



## EDUCATION

**PATHWAY:** Early Childhood Education

**COURSE:** Health, Safety & Nutrition

**UNIT:** 9 - Communicable Illnesses



## INTRODUCTION

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**Annotation:**

This unit explains the process for a disease to be communicable. Students will know where pathogens are commonly located. They will learn the four methods of disease transmission and recognize the four stages of an illness. Students will learn about immunizations and the recommended schedule.

**Grade(s):**

X	9 <sup>th</sup>
X	10 <sup>th</sup>
X	11 <sup>th</sup>
X	12 <sup>th</sup>

**Time:** 15 hours

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**Academic Reviewer:** Sharon Bickford

**Special Education Reviewer:** Holly Spivey

**Additional Author(s):** Holly Spivey

**Resources Used:** Working With Young Children 2008 Edition; American Association of Pediatrics

**Students with Disabilities:**

For students with disabilities, the instructor should refer to the student's IEP to be sure that the accommodations specified are being provided. Instructors should also familiarize themselves with the provisions of Behavior Intervention Plans that may be part of a student's IEP. Frequent consultation with a student's special education instructor will be beneficial in providing appropriate differentiation.



## FOCUS STANDARDS

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### GPS Focus Standards:

#### EDU- HSN 7 –

**Students will identify the component elements of the communicable illness process.**

- a. Explain the process for a disease to be communicable.
- b. Describe where pathogens are commonly located.
- c. Describe the four methods of disease transmission.
- d. Recognize the four stages of an illness.
- e. Explain the need for immunizations.
- f. Describe the immunization schedule recommended by the American Pediatrics association for communicable diseases.
- g. Recognize symptoms of common illness.

#### EDU- HSN 8 –

**Students will apply procedures to reduce the infectious process.**

- c. Compare and contrast the characteristics of a healthy child with symptoms of selected childhood illnesses.

### GPS Academic Standards:

- ELA11LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions.
- SCSH3. Students will identify and investigate problems scientifically.
- SAP4. Students will analyze the physical, chemical, and biological properties of process systems as these relate to transportation, absorption and excretion, including the cardiovascular, respiratory, digestive, excretory and immune systems.

### National / Local Standards / Industry / ISTE:

- NFACS-4.4



## UNDERSTANDINGS & GOALS

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### Enduring Understandings:

- Disease can affect children in many ways.
- Some diseases may cause pain and life-long damage.
- Health problems can damage a child's self esteem.
- When health problems are prevented, detected early, or treated properly, children have a better chance of leading a healthy and happy life.
- Infectious diseases, also called communicable diseases, are never caused by one event but rather by a unique combination of events.

### **Factors Required to Produce an Infectious Disease:**

Microbe agents such as bacteria, fungi, helminthes, protozoa and viruses (also known as pathogens) cause disease.

An animal, human, or environmental reservoir must exist where the agent can live, multiply, and die.

Organisms must leave the reservoir to spread disease. This can occur in humans through breaks in the skin or lesions, coughing, and secretions from the nose. Certain infectious diseases can be transmitted from an expectant mother across the placenta to the developing fetus.

Organisms must be transmitted, either directly or indirectly, from one place to another. An organism may have more than one mode of transmission.

Organisms must have a way to enter a susceptible human host.

There must be a susceptible host in order for an infection to occur. In general, people stay healthy because of their own defense mechanisms like their immune system and general defense mechanisms, such as layers of skin, cough reflex, gastric juices, fever, diarrhea and normal bacterial balance.

Communicable diseases can spread indirectly by handling things that an infected person used. Handkerchiefs, towels, bedding, diapers, drinking cups, eating utensils, toys, and money are just a few of the many objects that may carry infectious microbes.

### **Essential Questions:**

- What is a communicable illness?
- Why is it important for people working with young children to recognize and understand the prevention of communicable diseases?
- How can diseases affect a child?
- What are the issues related to parents deciding to have their children immunized?
- What are some universal infection control precautions every person can do to prevent spread of infection?

