



SAMPLE LESSON PLANS

Grade 8 – Body Systems

Unit 2

SOLs:

- 8.1.C Examine the health risks caused by food contaminants.
- 8.1.G Analyze the risk factors associated with communicable and non-communicable disease.

Title: Communicable Diseases

Objectives/ Goals: Students will learn about communicable diseases and analyze the different risk factors associated with communicable and non-communicable diseases.

Materials:

- Internet access
- Optional: Videos that provide an overview of communicable diseases:

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. The risk factors above can be reduced through prevention.

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. The Centers for Disease Control and Prevention provides instructions for 6 activity-based lessons on infectious diseases at CDC- BAM! Body and Mind- Infectious Disease Epidemiology- Teacher's Corner-Activities:

<http://www.cdc.gov/bam/teachers/epi.html> including a *Handwashing Activity* and *Poisoned Picnic* – an activity to identify the cause of a disease outbreak.

5. An online lesson plan for 5-8 hours of instruction on communicable diseases including the following template for a student project to develop a PSA is available at this site:

Communicating About Communicable Diseases!

<http://www.teacherstryscience.org/lp/communicating-about-communicable-diseases>

Template for Public Service Announcement
<http://www.teacherstryscience.org/lp/communicating-about-communicable-diseases>

Disease Name: _____

Beginning **Middle** **End**

Guiding Questions

1. What is the disease?
 2. What is it caused by? Bacteria or Virus?

1. What are the symptoms of the disease?
 2. How does the disease spread?
 3. How does it affect people living in a large cities all over the world (Include statistics)

1. Is there a cure?
 2. Can it be prevented?
 3. What can people do to protect themselves?
 4. What can people to do help?

Script

Have you heard of...

 Did you know it's caused by...

You know you have the disease if

 In large cities the disease spreads by ...

You can protect yourself by...

 If you want to help, here is what you can do...

Visual
 (draw a picture or describe what is happening on the screen)

6. Have students review videos and discuss the risk factors for communicable versus non-communicable diseases such as diabetes, heart disease, and cances (e.g., Florida PASS Program videos: *Is it Communicable or Non-Communicable?* <https://www.youtube.com/watch?v=vpEAos0blyw> , *Preventing Communicable Disease* https://www.youtube.com/watch?v=EgJcflR_Dic, and *Preventing Non Communicable Diseases* <https://www.youtube.com/watch?v=lruYVSGcxHs>

How are the risk factors different? What are the implications of the different risk factors for prevention?

Assessment Ideas:

- Evaluate student participation in discussion and activities
- Develop a comparison worksheet on risk factors and prevention of communicable and non-communicable diseases.

References:

- American Public Health Association <https://www.apha.org/topics-and-issues/communicable-disease>
- Alameda County Public Health Department <http://www.acphd.org/communicable-disease.aspx>
- Virginia Department of Health www.vdh.virginia.gov
- Centers for Disease Control and Prevention (CDC)
www.cdc.gov
<https://www.cdc.gov/foodsafety/foodborne-germs.html>
<https://www.cdc.gov/diseasesconditions/>
<https://www.cdc.gov/flu/protect/habits.htm>:

Lessons:

- *Communicable Disease Lesson Plan*
www.dannyclark10.weebly.com/uploads/1/2/2/1/12211660/health_lp_showcase.docx
- *Communicating About Communicable Diseases!*
<http://www.teacherstryscience.org/lp/communicating-about-communicable-diseases>
- *CDC- BAM! Body and Mind- Infectious Disease Epidemiology- Teacher's Corner-Activities:*
<http://www.cdc.gov/bam/teachers/epi.html>
- *Kids Health Food Safety Teacher's Guide Grades 6-8*
https://classroom.kidshealth.org/classroom/6to8/personal/safety/food_safety.pdf
- *PE Central Communicable or Non Communicable Disease Lesson Plan*
<http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=934#.WlaBuWVNFhom>
- *PE Central AIDS Fact Quilt*
<http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=3410#.WlaCZmVNFho>
- *Preventing Communicable and Non Communicable Diseases*
<https://sharemylesson.com/teaching-resource/communicable-and-non-communicable-diseases-254318>

YouTube Videos:

- *Is it Communicable or Non-Communicable?*
<https://www.youtube.com/watch?v=vpEAos0blyw>
- *Preventing Communicable Disease* https://www.youtube.com/watch?v=EgJcflR_Dic.
- *Preventing Non-Communicable Diseases*
<https://www.youtube.com/watch?v=lruYVSGcxHs>