

State-Approved Curriculum NURSE AIDE I TRAINING PROGRAM

July 2013 Module B



North Carolina Department of Health and Human Services
Division of Health Service Regulation
Health Care Personnel Registry Section
Center for Aide Regulation and Education
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Module B – Infection Prevention Teaching Guide

Objectives

- Relate the chain of infection to the work of a nurse aide in long-term care facilities.
- Explain the concept of breaking the chain of infection and its importance to infection prevention.
- Compare Standard Precautions and Transmission-based Precautions.
- Discuss the use of Personal Protective Equipment by the nurse aide.
- Explain why residents in long-term care facilities are at risk for infection.

Supplies

- Scotch/cellophane tape – 12-inches per student, scissors, paper clips (Activity #1B)
- Used tissue (tissue, course ground mustard or hot dog mustard) (Teaching Tip #2B)
- PPE devices – mask, gown, gloves, face shield, and goggles (Teaching Tip #10B)
- Sharps Container (Teaching Tip #11B)
- Scotch/cellophane tape, scissors (Teaching Tip #12B)

Advance Preparation – In General

- Review curriculum and presentation materials
- Add examples or comments to Notes Section
- Set up computer/projector
- Establish Internet connection

Advance Preparation – Teaching Tips

- **#2B Simulate Used Tissue:** Create a simulated used tissue using a tissue and course ground mustard or regular hot dog mustard. At the beginning of class, determine if any students have allergies to mustard.
- **#9B Interactive Video:** Familiarize self and preview an excellent video about hospital-acquired infection, from the U.S. Department Health Human Services (U.S. DHHS). Click on start to show the introduction. After the introduction, you may branch off into 5 different directions. The character - Dena, the Registered Nurse is an appropriate choice for this level of student. Preview Dena beforehand. There may be several areas that you want to right arrow click past in order to save time. Be sure and click the “what would have happened if you had not made good choices” button at the end.
www.hv.hs.goash/initiatives/hai/training/partneringtoheal.html
- **#10B Pass Around PPE:** Gather PPE devices (mask, gown, gloves, face shield, and goggles).
- **#11B Sharps Container:** Get a sharps container.

- **#12B 7-Day Hepatitis B Virus:** Cut out approximately 5 large Hepatitis B Viruses for the classroom and one small Hepatitis B Virus for each student. Consider laminating large Hepatitis B Viruses. Cut tape. Decide placement of Hepatitis B Viruses in room beforehand, but do not place until directed to do so.

Advance Preparation – Activities

- **#1B Build a Chain of Infection:** For each student, duplicate link sheet, cut out link strips, and paperclip sets of six (6) together. Provide a roll of tape and ask students to pass the tape around the room. Instruct students to tear off six (6) strips of tape, two (2) inches in length and to place on the edge of their tables or desks.
- **#2B Chain of Infection:** Duplicate student worksheet for each student. Decide if it will be homework or class work and if class work – decide if it will be individual or group.

**Module B – Infection Prevention
Definition List**

Aerobic – requires oxygen to survive

Airborne Precautions – a transmission based precaution that prevents spread of harmful germs that travel in the air at a distance, using Standard Precautions, plus a respirator, depending on specific disease

Anaerobic – does not need oxygen to survive

Aseptic – clean

Bloodborne Pathogens – harmful germs found in human blood and can cause infection and disease

Body Fluids – blood, pus, liquid from sores, urine, stool, tears, spit, droplets from sneezes and coughs, and sputum

Carriers – people who have harmful germs living on or in their body, but are not visibly sick

Centers for Disease Control and Prevention (CDC) – an agency of the federal government that is in charge of the control and prevention of disease, in our country

Chain of Infection – way to explain how infection is passed around from one host to another host by using a picture of a chain

Contact Precautions – a transmission based precaution that prevents spread of harmful germs by direct contact, using Standard Precautions, plus gown and gloves

Direct Contact – mutual touching of two things, people, or organisms which may cause the spread of harmful germs

Droplet Precautions – a transmission based precaution that prevents spread of harmful germs that travel by droplets in the air, using Standard Precautions, plus mask and gloves

Droplets – particles of liquids that are sprayed from the nose or mouth when a person sneezes, coughs, sings, talks, or laughs

Goggles – personal protective equipment used to protect eyes from harmful germs

Gloves – personal protective equipment used to protect skin on hands from harmful germs

Gowns – personal protective equipment used to protect skin and clothes from harmful germs

Hand Hygiene – washing hands with soap and water or alcohol-based hand rubs

Healthcare-associated infection (HAI) – an infection that a resident gets while staying or living in a health care setting

Hepatitis B – a disease of the liver caused by a virus

Host – an animal or a person

Indirect Contact – harmful germs spread by an object that has touched body fluids from infected person

Infection – a disease or condition of the body that occurs when harmful germs get into the body and grow in number

Infection Prevention – all of the things that people do to control and prevent the spread of infection

Infectious Agent – a harmful germ that causes an infection

Influenza (flu) – a contagious respiratory illness

Localized Infection – an infection found in one part of the body with symptoms noted at that one part of the body

Masks – personal protective equipment used to protect mouth and nose from harmful germs

Medical Asepsis (clean technique) – practice used to remove or destroy germs and to prevent their spread from one person or place to another person or place

Microorganisms – also called germs that live almost everywhere and may cause problems or diseases

Mode of Transmission – how harmful germs travel or get around from place to place

Mucus Membranes – linings of natural body openings, such as mouth, nose, rectum, genitals and eyes

Non-intact Skin – cuts, scratches, and sores of the skin

Norovirus – a contagious gastrointestinal illness

Outbreak – more illness in more residents than what is expected or what is normal for the facility of a healthcare associated infection

Personal Protective Equipment (PPE) – a group of items used to block harmful germs from getting on skin and clothes

Point of Care – refers to the place where three (3) elements occur together: the resident, the nurse aide, and the care or treatment involving resident contact; most point of care occurs in resident's room

Portal of Entry – a body opening of a person that allows harmful germs to enter into the body

Portal of Exit – any way that harmful germs escape from reservoir

Reservoir – place where harmful germs live, grow, and increase in numbers

Sharps – items that have corners, edges, or projections that can cut or pierce the skin, such as needles and razor blades

Sharps Container (needle disposal container or sharps box) – hard and leak-proof biohazard container used only for sharps

Shields – personal protective equipment used to protect the whole face from harmful germs

Sputum – mucous coughed up from lungs

Standard Precautions – the first of two levels to prevent/control infections; the basic tasks that health care workers must do in order to prevent and control spread of infection, whereby all body fluids, non-intact skin, and mucus membranes are treated as if they were infected

Susceptible Host – person who does not have an infection now, but is at risk for becoming infected from harmful germs

Systemic Infection – an infection that affects an entire body part or whole body system

