



JROTC Virtual Learning

First Aid for Poisons, Wounds and Bruises [U4C2L6]

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STANDARDIZED TRAINING SESSION

JROTC TRAILS WEST BRIGADE: Truman, Van Horn,
William Chrisman High Schools

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Student Learning Plan LET 4

First Aid for Poisons, Wounds and Bruises [[U4C2L6]



Courtesy of Army JROTC

U4C2L6

First Aid for Poisons, Wounds, and Bruises

Key Words:

- Abrasions
- Amputation
- Avulsion
- Incision
- Lacerations
- Solvents

What You Will Learn to Do

Determine first aid treatment for wounds, bruises, and poisoning

Linked Core Abilities

- Do your share as a good citizen in your school, community, country, and the world

Skills and Knowledge You Will Gain Along the Way

- Identify the causes and symptoms of poisoning
- Describe how to treat a poison victim
- Distinguish among the four types of wounds
- Describe how to treat minor wounds and bruises

Introduction

Whenever there are small children left alone in the kitchen, accidents can happen, especially when cleaning products are left out in the open. But, poisonings can accidentally happen to people of any age. As such, the first section of this lesson introduces the treatment and prevention of injury from poisons, and as an addition to your first aid skills, the lesson ends with a discussion of different types of wounds and their treatment, as well as the treatment of bruises.

Poisons

As consumers, we buy more than a quarter of a million different household products — materials used in and around the house for medication, cleaning, cosmetic purposes, exterminating insects, and killing weeds. These items are valuable in the house and for yard maintenance, but misuse, especially when products are used in inappropriate applications or quantities, can cause illness, injury, and even death.



Each year more than 6,000 people die and an estimated 300,000 suffer disabling illnesses as a result of unintentional poisoning by solid and liquid substances. Poisonings can happen to anyone, at any time, in any situation.


Poisonings at home, however, can be prevented. While child-resistant packaging has greatly reduced the number of fatalities among children under five years of age, parents, grandparents, and other caregivers must still be cautious. Following label directions for all products, including medication dosages, and proper storage of potentially toxic products are important precautions to heed.

Poisoning is the effect of one or more harmful substance on the body. Poisons can be inhaled or ingested. Fortunately, most poisonings happen with products of low toxicity or with amounts so small, the severe poisoning rarely occurs. However, the potential for severe or fatal poisoning is always present.

Inhaled Poisons

Inhaled poison could be fumes from...

Pesticides	Glue
Chlorine (some uses include household bleaches and disinfectants and swimming pool disinfectants and algaecides)	Paint
Smoke	Petrol and Turpentine
Ammonia (some uses include household cleaners, fertilizers, and Freon)	Gases (carbon monoxide)



Courtesy of Army JROTC

Inhaled poisoning occurs when a person breathes a poisonous substance into his/her lungs. Inhaled poisons include:

- Smoke
- Gas used in outdoor cooking equipment and appliances in homes and recreational vehicles
- Hazardous fumes from household products such as paint and paint thinners, gasoline, solvents, and glues, as well as from chemicals used in industrial processes
- Carbon monoxide, which is always produced by wood, coal, and charcoal fires, and by gasoline engines, can also be produced by gas, oil, and kerosene appliances, such as furnaces, space heaters, water heaters, and stoves

Carbon monoxide, in particular, is a very dangerous poisonous substance, because it is odorless, colorless, and tasteless, making it difficult to detect. When a person inhales carbon monoxide, it replaces oxygen in the blood, which results in oxygen starvation throughout the body. Exposure to low amounts of carbon monoxide can cause flu-like symptoms; continued exposure can cause permanent brain, nerve, and heart damage; exposure to very high concentrations can kill a person in a few minutes.