### **Knowledge from this Unit:**

- A communicable disease is one that can be transmitted from person to person.
- A communicable disease can be caused by an agent that is infectious and transmitted from a source to a susceptible host.
- Knowledge of communicable diseases and prevention are fundamental to working with young children.
- Understanding of immunizations and the issues parents face when deciding to have their child immunized.

### **Skills from this Unit:**

- Students identify pathogens and how they cause disease.
- Students recognize the symptoms of childhood illnesses and the importance of prevention.



## ASSESSMENT(S)

**Assessment Method Type:** Select one or more of the following. Please consider the type(s) of differentiated instruction you will be using in the classroom.

- ☐ Pre-test
- ☐ Objective assessment - multiple-choice, true- false, etc.
  - ☐ Quizzes/Tests
  - X ☒ Unit test
- ☐ Group project
- X ☒ Individual project
- ☐ Self-assessment - May include practice quizzes, games, simulations, checklists, etc.
  - X ☒ Self-check rubrics
    - ☐ Self-check during writing/planning process
    - ☐ Journal reflections on concepts, personal experiences and impact on one's life
    - ☐ Reflect on evaluations of work from teachers, business partners, and competition judges
    - ☐ Academic prompts
    - ☐ Practice quizzes/tests
- ☐ Subjective assessment/Informal observations
  - ☐ Essay tests
  - ☐ Observe students working with partners
  - ☐ Observe students role playing
- ☐ Peer-assessment
  - ☐ Peer editing & commentary of products/projects/presentations using rubrics
  - ☐ Peer editing and/or critiquing
- X ☒ Dialogue and Discussion
  - ☐ Student/teacher conferences
  - X ☒ Partner and small group discussions
  - X ☒ Whole group discussions
  - ☐ Interaction with/feedback from community members/speakers and business partners
- ☐ Constructed Responses
  - ☐ Chart good reading/writing/listening/speaking habits
  - ☐ Application of skills to real-life situations/scenarios
- ☐ Post-test

**Assessment(s) Title:**

Unit 9 Test: Communicable Disease

**Assessment(s) Description/Directions:**

Matching and multiple choice.

**Attachments for Assessment(s):**

Unit 9 Test: Answer Key  
 Hershey's Kisses Game Directions  
 Presentation Rubric  
 Poster Rubric  
 Unit 9 Test



# LEARNING EXPERIENCES

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**Instructional planning:** Include lessons, activities and other learning experiences in this section with a brief description of the activities to ensure student acquisition of the knowledge and skills addressed in the standards. Complete the sequence of instruction for each lesson/task in the unit.

## Sequence of Instruction

1. Identify the Standards. Standards should be posted in the classroom for each lesson.
2. Review Essential Questions.
3. Identify and review the unit vocabulary.

Communicable disease  
Incubation stage  
Prodromal stage  
Food borne illness  
Vaccination  
Acute Stage  
Childhood diseases  
Microbe  
Convalescent stage  
Pathogens  
Organisms  
lymph glands  
Immunization  
Air borne illness  
Fecal-oral transmission  
Blood borne illness  
respiratory tract  
Antibodies  
Universal infection control precautions

4. Lesson 1: Who Has the Pathogen?
5. Lesson Two: Hide and Seek with Pathogens
6. Lesson Three: The Four Stages of an Illness
7. Lesson Four: Common Communicable Illnesses
8. Lesson Five: Have You Been Shot? Immunizations

## **LESSON ONE: Who Has the Pathogen?**

EDU- HSN 7 - **Students will identify the component elements of the communicable illness process.**

- a. Explain the process for a disease to be communicable.
- b. Describe where pathogens are commonly located.
- c. Describe the four methods of disease transmission.

## **Essential Questions:**

What is a communicable illness?

What are some universal infection control precautions every person can do to prevent spread of infection?

### **ACTIVITY ONE:**

Have the students explore the web site- <http://microbemagic.ucc.ie/>

This is an elementary web site however it does a good job of explaining pathogens.