Transmission Based Precautions – the second of two levels to prevent/control infections; specific tasks and measures that health care workers must do when caring for residents who are infected or may be infected with specific types of infections

World Health Organization (WHO) – an organization within the United Nations whose purpose is to aid in the achievement of highest level of health for all of the world's people

Module B – Infection Prevention	
(S-1) Title Slide (S-2) Objectives <ol style="list-style-type: none"> 1. Relate the chain of infection to the work of a nurse aide in long-term care facilities. 2. Explain the concept of breaking the chain of infection and its importance to infection prevention. 3. Compare Standard Precautions and Transmission-based Precautions. 4. Discuss the use of Personal Protective Equipment by the nurse aide. 5. Explain why residents in long-term care facilities are at risk for infection. 	
Content	Notes
(S-3) Infection Prevention <ul style="list-style-type: none"> • All of the things that people do to control and prevent the spread of infection 	
(S-4) Infection <ul style="list-style-type: none"> • A disease or condition of the body that occurs when harmful germs get into the body and grow in number • Examples <ul style="list-style-type: none"> ○ Urinary tract infection, including bladder infection and kidney infection ○ Skin infection, including infected wounds and cuts ○ Respiratory infection, including pneumonia, flu and the common cold ○ Gastrointestinal infection, including stomach infection, intestinal infection, or food poisoning • Two types of infection are localized and systemic 	
(S-5) Localized Infection <ul style="list-style-type: none"> • An infection found in one part of the body and symptoms are limited to that one part of the body • Example – an infected finger (when a finger becomes infected, it may be red, painful, hot, puffy, with drainage) 	
(S-6) Systemic Infection <ul style="list-style-type: none"> • An infection that affects an entire body part or whole body system • Different types of symptoms including fever, chills, confusion, feeling tired, nausea/vomiting, and possibly symptoms specific to the entire body part or body system • Example – respiratory infection 	
TEACHING TIP #1B: Respiratory Infection Symptoms Ask students: <ul style="list-style-type: none"> • What kind of symptoms do you think someone would have if he had a respiratory infection? 	

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(S-7) Symptoms of Respiratory Infection <ul style="list-style-type: none"> • Fever and chills • Sniffling and snorting • Coughing and sneezing • Hacking up globs of green or yellow, slimy mucous 	
TEACHING TIP #2B: Simulated Used Tissue First, determine if anyone is allergic to mustard. If so, omit this teaching tip. Pass around a simulated used tissue. <ul style="list-style-type: none"> • While the simulated used tissue is being passed around, go to slide 8. 	
(S-8) TEACHING TIP #3B: Respiratory Infection Discussion Ask students: <ul style="list-style-type: none"> • How do you feel when someone coughs or sneezes on you? • How do you feel when someone hands you a moist, crumpled up, used tissue with yellow, thick, slimy globs of mucous on it, to throw away? 	
(S-9) TEACHING TIP #4B: Bladder Infection Symptoms After everyone has handled the simulated used tissue and it is discarded, ask students: <ul style="list-style-type: none"> • What kind of symptoms do you think a female resident would have if she had a bladder infection? 	
(S-10) Symptoms of Bladder Infection <ul style="list-style-type: none"> • Fever and chills • Pain when using bathroom • Bad or strong smelling urine, with possible blood in it • Resident states “my urine stinks and it hurts when I have to go to the bathroom” (may use a different word for urine) 	
(S-11) Stomach Infection <ul style="list-style-type: none"> • Person with a stomach infection will probably have stomach pains and may vomit 	
(S-12) TEACHING TIP #5B: Discussion About Vomit	

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<p>Ask students:</p> <ul style="list-style-type: none"> • Have you ever had someone vomit on you? • Have you ever had to clean up after someone who has vomited? • How did you feel if you got the vomited liquid on your hand? • What did you do? • Do you wish you had some gloves to put on when you were cleaning up the vomit? 	
<p>(S-13) Microorganisms</p> <ul style="list-style-type: none"> • Are also called germs • Live almost everywhere – both inside and outside the body • Some help and others cause problems or diseases • Requirements to survive <ul style="list-style-type: none"> ○ Warmth ○ Moisture ○ Some need oxygen to live (aerobic) and others do not (anaerobic) ○ Tissue to feed on • Examples – bacteria, viruses, parasites, fungi • Cause infections 	
<p>(S-14) Medical Asepsis</p> <ul style="list-style-type: none"> • Also called clean technique • Practices used to remove or destroy microorganisms and to prevent their spread from one person or place to another person or place 	
<p>(S-15) Chain of Infection</p> <ul style="list-style-type: none"> • Way to explain how infection is passed around from one host (person or animal) to another host by using picture of a chain • Foundation for spreading and prevention of spreading an infection • Has six (6) links • Each link represents something (or someone) needed to pass on an infection from one to another • For an infection to occur and spread, each of six links must be present • As long as links are joined together, an infection will be passed from one person, to another person, to another person, and so on • So, as long as links are joined together, an infection will be passed from one resident, to another resident, to a staff member, to another resident, and so on • By breaking any link in the chain, a new infection can be prevented • Infection prevention practices such as hand washing, cleaning equipment, and using masks will break a link in the chain 	

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<ul style="list-style-type: none"> Will learn ways to break chain of infection and help keep you, your co-workers, and your residents infection-free; this is one time when breaking something is a good thing! 	
<p>ACTIVITY #1B: Build a Chain of Infection Begins (Individual)</p> <p>Distribute the paper clipped strips of paper to the class and tell students:</p> <ul style="list-style-type: none"> As we learn about the different links of the chain of infection, you are going to make your own chain of infection. As we talk about the different links of the chain of infection, please write one example of each link on the appropriate slip of paper. For example, you may choose to write the word, bacteria, on the first link. As we go along I will direct you when and how to construct the chain. 	
<p>(S-16) Link #1 Infectious Agent</p> <ul style="list-style-type: none"> A harmful germ that causes an infection Examples – bacteria, a virus, a fungus, or a parasite 	
<p>ACTIVITY #1B: Build a Chain of Infection Continues</p> <p>Tell students:</p> <ul style="list-style-type: none"> Write an example on link 1 Tape the 1st link so it forms a circle 	
<p>(S-17) Link #2 Reservoir</p> <ul style="list-style-type: none"> Place where harmful germs live, grow, and increase in numbers (a home for germs) Examples – a person, an animal, dirt, water, or other places in environment 	
<p>(S-18) Link #2 Reservoir</p> <ul style="list-style-type: none"> When reservoir is person, some places where harmful germs may be living include: <ul style="list-style-type: none"> Blood The skin The digestive tract, such as the mouth, stomach, intestines The respiratory tract, such as the nose, throat or lungs 	
<p>(S-19) Link #2 Reservoir</p> <ul style="list-style-type: none"> Can you look at a person and ALWAYS tell if he has an infection that can be given to you, a co-worker, or another resident? 	

