


Weekly Lesson Plan

Course Standard 9

HS-IHS-9

Analyze different types of microorganisms and their defining characteristics to reduce the risk of infection or illness. Demonstrate physicochemical methods and the use of PPE in preventing and controlling the spread of microbial growth.




- 9.1 Define and describe the need for asepsis and infection prevention in the classroom, laboratory, and in the healthcare environment.
- 9.2 Compare and demonstrate various physical (hand washing and PPE) and chemical methods (cleaning, disinfection, and sterilization) used to control or prevent microbial growth.
- 9.3 Examine the evolution and spread of antibiotic resistant pathogens.
- 9.4 Analyze ways microorganisms are spread using the chain of infection model.
- 9.5 Utilize personal protective equipment (PPE) and apply personal safety procedures based on OSHA (Occupational Health and Safety Administration and the Centers for Disease Control and Prevention (CDCP).
- 9.6 Describe methods of controlling the spread and growth of microorganisms.
- 9.7 Discuss Hospital Acquired Infection (HAI), the HAI standards and reporting of HAI.
- 9.8 Discuss immunizations and the schedule for vaccinations.

 Principles of Infection Control

Directions: Follow your teacher's instructions for answering the questions below.

1. List five (5) healthcare careers that would be MOST concerned with infection control, and why:

Health Career	Why would this professional be concerned with infection control?
Nurse	They go from room to room
Janitor	Making sure stuff is clean after
Doctor	Sees sick and well patients
CNA	Changing patients
physical therapist	They take equipment into the room
2. Is *E. coli* a pathogen or a nonpathogenic? Both Why? It is in our digestive system.
3. What is the difference between a microbe and microorganism?
Same
4. What is the ideal environment for the growth of microorganisms?
Dark, moist
5. When you pour hydrogen peroxide on a bloody abrasion, it bubbles. The bubbles give off oxygen. What type of microbe would potentially be destroyed by the use of hydrogen peroxide – aerobic or anaerobic?
Anaerobic
6. Bacteria are classified by shape. Draw an example of each shape.

Shape	My Drawing
Spirilla	
Bacilli	
Cocci	

Standard Seven – Safety Practices 1 NCHSE

8. What type of organism causes Malaria, Dysentery and African sleeping sickness?
Protozoa
9. What type of microbe can only be seen with an electron microscope?
Virus
10. What type of organism is plant-like?
Fungi
11. Name one infectious disease that is caused by neglected parasitic infection?
Trichomoniasis
12. A patient has a respiratory infection caused by a tubercle bacillus. Can it be treated with antibiotics?
Yes
13. A soccer player and shows you his feet. He doesn't have any pain, itching, or oozing. What do you think could be wrong with his feet, what caused it, and how will it be treated?
Fungal infection
14. What is the difference between a nosocomial infection and an opportunistic infection?
Nosocomial is acquired in healthcare setting. Opportunistic happens when immune system is low.
15. Place the following in order from the item with the most microbes to the item with the least microbes.

<u>3</u>	Disinfected thermometer
<u>1</u>	Contaminated dressing
<u>4</u>	Sterile towel
<u>2</u>	Clean countertop

Civil war conditions created an environment for dysentery as soldiers lived crowded in poor diets of fried meat, they used the same pan to cook their food, and they used to wash up; and a latrine upstream from their camp. The result was that dysentery disorders were the most common during the Civil War and killed more soldiers than any other disease. Soldiers called dysentery "quickstep".





Weekly Lesson Plan

Name:

Grade:

Monday

9.1 Define the need for infection control
9.2 Compare physical as well as chemical controls
PowerPoint
Presentation on Chapter 10- Infection Control