Running a car engine in a closed garage, using a charcoal grill indoors, and burning a fire in a fireplace with a blocked chimney can all result in carbon monoxide poisoning. In addition, since carbon monoxide forms when there is a lack of oxygen resulting in incomplete fuel combustion, operating fuel-burning equipment without an adequate supply of oxygen (proper ventilation) can result in carbon monoxide poisoning. For

example, hundreds of people in the United States each year suffer carbon monoxide injuries from using portable heaters, lanterns, and camping stoves inside tents, campers, and vehicles.

Symptoms of Inhaled Poisoning

Symptoms of inhaled poisoning may not show up immediately. If you suspect inhalation poisoning, keep the victim under observation. If you know the victim has inhaled a poisonous chemical, get medical help whether or not symptoms are present. Symptoms will vary depending on the type and amount of poison inhaled, but can include any of the following:

- Dizziness
- Weakness
- Drowsiness
- Headache
- Mental confusion
- Breathing difficulties
- Heartbeat irregularities
- Unusual breath odor
- Discoloration of the lips and mucous membranes
- Nausea
- Vomiting
- Rashes or burns on the skin
- Unconsciousness

Treatment for Inhaled Poisons

Before rushing in to rescue a victim in a smoke-, gas-, or fume-filled environment, quickly assess the situation so that you do not end up a victim as well. If the poisonous substance is overwhelming and the danger to you is too great, do not attempt to rescue the victim unless you have been trained for rescue in this type of situation. Immediately call EMS and stay clear of danger.

However, if after assessing the situation you believe you can safely remove the victim from the poisonous environment, do so by following these guidelines:

1. If you are alone, call for help first before attempting the rescue. This will notify others of the situation — a precaution that will ensure help is on its way in case you are also overcome by the poison.
2. Take several deep breaths of fresh air, then take a final deep breath and hold it as you go in. If available, a damp cloth held over your nose and mouth is a good safety precaution. Note: Do not use light switches, light a match, or use any other equipment or appliance that produces flames or sparks while you are in a gas- or fume-filled area.
3. If you can see fumes or smoke, keep your head out of them. For example, fumes from car exhaust are heavy and settle near the floor, so keep your head above them; but in the case of smoke, which rises, keep your head below it.
4. Move the victim out into the fresh air. If for some reason this is not possible, open doors and windows to ventilate the area, returning out into the fresh air as necessary to ensure your safety. Do not administer first aid until you and the victim are out of the hazardous environment or the area is ventilated.

Check the victim's airway, breathing, and circulation (ABCs), and perform mouth-to-mouth resuscitation and CPR as necessary. Once you are sure the victim is breathing, call EMS if you or someone else has not already done so. Even if the victim seems fine once he/she is in fresh air, call for medical help as symptoms may show up later. While you are waiting for medical help, treat the victim for any burns he/she may have suffered and monitor for shock.

Oral Poisoning

Oral poisoning occurs when a harmful substance, such as a common household cleaning product, is swallowed. First aid for oral poisoning depends on the substance swallowed.

Symptoms of Oral Poisoning

Symptoms will vary depending on the type and amount of poison inhaled but can include any of the following:

- Abdominal pain and cramping
- Nausea or vomiting
- Diarrhea
- Burns, odor, stains around and in mouth
- Drowsiness or unconsciousness
- Poison containers nearby

Treatment for Oral Poisons

Procedures for treating oral poisoning:

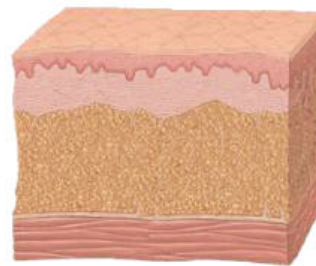
1. Determine critical information:
 - a. Age and size of victim
 - b. What was swallowed
 - c. How much was swallowed
 - d. When was it swallowed
2. If a corrosive or caustic substance was swallowed, immediately dilute it by having the victim drink at least one to two eight-ounce glasses of water or milk.
3. For a responsive victim, call a poison control center immediately. More than 70 percent of poisonings can be treated through instructions taken over the telephone from a poison control center.
4. For an unresponsive victim, or if the poison control center number is unknown, call EMS and monitor the ABCs.
5. Place the victim on his or her left side to position the end of the stomach where it enters the small intestine straight up. Gravity will delay advancement of the poison into the small intestine, where absorption into the victim's circulatory system is faster.
6. Induce vomiting only if a poison control center or physician advises it. Inducing must be done within 30 minutes of swallowing.
7. Save poison containers, plants, etc. to help medical personnel identify the poison.