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<ul style="list-style-type: none"> The answer is “NO, not always.” 	
<p>(S-20) Link #2 Reservoir</p> <ul style="list-style-type: none"> When you think about people being reservoirs for harmful germs, all human beings belong in one of three groups: <ul style="list-style-type: none"> First group – people not infected, are well and are not a current reservoir for germs Second group – people who are infected, are obviously sick, and you know these people might get you sick Third group – people who are carriers; have the harmful germs living on or in their body, but germs are not making them sick; because they are not sick, you do not know they have infections; carriers of an infection do not show symptoms of infection, but can still infect others 	
<p>(S-21) Link #2 Reservoir</p> <ul style="list-style-type: none"> NOW, think about infection in terms of an iceberg People we know about who have infections and can infect us are only the tip of the iceberg Think about all those large numbers of carriers of infection out there that we do not know about and who could possibly infect us! 	
<p>TEACHING TIP #6B: Time to Ponder</p> <p>Allow participants time to ponder information.</p>	
<p>(S-22) Link #2 Reservoir</p> <ul style="list-style-type: none"> Key to prevent you, your co-workers, and your residents from getting infected is to treat everyone, EVERYONE as possible reservoirs or hiding places for harmful germs 	
<p>ACTIVITY #1B: Build a Chain of Infection Continues</p> <p>Tell students:</p> <ul style="list-style-type: none"> Write an example on link 2 Link the 1st link with the 2nd link and tape the 2nd link so it forms a circle 	
<p>(S-23) Link #3 Portal of Exit</p> <ul style="list-style-type: none"> Any way or route that harmful germs escape from reservoir Examples <ul style="list-style-type: none"> The nose and mouth – harmful germs leave in mucous droplets and saliva (or spit) The gastrointestinal tract – harmful germs leave in stool or 	

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<p>vomit</p> <ul style="list-style-type: none"> ○ Skin – harmful germs leave through direct contact or in blood, pus, or other liquids that come from inside of body 	
<p>ACTIVITY #1B: Build a Chain of Infection Continues</p> <p>Tell students:</p> <ul style="list-style-type: none"> • Write an example on link 3 • Link the 2nd link with the 3rd link and tape the 3rd link so it forms a circle 	
<p>(S-24) Link #4 Mode of Transportation</p> <ul style="list-style-type: none"> • How harmful germs travel or get around from place to place 	
<p>(S-25) Link #4 Mode of Transportation</p> <ul style="list-style-type: none"> • Number one way a harmful germ travels from place to place is by our hands 	
<p>(S-26) Link #4 Mode of Transportation</p> <ul style="list-style-type: none"> • How do our hands provide transportation for germs? <ul style="list-style-type: none"> ○ Get germs on hands after coughing, sneezing, wiping noses, or using restroom and then spread the germs to someone else or to an object that someone else might touch ○ We touch blood, infected wound, stool, or vomit of infected person, then do not clean our hands properly before going to next resident or before touching something that someone else might touch ○ May be spread by either direct or indirect contact 	
<p>(S-27) Direct Contact</p> <ul style="list-style-type: none"> • One way harmful germs travel is by direct contact with body fluids where germs live, such as <ul style="list-style-type: none"> ○ Blood ○ Sputum (mucous that is coughed up) ○ Pus or wound fluid (from a cut or sore) ○ Saliva (or spit) ○ Stool (or bowel movement) ○ Vomit • Examples <ul style="list-style-type: none"> ○ Needle sticks with blood on the needle ○ Contact with skin that has a rash, cuts or scratches ○ Splash or spray of body fluids to the mucus membranes of the eyes, nose and/or mouth 	

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<p>(S-28) Indirect Contact</p> <ul style="list-style-type: none"> • Another way for a person to get infected by body fluids is by indirect contact • Indirect contact means that harmful germs are spread by an object that had touched body fluids from infected person; when another person touches the object, that person might get an infection • Examples <ul style="list-style-type: none"> ○ Dirty needles or instruments ○ Used bandages ○ Hands of family members or nurse aides who did not practice good hand washing 	
<p>(S-29)TEACHING TIP #7B: Self-reflection</p> <p>Remind students:</p> <ul style="list-style-type: none"> • About the feelings expressed earlier when someone sneezes on them and how everyone agreed that it would not make them very happy 	
<p>(S-30) Droplets</p> <ul style="list-style-type: none"> • Some harmful germs (like the flu) can be spread or travel by way of droplets <ul style="list-style-type: none"> ○ Droplets spread after being sprayed from nose or mouth when infected person sneezes, coughs, sings, talks, or laughs ○ Droplets might land on another person (direct contact), or might land on doorknob, railing, or other surface that another person might touch (indirect contact) 	
<p>(S-31)Link #4 Mode of Transportation</p> <ul style="list-style-type: none"> • Key to prevent you, co-workers, and residents from getting infected is to treat all body fluids as possible carriers of harmful germs 	
<p>(S-32) Link #4 Mode of Transportation</p> <ul style="list-style-type: none"> • Other ways harmful germs get around <ul style="list-style-type: none"> ○ Through animal and insect bites; an insect or animal bites an infected person or animal and then bites a new person or animal and shares the infection ○ By eating or drinking food or water that is infected with harmful germs 	
<p>ACTIVITY #1B: Build a Chain of Infection Continues</p> <p>Tell students:</p> <ul style="list-style-type: none"> • Write an example on link 4 	

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<ul style="list-style-type: none"> Link the 3rd link with the 4th link and tape the 4th link so it forms a circle 	
<p>(S-33) Link #5 Portal of Entry</p> <ul style="list-style-type: none"> Any body opening of a person that allows harmful germs to enter into the body Germs can usually get in the same way they got out, so the main portals of entry are the same as the portals of exit Examples of portals of entry Include: <ul style="list-style-type: none"> The nose and mouth – person breathes in harmful germs The gastrointestinal tract – when person eats food or drinks liquids that have harmful germs in them Any breaks in skin that allow harmful germs to get past skin, such as open sore, cut, needle stick, and cracked skin 	
<p>ACTIVITY #1B: Build a Chain of Infection Continues</p> <p>Tell students:</p> <ul style="list-style-type: none"> Write an example on link 5 Link the 4th link with the 5th link and tape the 5th link so it forms a circle 	
<p>(S-34) Link #6 Susceptible Host</p> <ul style="list-style-type: none"> Person who does not have an infection now, but is at risk for becoming next person to get infected from harmful germs Susceptible host is a person whose body for some reason cannot fight off infection 	
<p>TEACHING TIP #8B: Reasons Body Cannot Fight Infection</p> <p>Ask students:</p> <ul style="list-style-type: none"> Think of and tell me some reasons why a person's body cannot fight off an infection. 	
<p>(S-35) Link #6 Susceptible Host</p> <ul style="list-style-type: none"> Some of the reasons why a person's body cannot fight off an infection include <ul style="list-style-type: none"> Age Poor nutrition Stress Chronic illnesses Not having proper vaccinations Open cuts or skin breakdown 	