Tuesday

9.3 Observe the spread of pathogens
Glo Germ Lab/
In notebook define terms at beginig of chapter

Wednesday

9.4 Analyzie the chain of infection
Chain of infection entry in notebook

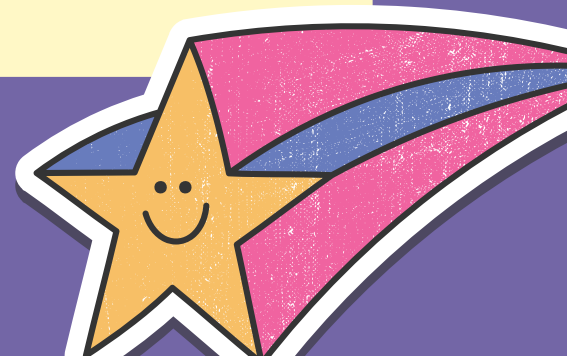
Thursday

9.5 Utilize PPE, discuss OSHA, CDC
Don & Doff PPE, gloves, gown, and mask

Friday

9.6 Discuss methods for preventing spread of infection
Handwashing lab

Notes





Weekly Lesson Plan

Name: Kristine Spivey

Grade: 3rd and 4th block

Monday

9.7 Discuss hospital acquired infections

9.8 Vaccination schedules

Discuss recent news with measles outbreak in Florida and how vaccines control huge outbreaks

Tuesday

Create a flyer to demonstrate Contact, Droplet or Airborne precautions- upload on Google Classroom

Wednesday

Principles of Infection Control Handout

- E-coli (good/bad)
- Bacteria
- Nosocomial Infection
- Government Agencies

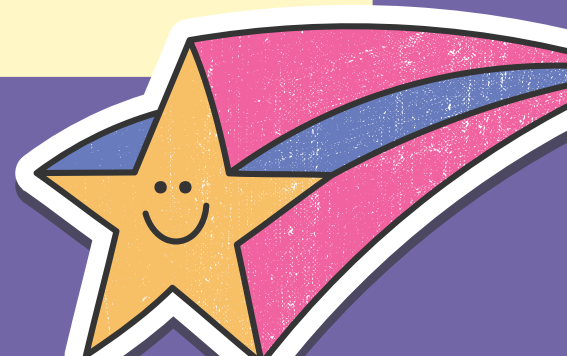
Thursday

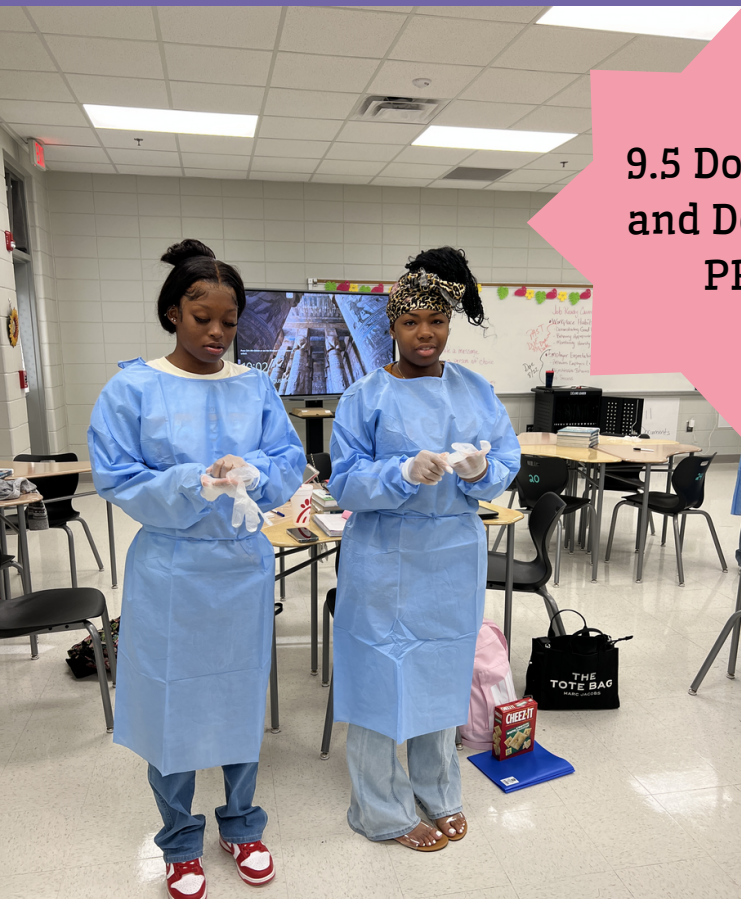
- Kahoot to review for test on Infection Control
- Safety Inspection