Wounds

Wounds are soft tissue injuries that break the skin. They are typically classified into four categories – abrasions, lacerations, punctures and avulsions – and depending on their severity, can be painful and invite infection if not properly treated.

Abrasions

Abrasions are a result of the top layer of skin being scraped away. Most often, abrasions are caused by a sliding impact between a rough surface and skin. Abrasions are generally shallow injuries with little bleeding.



There are four types of open wounds:

- Abrasions
- Lacerations
- Punctures
- Avulsions

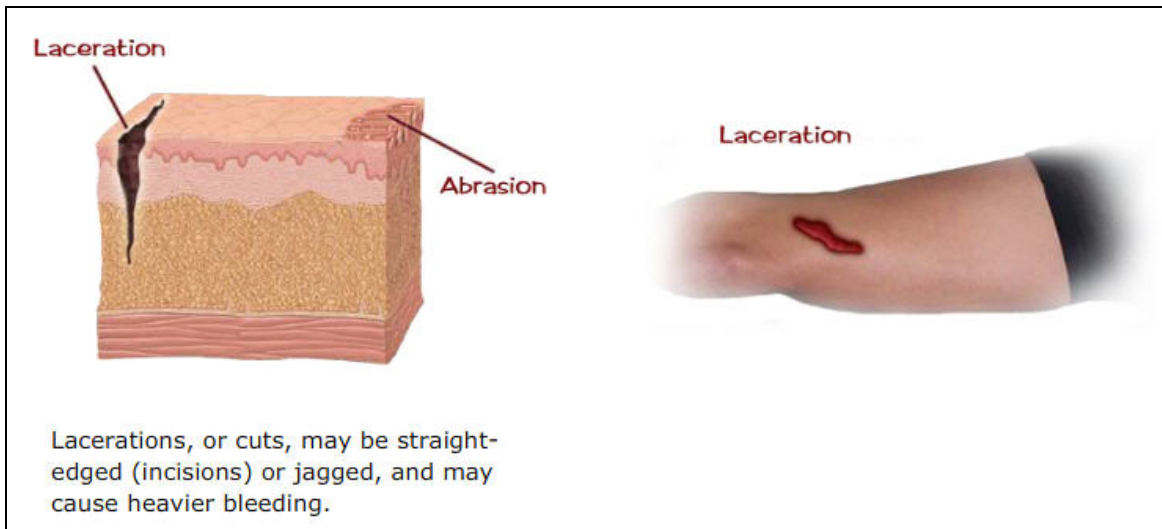
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Lacerations