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<ul style="list-style-type: none"> ○ Fatigue 	
<p>(S-36) Link #6 Susceptible Host</p> <ul style="list-style-type: none"> • Residents living in long-term care facilities more likely to get infection than other people who live in the community because <ul style="list-style-type: none"> ○ Many have several things wrong with health, such as a resident who may have lung, heart, and kidney problems ○ Many are elderly ○ More likely to come into contact with harmful germs because they live close together and because they share staff and medical equipment 	
<p>ACTIVITY #1B: Build a Chain of Infection Continues</p> <p>Tell students:</p> <ul style="list-style-type: none"> • Write an example on link 6 • Link the 6th link with both the 5th link and the 1st link and tape the 6th link so it forms a circle and completes the chain 	
<p>(S-37) Chain of Infection</p> <ul style="list-style-type: none"> • How does chain of infection relate to a nurse aide's work in long-term care? <ul style="list-style-type: none"> ○ As a nurse aide, you will have a huge responsibility to protect self, family, and residents from danger because you will work in environment that encourages infection ○ People who you care for generally are elderly, sickly, and/or susceptible to diseases ○ What is just a cold to most people can be deadly to older adult ○ If you break any link in chain of infection, the occurrence of new infection can be prevented ○ You will have many chances at work to break chain of infection 	
<p>(S-38) Breaking Chain of Infection at Each Link – Examples</p> <ul style="list-style-type: none"> • If YOU can break any link in the Chain of Infection, YOU can prevent the occurrence of a new infection • Examples of a very simple way that everyone can break each link of the chain <ul style="list-style-type: none"> ○ Break first link, the infectious agent, by getting an immunization against flu ○ Break second link, the reservoir, by staying home from work when you are sick ○ Break the third link, which is the portal of exit, by covering your mouth and nose when you sneeze ○ Break fourth link, which is mode of transmission, by washing 	

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<p>your hands</p> <ul style="list-style-type: none"> ○ Break the fifth link, which is the portal of entry, by covering an open sore with a bandage ○ Break the sixth link, which is the susceptible host, by eating a proper diet 	
<p>ACTIVITY #1B: Build a Chain of Infection Concludes</p> <p>Tell students:</p> <ul style="list-style-type: none"> • It is now time to break your chains of infection. • I am going to go around the room and have each of you choose a link of your chain, have you break the link, and then tell everyone what one thing you did to break the link. <p>Call on each student. You may want to clap when each student is done and say, “great job.”</p>	
<p>(S-39) Breaking Chain of Infection</p> <ul style="list-style-type: none"> • Congratulations each of you just STOPPED AN INFECTION 	
<p>ACTIVITY #2B: Chain of Infection (Individual or Group)</p> <p>Distribute to students. Tell students:</p> <ul style="list-style-type: none"> • Write examples of each link from the choices in the center of the page <p>When done, either take up assignment and grade or go over answers with the class.</p>	
<p>(S-40) Healthcare-associated infection (HAI)</p> <ul style="list-style-type: none"> • An infection that a resident gets while staying or living in a health care setting 	
<p>TEACHING TIP #9B: Interactive Video</p> <p>Show interactive video:</p> <p>www.hv/hs.goash/initiatives/hai/training/partneringtoheal.html</p> <p>Click on start to show the introduction. After the introduction, you may branch off into 5 different directions. The character - Dena, the Registered Nurse is an appropriate choice for this level of student.</p>	

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Click on Dena. Be sure and click the “what would have happened if you had not made good choices” button at the end. Discuss with class.	
(S-41) CDC <ul style="list-style-type: none"> Probably heard about the CDC – maybe on the news or in a movie CDC stands for Centers for Disease Control and Prevention An agency of the federal government that is in charge of the control and prevention of disease in our country Works to protect the public by helping keep members of the public healthy and safe by education Developed a two-tiered or two level way to prevent and control infections in health care – Standard Precautions and Transmission-Based (Isolation) Precautions 	
(S-42) Standard Precautions <ul style="list-style-type: none"> The first level to prevent and control infections The basic tasks that health care workers must do when caring for EACH and EVERY RESIDENT in order to prevent and control spread of infection This means that <u>ALL</u> body fluids, non-intact skin, and mucus membranes are treated as if they were infected 	
(S-43) Review of Key Terms <ul style="list-style-type: none"> Recall body fluids include blood, pus, liquid from sores, urine, stool, tears, spit, droplets from sneezes and coughs, and sputum coughed up from lungs Non-intact skin include cuts, scratches, sores that may be oozing infected fluids (reminder: non-intact skin is both a portal of exit and portal of entry) Mucus membranes are the linings of natural body openings, such as mouth, nose, rectum, genitals and eyes <u>ALL</u> body fluids, non-intact skin, and mucus membranes must be treated as if they were infected 	
(S-44) Importance of Standard Precautions <ul style="list-style-type: none"> Why must Standard Precautions be used with each and every resident? <ul style="list-style-type: none"> Because there are residents who you may care for who have infections that no one knows about Yes, a resident may be infected and not showing any signs or symptoms of being sick Without using Standard Precautions, you can get the infection and pass it along to others 	

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(S-45) Standard Precautions – Nurse Aide’s Role <ul style="list-style-type: none"> Nurse aides must follow Standard Precaution rules to protect self, co-workers, and residents from getting infections 	
(S-46) Hand Hygiene <ul style="list-style-type: none"> New term in health care CDC defines hand hygiene as washing hands with <ul style="list-style-type: none"> soap and water or alcohol-based hand rubs You have probably been washing hands with soap and water all your life, but may not be as familiar with alcohol-based hand rubs Alcohol-based hand rubs may be gels, rinses, or foams that do not need water to use 	
(S-47) Hands <ul style="list-style-type: none"> Remember, number one way a harmful germ travels from place to place is on the hands 	
(S-48) Hand Hygiene – Why? <ul style="list-style-type: none"> THEREFORE, performing hand hygiene is the single most important thing the nurse aide can do to prevent spread of infection when at work 	
(S-49) Hand Hygiene – Where? (Point of Care) <ul style="list-style-type: none"> While at work, nurse aide should perform hand hygiene at point of care Point of care refers to the place where three (3) elements occur together <ul style="list-style-type: none"> The resident The nurse aide The care or treatment involving resident contact Most point of care occurs in resident’s room 	
(S-50) Hand Hygiene – When (5 Essential Times) <ul style="list-style-type: none"> World Health Organization (WHO) recommends that during health care delivery, at the point of care, there are five (5) essential times or moments that nurse aide must perform hand hygiene <ol style="list-style-type: none"> Before touching a resident (examples – helping resident move around, helping resident with AM or PM care, taking vital signs) Before doing a clean or aseptic procedure (examples – before brushing resident’s teeth or cleaning dentures, preparing meal tray, feeding resident, getting clean linen) After any body fluid exposure risk (examples – after brushing resident’s teeth or providing denture care, feeding resident, caring for skin lesions, cleaning up urine, stool, vomit, blood, 	