If you do not have enough computers, use your computer and overhead projector to view the site and discuss with the entire class.

### **ACTIVITY TWO:** Play Hershey's Kisses Pathogen game:

This will teach students how a communicable disease spreads. To make a more direct link for the special education population – you can simplify and associate “pathogen” with “germs”. Remind the students that these “germs” can be found on the hands, mouth, etc.

### **ACTIVITY THREE: METHODS OF DISEASE TRANSMISSION**

- 1) Divide the class into four small groups.
- 2) Assign one of the following methods of disease transmission to each group: air borne, fecal-oral, indirect contact, and direct contact.
- 3) Students should research the method and also prevention techniques.
- 4) Tell students to plan a creative way to present their findings. Suggestions include: skits, puppet show, design a game or recreate a TV game show, make a video, etc.
- 5) Each group must provide a handout for the entire class. You can use the attached rubric to grade the presentations.

### **LESSON TWO: HIDE AND SEEK PATHOGENS**

EDU- HSN 7 - **Students will identify the component elements of the communicable illness process.**

c. Describe the four methods of disease transmission.

#### **Essential Question:**

Why is it important for people working with young children to recognize and understand the prevention of communicable diseases?

- 1) Invite a speaker from your local health department to discuss common locations for pathogens especially related to daycare centers and early childhood education programs.
- 2) Discuss the 4 methods of disease transmission: airborne; fecal-oral; direct; indirect
- 3) The following is a PowerPoint presentation that teaches where pathogens come from, common locations and how to prevent the spread of pathogens.

#### **The Case for Infection Control Practices in Home and Community Settings:**

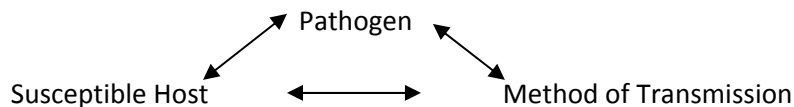
[http://www.ask.com/bar?q=where+can+pathogens+be+found+in+daycare+centers&page=5&adt=0&qsrc=2417&ab=1&u=http%3A%2F%2Fwww.fda.gov%2FOHRMS%2FDOCKETS%2FAC%2F05%2Fslides%2F2005-4184S1\\_10\\_CTFA-Scott\\_files%2Fframe.htm](http://www.ask.com/bar?q=where+can+pathogens+be+found+in+daycare+centers&page=5&adt=0&qsrc=2417&ab=1&u=http%3A%2F%2Fwww.fda.gov%2FOHRMS%2FDOCKETS%2FAC%2F05%2Fslides%2F2005-4184S1_10_CTFA-Scott_files%2Fframe.htm)

4) Have students work in small groups and make a list of places pathogens can be found in your ECE lab or in a daycare center.

5) Then have them describe ways to reduce the spread of pathogens in a daycare setting.

6) The Georgia Daycare Licensing Rules and Regulations has information about cleaning and prevention of spreading diseases. Students can review the rules and regulations for child care centers in Georgia at the following web-site: <http://daycare.com/georgia/state11.html> OR Unit 9 – Rules and Regulations attachment.

7) Discuss the Communicable Illness Model Below:



Why must these three factors be present at approximately the same time in order for infection to occur?

### **LESSON THREE: The Four Stages of an Illness**

EDU- HSN 7 - **Students will identify the component elements of the communicable illness process.**

- d. Recognize the four stages of an illness.
- g. Recognize symptoms of common illness.

EDU- HSN 8 - **Students will apply procedures to reduce the infectious process.**

- c. Compare and contrast the characteristics of a healthy child with symptoms of selected childhood illnesses.

#### **Essential Question:**

How can disease affect a child?

- Incubation Stage: child has been exposed and illness is dormant.
- Prodromal Stage/Pre-Diagnostic Period: child may be sluggish, fatigued but no real symptoms like fever, cough, lesions, etc.
- Appearance of Symptoms/Acute Stage: fever, cough, lesions or other symptoms of the disease appear.
- Recovery/Convalescent Stage: symptoms begin to lessen or disappear, however the child still does not feel 100% well.

