging pathogens that cause disease and develop a plan for remaining free of communicable diseases.

**Materials:**

- Internet access
- Optional: Videos that provide an overview of communicable diseases: *Is it Communicable or Non-Communicable?* <https://www.youtube.com/watch?v=vpEAos0blyw> and *Preventing Communicable Disease* <https://www.youtube.com/watch?v=EgJcflR Dic>

**Procedure:**

1. Provide students with an overview of communicable diseases and the pathogens that cause them. Communicable diseases are diseases spread from one person to another through a variety of ways that include: contact with blood and bodily fluids; breathing in an airborne virus; or by being bitten by an insect. **Some** examples of the communicable diseases include the flu, pinkeye, the Zika Virus, Hepatitis, measles, and salmonella and other food borne illnesses.

Ask students to name other types of diseases that are communicable, including recent diseases of national concern (e.g., HINI flu, Zika, Ebola, Meningitis, MRSA, Mono).

2. Share with students that the manner in which these diseases spread depends on the specific disease or infectious agent and that some diseases have multiple methods of

transmission (e.g., zika). Some ways in which common and emerging communicable diseases spread are by:

- physical contact with an infected person, such as through touch (staphylococcus), sexual intercourse (gonorrhea, HIV), fecal/oral transmission (hepatitis A), or droplets (influenza, TB)
- contact with a contaminated surface or object (Norwalk virus), food (salmonella, E. coli), blood (HIV, hepatitis B, zika), or water (cholera);
- bites from insects or animals capable of transmitting the disease (mosquito: malaria, zika, and yellow fever; flea: plague); and
- travel through the air, such as tuberculosis or measles.

3. Ask students, whether the transmission of diseases can be prevented? Ask them to share ways of preventing communicable diseases. Add and discuss methods from the list below that students don't mention.

The primary ways of preventing communicable diseases including:

- frequent handwashing
- safe food preparation and handling
- cleaning and disinfection of commonly used surfaces (e.g., kitchen, bathroom),
- coughing and sneezing into your sleeve,
- not sharing personal items (e.g., toothbrushes and razors, sharing towels, needles);
- getting vaccinated;
- avoiding touching wild animals,
- eliminate standing water, use of pesticides, insect repellent
- staying home when sick;
- practices to prevent STDs (including Zika)

4. Assignment: Student(s) select a communicable disease and develop a prevention poster or infographic (<https://piktochart.com>) to name the disease, identify the symptoms, treatment and key prevention methods that the student(s) will practice. Students should access national, state, and local health department and other resource websites (examples are referenced below).

## **Assessment Ideas:**

Do posters address:

Disease type? Symptoms? Risk Factors? Treatment? Prevention Plan? Cited Sources of Information?

## **References:**

<https://www.apha.org/topics-and-issues/communicable-disease>

<http://www.acphd.org/communicable-disease.aspx>

[www.vdh.virginia.gov](http://www.vdh.virginia.gov)

[www.cdc.gov](http://www.cdc.gov)

<https://www.cdc.gov/foodsafety/foodborne-germs.html>

<https://www.cdc.gov/diseasesconditions/>

<https://www.cdc.gov/flu/protect/habits.htm>