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<p>and handling soiled linen, urinal, bedpan)</p> <ol style="list-style-type: none"> 4. After touching a resident (examples – after helping resident move around, helping resident with a.m. or p.m. care, taking vital signs) 5. After touching resident surroundings (examples – after changing bed linen with resident out of bed, raising or lowering bed rail, leaning against a bed or night table, clearing bedside table or over-bed table) 	
<p>(S-51) 5 Moments</p> <ul style="list-style-type: none"> • The 5 Moments apply to any health care setting where care involving direct care is provided to a resident, patient, or client 	
<p>(S-52) Hand Hygiene – When (Other Times to Wash Hands)</p> <ul style="list-style-type: none"> • Before/after going to restroom • Before/after eating • Before/after wearing gloves • Before getting clean linen 	
<p>(S-53) Hand Hygiene – When (Other Times to Wash Hands)</p> <ul style="list-style-type: none"> • When hands are visibly soiled • After handling trash • After arrival at work; before leaving work; after returning home from work before touching anybody or anything 	
<p>(S-54) Hand Hygiene – When (Other Times to Wash Hands)</p> <ul style="list-style-type: none"> • After blowing nose • After sneezing in hand • After touching hair • After touching other body parts, such as your mouth or nose 	
<p>(S-55) When to Hand Wash</p> <ul style="list-style-type: none"> • There are times when nurse aide should use soap and water, instead of alcohol-based hand rub <ul style="list-style-type: none"> ○ If hands are visibly dirty ○ After using restroom ○ After blowing nose ○ After sneezing in hands ○ After changing adult briefs ○ After cleaning a spill of blood or other body fluids ○ Before and after using shared medical equipment 	
<p>(S-56) When to Hand Rub</p> <ul style="list-style-type: none"> • There are times when alcohol-based hand rubs are acceptable choice in hand hygiene <ul style="list-style-type: none"> ○ Before and after eating 	

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<ul style="list-style-type: none"> ○ Before and after handling food ○ Before and after routine resident care 	
(S-57) Personal Protective Equipment (PPE) <ul style="list-style-type: none"> • A group of items used by a nurse aide to block harmful germs from getting on skin and clothes • This is what nurse aide puts on at work to keep blood, urine, stool, spit, and sputum off of skin and clothes 	
TEACHING TIP #10 B: Pass Around PPE Show and then pass around – mask, gown, gloves, face shield (if available), and goggles, either now or when each device is mentioned.	
(S-58) Personal Protective Equipment (PPE) <ul style="list-style-type: none"> • PPE includes gloves that protect skin on hands, gowns that protect skin and clothes, masks that protect mouth and nose, goggles that protect eyes, face shields that protect whole face 	
(S-59) Personal Protective Equipment (PPE) <ul style="list-style-type: none"> • Type of PPE nurse aide wears depends on <ul style="list-style-type: none"> ○ What is being done ○ What kind of contact there will be with blood, body fluids, non-intact skin, and mucus membranes ○ Whether the person is on Transmission-Based Precautions (will be talking more about later) 	
(S-60) Gloves <ul style="list-style-type: none"> • Wear gloves any time you will or think you will come into contact with <ul style="list-style-type: none"> ○ Blood and body fluids, such as urine, stool, spit, mucus coughed up ○ Non-intact skin, such as sores, cuts ○ Mucus membranes, such as inside or outside of the rectum, inside of the mouth, inside of the nose • Examples of when to always wear gloves – during mouth care, wiping a resident's nose, doing perineal care, caring for a sore, and shaving a resident 	
(S-61) Gown <ul style="list-style-type: none"> • Wear gown anytime you may come in contact with blood and body fluids, beyond the gloved hand • Examples of when to wear a gown – when changing and disposing of soiled bed linen, gown, pads, or bandages that may come into contact with your skin beyond the gloved area or your clothes 	

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<p>(S-62) Mask</p> <ul style="list-style-type: none"> • Wear mask when you must be protected from breathing in harmful germs through the nose and mouth • Examples of when to wear a mask – when resident has an illness that is transmitted by droplets 	
<p>(S-63) Sharps</p> <ul style="list-style-type: none"> • Items that have corners, edges, or projections that can cut or pierce the skin, such as needles, needles with syringes, needles with attached tubing, and razor blades • SAFETY, SAFETY, SAFETY <ul style="list-style-type: none"> ○ Wear gloves and be careful when using or handling anything sharp that could have touched blood or body fluids ○ Be careful not to cut self or resident during shaves ○ Be careful not to jab yourself with a sharp ○ <u>NEVER, EVER</u> re-cap a needle or other sharp object because you may jab yourself ○ <u>NEVER, EVER</u> put anything sharp in a regular trashcan 	
<p>(S-64) Disposal of Sharps</p> <ul style="list-style-type: none"> • <u>ALWAYS</u> put anything sharp that has been used on a resident in a sharps container (also called – needle disposal container or sharps box), <ul style="list-style-type: none"> ○ A special biohazard container used for disposal of sharps ○ Is hard and leak-proof ○ Labeled with warning that contents of container are harmful • SAFETY, SAFETY, SAFETY <ul style="list-style-type: none"> ○ <u>NEVER, EVER</u> stick your hand or fingers in a sharps container ○ <u>NEVER, EVER</u> try to cram just one more needle in the sharps container ○ <u>NEVER, EVER</u> over fill a needle disposal box – it should only be filled $\frac{3}{4}$ full and then disposed of 	
<p>TEACHING TIP #11 B: Sharps Container</p> <p>Show a sharps container.</p>	
<p>(S-65) Spills on Floor</p> <ul style="list-style-type: none"> • Clean up spills based on procedures listed in facility's infection prevention policy or notify housekeeping, if necessary (and available) • In general <ul style="list-style-type: none"> ○ Put on gloves ○ Absorb spill 	