Have each student choose a common childhood disease and design a poster that details the four stages for that illness. You can have students choose or you can have them draw from a “hat” diseases that you have chosen. Use the attached Poster Rubric to grade the posters.

Possible extra assignment could include having students complete a graphic organizer of the four stages or have them write/illustrate the four stages on separate index cards and then tie/connect them in the

proper order in a card ladder. This activity is best used for special education students or other students that may be having a hard time grasping the order or that there are four separate stages of an illness.

#### **LESSON FOUR: Communicable Illnesses**

EDU- HSN 7 - **Students will identify the component elements of the communicable illness process.**

- a. Explain the process for a disease to be communicable.
- b. Describe where pathogens are commonly located.
- d. Recognize the four stages of an illness.
- g. Recognize symptoms of common illnesses.

EDU-HSN 8 – Student will apply procedures to reduce the infectious process.

- c. Compare and contrast the characteristics of a healthy child with symptoms of selected childhood illnesses.

Essential Questions:

What is a communicable illness?

Why is it important for people working with young children to recognize and understand the prevention of communicable diseases?

How can disease affect a child?

What are some universal infection control precautions every person can do to prevent spread of infection?

- 1) In a large group, name and discuss some common childhood illnesses and ways they are transmitted. Discuss some possible ways of preventing the spread of these diseases.
- 2) Assign each student a disease commonly seen in childhood settings. Examples may include but are not limited to the following: Chickenpox, Common cold, Fifth Disease, Haemophilus Influenza type b, Measles (rubella), meningitis, mononucleosis, Mumps, Roseola Infantum, rubella, streptococcal infections, tuberculosis, acquired immune deficiency syndrome, Hepatitis B, conjunctivitis, Cytomegalo-virus, Hand/foot/mouth disease, herpes simplex, Impetigo, Lice, Ringworm, Rocky Mountain Spotted Fever, Scabies, Tetanus.
- 3) Students will create a pamphlet giving information and illustrating their assigned disease. Pamphlets should be three-fold/front and back and include
  - \_\_\_\_\_ Title of Illness and description
  - \_\_\_\_\_ Signs and Symptoms
  - \_\_\_\_\_ Infections Agent identified
  - \_\_\_\_\_ Methods of Transmission
  - \_\_\_\_\_ Incubation Period
  - \_\_\_\_\_ Length of Communicability
  - \_\_\_\_\_ Long Term Effects of Condition
  - \_\_\_\_\_ Control Measures and Prevention
  - \_\_\_\_\_ Neatness and Professionalism
  - \_\_\_\_\_ Photos
  - \_\_\_\_\_ 3 sources cited (1 book min.)
  - \_\_\_\_\_ 3 websites identified

It is the teacher's discretion as to whether or not students present their pamphlets to the class.

#### **LESSON FIVE: Immunizations**



EDU- HSN 7 - **Students will identify the component elements of the communicable illness process.**

e. Explain the need for immunizations.

f. Describe the immunization schedule recommended by the American Pediatrics association for communicable diseases.

**Essential Question:**

What are the issues related to parents deciding to have their children immunized?

- 1) Large group discussion: What are immunizations? Who has to have them? How often? What are in vaccines? This information can be found at the following website:

<http://www.aap.org/healthtopics/Immunizations.cfm>

- 2) Have students research the rules and regulations related to immunizations in Georgia daycare and ECE programs. Use the following website:

[http://rules.sos.state.ga.us/cgi-bin/page.cgi?g=BRIGHT FROM THE START GEORGIA DEPARTMENT OF EARLY CARE AND LEARNING %2FCHILD CARE LEARNING CENTERS%2Findex.html&d=1](http://rules.sos.state.ga.us/cgi-bin/page.cgi?g=BRIGHT+FROM+THE+START+GEORGIA+DEPARTMENT+OF+EARLY+CARE+AND+LEARNING+%2FCHILD+CARE+LEARNING+CENTERS%2Findex.html&d=1)

- 3) Have students review the following website from the American Pediatric Association that shows the immunization schedule:

<http://www.aap.org/healthtopics/Immunizations.cfm>

- 4) Either in small groups (4-6) or individually, have students design posters, brochures, newsletter, or flyers showing the recommended schedule of immunizations from the American Pediatric Association.
- 5) Once graded, students can give them to the parents of children in your lab, pass them out at a daycare center or place them in a laundry mat.