Friday

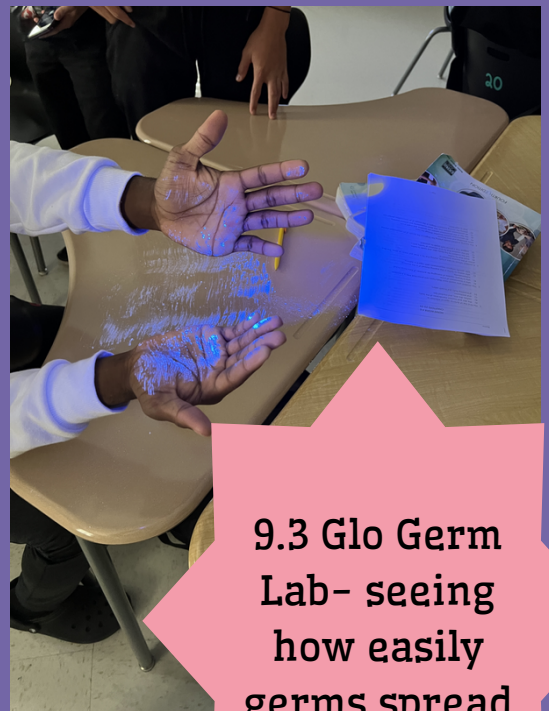
Test
Chapter 10
Infection Control

Notes






9.5 Donning and Doffing PPE



9.3 Glo Germ Lab- seeing how easily germs spread



DROPLET PRECAUTIONS

Influenza/ Flu




Propelled short distances in the air, through talking sneezing, and coughing

Before entering patients room:

- Wash hands
- DON PPE:** gown, gloves, mask, and eye protection

After exiting patients room:

- DOFF** Mask, eye protection, gloves, and gown
- Wash hands

Students created a flyer on a type of precaution

Group Name: _____ Date: _____
 Topic: _____
 Precautions Group Project

Item Evaluated	Points Possible					Points Allocated
	Superior	Excellent	Good	Fair	Poor	
Poster:						
Artist/design value	10	8	6	4	2	
Creativity	10	8	6	4	2	
Neatness	10	8	6	4	2	
Infection control information – clear, concise and includes important information	20	16	12	8	4	
Presentation/Demonstration:						
Topic information presented in a clear and concise manner	10	8	6	4	2	
Team members were able to communicate important information in an interesting and informative manner	15	12	9	6	3	
Voice (volume/grammar) and enthusiasm	5	4	3	2	1	
Appearance, poise, eye contact, gestures	10	8	6	4	2	
Group Work:						
All team members worked cooperatively and contributed to the success of the project.	10	8	6	4	2	
TOTAL POINTS	100	72	54	36	18	

Adapted with permission from National HGGA

Comments: *Very good!*

HS-IHS-9

Test

9.1,9.2,9.3,9.4,
9.5,9.6,9.7,
9.8

Class: 4th Block Date: 2-13-24

... mainly person to person through coughing or sneezing by infected people.

... when the bacteria live in the body without causing symptoms.

... virus is transmitted by infected birds to humans and animals.

... 78

4. It is never necessary to change your gloves while you are working on the same patient, only when you move from one patient to another.
 True
 False

5. Opportunistic infections are the result of infectious material carried by health care workers from one patient to another.
 True
 False

6. Almost all bacteria can be destroyed by antibiotics.
 True
 False

7. MRSA (methicillin-resistant *Staphylococcus aureus*) is a virus.
 True
 False

8. The number of hospitalized patients that get infections unrelated hospital is increasing.
 True
 False

9. A specially fitted mask must be worn when working with AIDS.
 True
 False

10. Mental stress can affect the body's ability to fight infection.
 True
 False

Indicate the answer choice that best completes the statements

Chapter 10

11. What is the term for microorganisms that cause damage by nourishing themselves at the expense of their hosts?
 a. Hosts
 b. Parasites
 c. Toxins
 d. Symbiosis

12. Which of the following diseases is contracted by the highest number of health care workers each year?
 a. AIDS
 b. Hepatitis B
 c. TB
 d. AIDS, Hepatitis B, and TB each affect about the same number of workers.

13. What was the immediate result of the work of Louis Pasteur?
 a. Invention of the microscope
 b. Creation of the germ theory
 c. Recognition of microbiology as a science
 d. Development of standard precautions

14. Which of the following procedures is an example of medical asepsis?
 a. Covering the face with a surgical mask
 b. Wearing sterile gloves
 c. Handwashing
 d. Sterilizing instruments

15. Which of the following is true about *Clostridium difficile* (*C. difficile*)?
 a. It is becoming less of a concern as it is easily treated.
 b. It causes severe respiratory distress.
 c. It causes life-threatening diarrhea.
 d. It is a virus.