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<ul style="list-style-type: none"> ○ Clean area with correct product, following directions on the product label ○ Discard waste in appropriate container (a biohazard bag if spill involves body fluids) ○ Apply disinfectant to area, following directions of product ○ Place warning cone or sign to warn others if there is wet surface 	
(S-66) Spills on Floor <ul style="list-style-type: none"> • Why are spills on the floor involving body fluids especially dangerous in a long-term care facility? • Spills that involve body fluids are a safety threat in the long-term care facility for two (2) reasons <ul style="list-style-type: none"> ○ Falls ○ Risk of infection 	
(S-67) Spills on Surface <ul style="list-style-type: none"> • Anytime blood or body fluids get on any surface, you must clean surface with whatever product is provided at the facility • You must follow facility procedures and product instructions very closely • Examples of surfaces that may need to be cleaned include over-bed tables, wheelchairs, counter tops in utility rooms, and shower chairs 	
(S-68) Transmission-Based Precautions <ul style="list-style-type: none"> • Second level to prevent and control infections • Specific tasks and measures that health care workers must do when caring for residents who are infected or may be infected with specific types of infections • Three types of Transmission-Based Precautions <ul style="list-style-type: none"> ○ Contact Precautions ○ Droplet Precautions ○ Airborne Precautions 	
(S-69) Contact Precautions <ul style="list-style-type: none"> • Purpose – prevent spread of harmful germs spread by direct contact • PPE – follow Standard Precautions, plus wear gown and gloves • Examples – Methicillin-Resistant Staphylococcus Aureus (MRSA) infection (is the bacteria known for causing skin infections in addition to many other types of infections) and Norovirus (the virus that causes diarrhea and vomiting) 	
(S-70) Droplet Precautions <ul style="list-style-type: none"> • Purpose – prevent spread of harmful germs that travel by droplets in the air 	

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<ul style="list-style-type: none"> • Droplets <ul style="list-style-type: none"> ○ Usually do not go farther than three feet, but could travel farther ○ Spread when an infected resident coughs, sings, sneezes, or laughs • PPE – follow Standard Precautions, plus wear a mask and gloves • Examples – influenza, meningitis, and whooping cough 	
(S-71) Airborne Precautions <ul style="list-style-type: none"> • Purpose – prevent spread of harmful germs that travel in the air at a distance • Harmful germs <ul style="list-style-type: none"> ○ Float around for a while ○ Can be carried by moisture, air currents and dust • PPE – Standard Precautions, plus wear a respirator, depending on specific disease • Examples – tuberculosis (or TB), chicken pox, measles 	
(S-72) Outbreak <ul style="list-style-type: none"> • More illness in more residents than what is expected or what is normal for the facility • Is a healthcare associated infection • Examples – respiratory illness, such as influenza (flu); and gastrointestinal illness, such as norovirus 	
(S-73) Outbreaks are Dangerous <ul style="list-style-type: none"> • Influenza and norovirus very dangerous for people aged 65 and older 	
(S-74) Influenza (the flu) <ul style="list-style-type: none"> • Respiratory infection • Risky for people 65 years and older <ul style="list-style-type: none"> ○ People 65 years and older are at greater risk of serious complications and death from the flu compared with young, healthy adults ○ 90 percent of flu-related deaths and more than half of flu-related hospitalizations each year occur in people 65 years and older • Yearly flu vaccination is the first and most important step in protecting against flu • Healthy adults may be able to infect others 1 day before showing flu symptoms and then 5 to 7 days after becoming sick • Employees with fever and respiratory symptoms (such as cough or sore throat) should not come to work until fever has been gone for at least 24 hours without the use of fever-reducing medicines like 	

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<p>Tylenol or ibuprofen</p> <ul style="list-style-type: none"> Encourage EVERYONE (employees, residents, and visitors) to practice good hand hygiene and to cover mouth and nose when coughing or sneezing Follow Standard Precautions and Transmission-Based Precautions 	
<p>(S-75) Norovirus</p> <ul style="list-style-type: none"> Gastrointestinal infection Dehydration can be problem and elderly must replace fluids, when able (sometimes intravenous fluids are needed) Most people get well in 1 to 2 days, but are contagious until at least 3 days after vomiting and diarrhea have stopped Nurse aides who have symptoms of norovirus should stay home from work until at least 2 days after symptoms have resolved Follow hand-hygiene guidelines, and carefully <u>wash hands with soap and water</u> after contact with residents with diarrhea or vomiting Alcohol-based hand sanitizers are not as effective against norovirus No vaccination available or specific drug available to prevent or treat norovirus Follow Standard Precautions and Transmission-Based Precautions 	
<p>(S-76) Bloodborne Pathogens</p> <ul style="list-style-type: none"> Harmful germs found in human blood that can cause infection and disease Three most common bloodborne pathogens are Hepatitis B Virus, Hepatitis C Virus, and the Human Immunodeficiency Virus, or HIV Resident can get an infection from bloodborne pathogens by <ul style="list-style-type: none"> Sharing contaminated needles Sharing contaminated fingerstick devices Direct contact with blood from infected person Nurse aide can get an infection from bloodborne pathogens by <ul style="list-style-type: none"> Accidental puncture wounds (jabs) from contaminated sharps Direct contact with blood from an infected person 	
<p>(S-77) Hepatitis B Virus (HBV)</p> <ul style="list-style-type: none"> Causes Hepatitis B, a disease of the liver About one third of persons infected with Hepatitis B Virus do not show symptoms Can live outside body on equipment and on surfaces like table tops or blood glucose meters for seven (7) days; can infect others during that time GREAT NEWS! Vaccine is available to prevent you from getting the disease 	
<p>(S-78) Hepatitis B Virus (HBV)</p>	

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<ul style="list-style-type: none"> • SEVEN DAYS!!!!!!!!!!!!!!!!!!!! • Important to repeat: the Hepatitis B Virus can live outside body on equipment and on surfaces like table tops or blood glucose meters for seven days 	
<p>TEACHING TIP #12B: 7-Day Hepatitis B Virus</p> <p>Place and tape several cut out Hepatitis B Viruses around the room on various surfaces. Tell students:</p> <ul style="list-style-type: none"> • I am placing several Hepatitis B Viruses around the room. Remember that the Hepatitis B Virus can live outside the body on equipment and surfaces for seven (7) days. • Between now and seven (7) days from now, I want you to notice the Hepatitis B Viruses when you enter the classroom and think about the significance of their presence and infection prevention principles. • Pay attention if you come in contact with or get close to the Hepatitis B Viruses as you do your average day-to-day activities in the classroom during the 7-day time period. <p>Distribute small Hepatitis B Viruses and tape to students and tell them:</p> <ul style="list-style-type: none"> • I would like for each of you to take a smaller version of the Hepatitis B Virus and tape it on your book, notebook, or folder. • Between now and seven (7) days from now, I want you to notice your Hepatitis B Virus when you open/close/carry your book, notebook or folder and think about the significance of its presence and infection prevention principles. <p>Remember to remove the cut-outs after seven (7) days and remind the students that the Hepatitis B Viruses have died. Discuss importance of infection prevention principles to prevent the spread of infection.</p>	
<p>(S-79) Bloodborne Pathogens – Protect Yourself and Others</p> <ul style="list-style-type: none"> • Always wear gloves when there is the chance of exposure to blood • Handle used sharps carefully and discard appropriately • Follow facility’s exposure plan if any part of body is exposed to blood or jabbed with contaminated sharp • Post-exposure <ul style="list-style-type: none"> ○ Wash area immediately ○ Report exposure to nurse ○ Complete an incident report ○ Follow procedures for testing and treatment 	
(S-80) TEACHING TIP # 13B What is Wrong with this Picture?	