**Activity 2 – Debate**

Using the information learned about immunizations, give students an opportunity to research the pros and cons. This information will be used in a debate.

- 1) Divide your class in half.
- 2) Have your class prepare “debate rules” to help keep order in the class. Some students can be VERY competitive and argumentative.
- 3) Half of your class is **for** scheduled immunizations, the other half, **against** immunizing children.
- 4) Give teams time to prepare their side’s argument.
- 5) Each team has 3-5 minutes to give their argument, without interruption from the other side.
- 6) After each team has given their argument, allow them time for rebuttal.

**Attachments for Learning Experiences:**

- Directions for the Hershey Kisses Game
- Unit 9 – Child Care Learning Center Rules and Regulations

- Unit 9 – Immunization Schedule - childhood

### Notes & Reflections:

If you have a Health Science class at your school, check with them for information, resources and games related to communicable disease. You can also invite a nurse from the local health department to talk about communicable diseases in daycare centers. They are also a good resource for information on immunizations.



## CULMINATING PERFORMANCE TASK

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### Culminating Unit Performance Task Title:

Unit 9 Test



## UNIT RESOURCES

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### Web Resources:

- <http://microbemagic.ucc.ie/>
- [http://www.ask.com/bar?q=where+can+pathogens+be+found+in+daycare+centers&page=5&adt=0&qsrc=2417&ab=1&u=http%3A%2F%2Fwww.fda.gov%2FOHRMS%2FDOCKETS%2FAC%2F05%2Fslides%2F2005-4184S1\\_10\\_CTFA-Scott\\_files%2Fframe.htm](http://www.ask.com/bar?q=where+can+pathogens+be+found+in+daycare+centers&page=5&adt=0&qsrc=2417&ab=1&u=http%3A%2F%2Fwww.fda.gov%2FOHRMS%2FDOCKETS%2FAC%2F05%2Fslides%2F2005-4184S1_10_CTFA-Scott_files%2Fframe.htm) (PowerPoint)
- <http://www.aap.org/healthtopics/Immunizations.cfm>

### Attachment(s):

- Hershey's Kisses Game (lesson 1, activity 2)
- Methods of Disease Transmission Presentation Rubric (lesson 3)
- Pamphlet Rubric (lesson 4)
- Poster Rubric (lesson 5)
- Child Care learning Center Rules and Regulations
- Immunization Schedule
- 4 stages of Communicable Illness Graphic Organizer (lesson 3)

### Materials & Equipment:

- Textbooks
- computers

- **“Health, Safety & Nutrition for the Young Child” eResource CD** (includes basic PowerPoint for each chapter and test-bank) – <http://www.earlychilded.delmar.cengage.com/>

**What 21st Century Technology was used in this unit?:**

<input checked="" type="checkbox"/>	Slide Show Software	<input type="checkbox"/>	Graphing Software	<input type="checkbox"/>	Audio File(s)
<input type="checkbox"/>	Interactive Whiteboard	<input type="checkbox"/>	Calculator	<input type="checkbox"/>	Graphic Organizer
<input type="checkbox"/>	Student Response System	<input type="checkbox"/>	Desktop Publishing	<input type="checkbox"/>	Image File(s)
<input type="checkbox"/>	Web Design Software	<input type="checkbox"/>	Blog	<input checked="" type="checkbox"/>	Video
<input type="checkbox"/>	Animation Software	<input type="checkbox"/>	Wiki	<input type="checkbox"/>	Electronic Game or Puzzle Maker
<input type="checkbox"/>	Email	<input checked="" type="checkbox"/>	Website		