16. Against which of the following diseases can health care workers be protected by a vaccine?
 a. AIDS
 b. Hepatitis B
 c. TB
 d. No vaccine has been created for any of these diseases.

17. What is the proper way to remove linen and other items from the room of a patient who is in isolation?
 a. Dispose of items in special medical waste container
 b. Bag items once in the room, and then place them
 c. Double-bag items before leaving the room.
 d. Hand them to a coworker in the hall who does no

18. Why are paper towels most appropriate for drying th

Chapter 10

a. Microorganisms can live in wet cloth towels.
 b. Cloth towels are more expensive.
 c. Paper towels are more convenient because they do not require laundering.
 d. Paper dries the hands more quickly and effectively.

19. What is the principal purpose of a rise in body temperature?
 a. Serves as a sign of infection
 b. Higher temperature kills microorganisms
 c. Heat required to produce white blood cells
 d. Activates the immune response

20. What is the correct way to handle a needle after it is used to give a vitamin injection to a healthy patient?
 a. Discard it in a wastebasket with other trash after recapping it.
 b. Discard it in a biohazard bag.
 c. Sterilize it as soon as possible to avoid the possible spread of infection.
 d. Place it immediately in a puncture-resistant container.

21. Why are diseases caused by viruses often very difficult to treat?
 a. They are difficult to identify.
 b. They are obligate intracellular parasites.
 c. They cannot be seen under the microscope.
 d. They cannot be destroyed by antibiotics.

22. All pathogens that are easily transmitted and have the potential to cause epidemics require the use of:
 a. transmission-based precautions.
 b. OSHA standards.
 c. CDC first alert precautions.
 d. neutropenic precautions.

23. When should medical assistants who work in private physicians' offices wear nonsterile gloves?
 a. At all times
 b. When there may be contact with body fluids or broken skin
 c. Only when working with patients who have infections
 d. When assisting physicians with minor surgeries

24. When should health care workers who are in direct contact with patients follow standard precautions?
 a. When working with patients who have infections
 b. At all times
 c. Before and during surgical procedures
 d. When coming on duty and after using the toilet

25. The Occupational Safety and Health Administration (OSHA) conducts visits at health care facilities in order to:
 a. ensure employee safety.
 b. license onsite laboratories.

Chapter 10

c. provide vaccines for workers.
 d. research the cause of diseases.

26. What is the proper action to take if blood is splashed on a countertop during a procedure?
 a. Clean the spill with an antiseptic as soon as possible.
 b. Wipe it up with a paper towel.
 c. Clean the spill as soon as possible with a disinfectant.
 d. Scrub the area well after the patient leaves.

27. What is the difference between medical and surgical asepsis?
 a. Medical asepsis is used in physicians' offices; sterile asepsis is used in hospitals.
 b. Sterile asepsis is used when serious infections are present.
 c. Only medical asepsis involves handwashing.
 d. Medical asepsis decreases pathogens; sterile asepsis eliminates pathogens.

28. How does the body's immune response operate to fight infection?
 a. Produces antibodies
 b. Helps the body process medications
 c. Suppresses the normal flora
 d. Increases the number of resident flora

29. The germ theory states that:
 a. infectious diseases can be cured with antibiotic therapy.
 b. most microorganisms are harmful to humans.
 c. health care workers should wash their hands frequently.
 d. bacteria cause many specific diseases.

30. What is the most common reason that long-term antibiotic therapy can cause new infect
 a. Interferes with the body's immune response
 b. Masks symptoms that then go untreated
 c. Destroys the body's normal flora
 d. Weakens the physiological state of the body

Chapter 10

31. Inhibits growth of microorganisms E

32. Disease-causing microorganism A

33. Kills all microorganisms X H

34. Occurs while a person is receiving health care X

35. Tends to occur when the body is in a weakened state C

36. Harmless microorganisms that are always present in or on the body X G D

37. Requires oxygen to live X B

38. Destroys most bacteria and viruses F

Match each type of microbe with the following diseases it causes.

a. Bacteria
 b. Virus
 c. Fungi
 d. Rickettsia
 e. Protozoa

39. Common cold, influenza, chickenpox, hepatitis B, AIDS, measles, polio B

40. Dysentery, trichomonas, malaria E