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<p>Tell students:</p> <ul style="list-style-type: none"> • I am going to show you some pictures and I want you to figure out what is wrong with each picture. • When you figure out what is wrong, I want you to shout it out. • Let's show some excitement. 	
<p>(S-81) TEACHING TIP # 13B What is Wrong with this Picture?</p> <p>Allow the students to shout out answers.</p>	
<p>(S-82) TEACHING TIP # 13B What is Wrong with this Picture?</p> <p>Tell students:</p> <ul style="list-style-type: none"> • That is correct. The health care worker is throwing a sharp in the trashcan. Sharps are never discarded in a trashcan. Sharps must always be discarded in a biohazard container designed for disposal of sharps. 	
<p>(S-83) TEACHING TIP # 13B What is Wrong with this Picture?</p> <p>Allow the students to shout out answers.</p>	
<p>(S-84) TEACHING TIP # 13B What is Wrong with this Picture?</p> <p>Tell students:</p> <ul style="list-style-type: none"> • That is correct. The health care worker is recapping a used needle and syringe. Never, ever recap a needle that has been used on a resident. You could jab yourself and then be exposed to a bloodborne pathogen. 	
<p>(S-85) TEACHING TIP # 13B What is Wrong with this Picture?</p> <p>Allow the students to shout out answers.</p>	
<p>(S-86) TEACHING TIP # 13B What is Wrong with this Picture?</p> <p>Tell students:</p> <ul style="list-style-type: none"> • That is correct. The health care worker is opening a door using the door handle while wearing soiled gloves. First of all you must change your gloves immediately if they become dirty. I think we must all agree that the gloves are dirty. Another rule that the 	

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health care worker violated is moving from an area that is contaminated to an area that is not contaminated without changing or removing gloves. Third, you must never touch anything with dirty gloves that people may touch without wearing gloves. Typically people do not put on gloves to open a door.	
(S-87) TEACHING TIP # 13B What is Wrong with this Picture? Allow the students to shout out answers.	
(S-88) TEACHING TIP # 13B What is Wrong with this Picture? Tell students: <ul style="list-style-type: none"> • That is correct. The health care worker is touching his face with a dirty glove. First of all you must change your gloves immediately if they become dirty. I think we must all agree that the gloves are dirty. Another rule that the health care worker violated is moving from an area that is contaminated to a body part that is not contaminated without changing or removing gloves. Finally, you must never, ever touch your skin with the dirty side of your glove. I don't care how bad your nose may itch, you must not scratch it with dirty gloves on. • You did very well identifying what was wrong with the examples of poor health care practices. I do need to tell you that the pictures I just showed you were simulated and the blood was fake stage blood. 	
(S-89) The End	

Activity #1B Instructor's Guide
Build a Chain of Infection

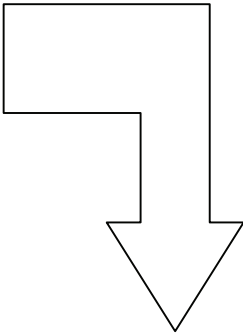
Preparation

Before class, cut out link strips, for each student. Paperclip sets of six (6) together, for each student. Also, before class begins, provide the students with a roll of tape and ask them to pass the tape around the room. Instruct the students to tear off six (6) strips of tape, two (2) inches in length and to place the strips of tape on the edge of their tables or desks for later use.

Activity #1B Build a Chain of Infection

Link #1 Infectious Agent
Link #2 Reservoir
Link #3 Portal of Exit
Link #4 Mode of Transmission
Link #5 Portal of Entry
Link #6 Susceptible Host

Activity #2B CHAIN OF INFECTION



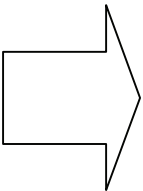
SUSCEPTIBLE HOST

1. _____

2. _____

3. _____

4. _____



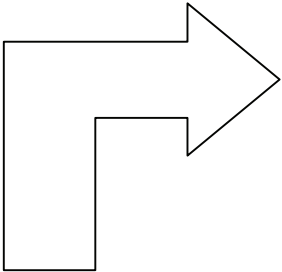
PORTAL OF ENTRY

1. _____

2. _____

3. _____

4. _____



MODE OF TRANSMISSION

1. _____

2. _____

3. _____

4. _____

INFECTIOUS AGENT

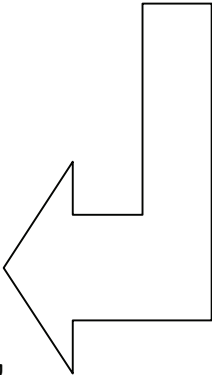
1. _____

2. _____

3. _____

4. _____

Bacteria	Nose through sneezing
Parasite	GI Tract through vomiting
Dirt	Person with poor nutrition
Person with diabetes	89 year-old person
Person with sores	Skin puncture
Unwashed Hands	Nose through breathing
Ticks	Fungi
Vomit	Mouth through coughing
Respiratory tract	Wound that is draining
Virus	Mouth through eating
Skin Tear	GI Tract
Door Knob	Sneeze droplets



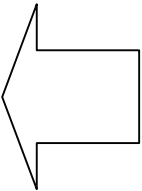
RESERVOIR

1. _____

2. _____

3. _____

4. _____



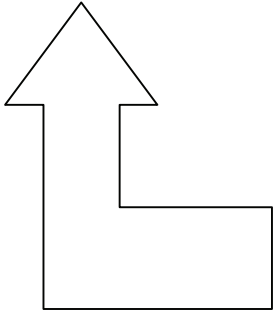
PORTAL OF EXIT

1. _____

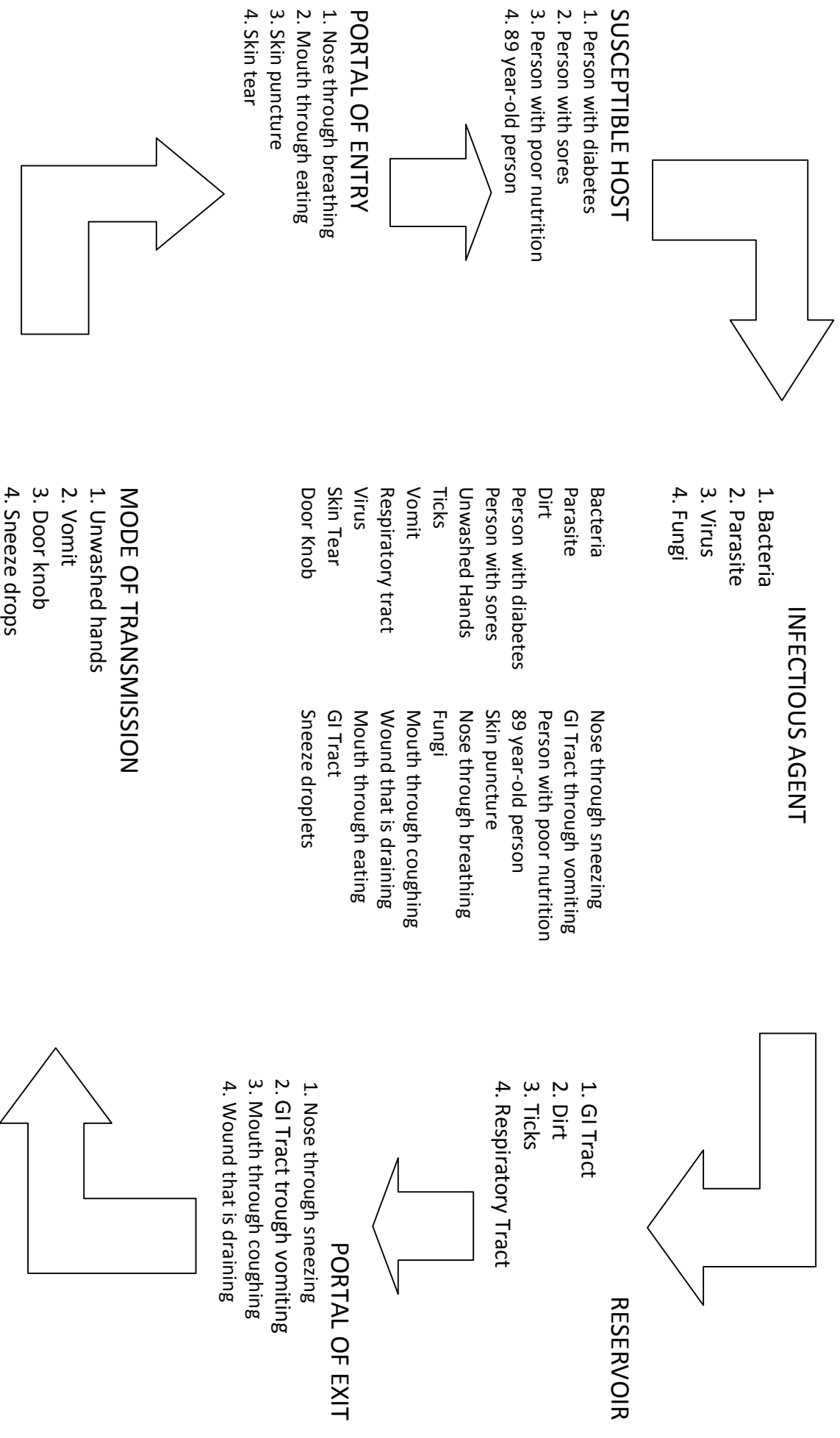
2. _____

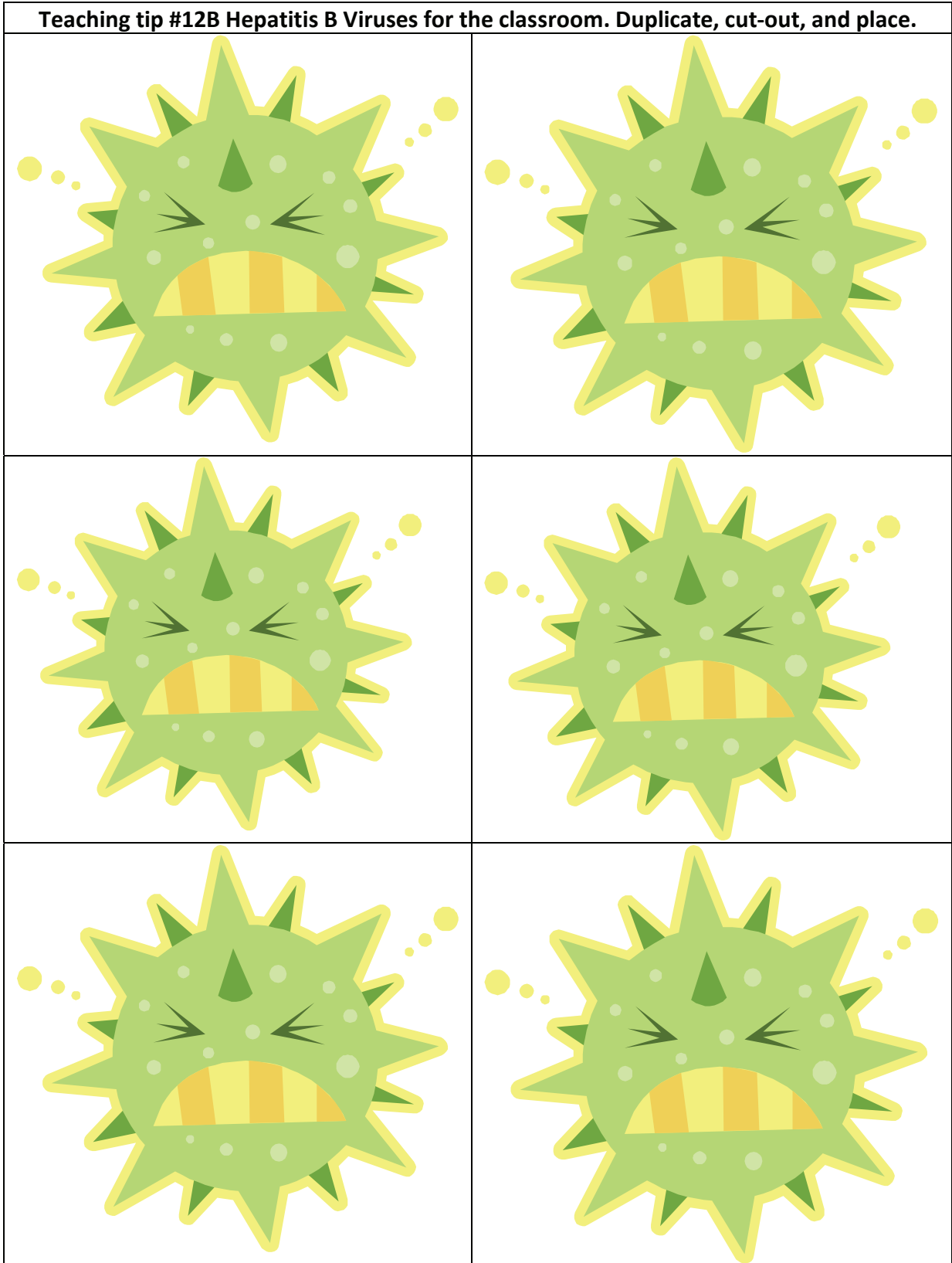
3. _____

4. _____



Activity #2B CHAIN OF INFECTION ANSWERS





Teaching tip #12B Hepatitis B Viruses for students. Duplicate, cut-out, and distribute to students.