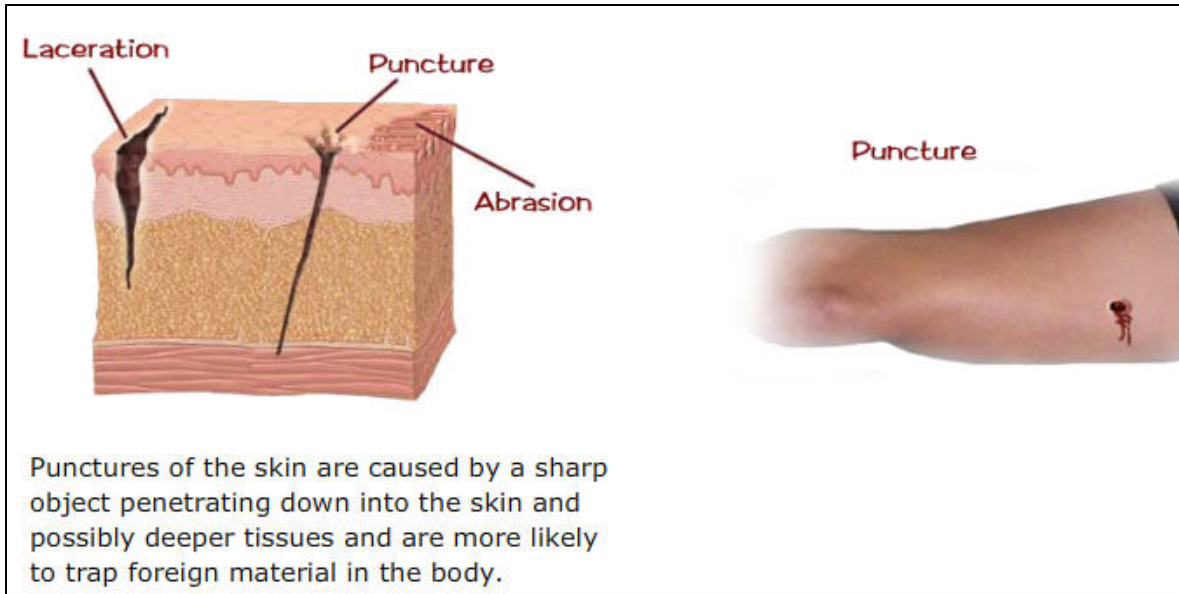
Lacerations, or cuts and **incisions**, are straight, even wounds made with sharp objects like knives, glass or razor blades.



Courtesy of Army JROTC

Punctures

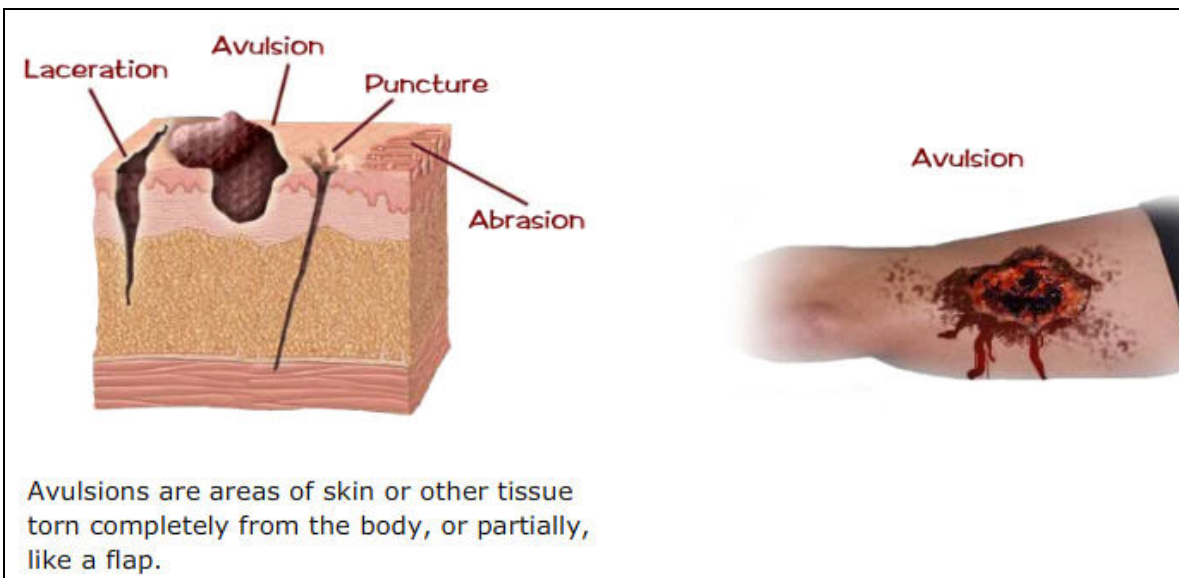
Punctures are caused by pointed objects such as pins and nails that make small holes into deeper tissue, often with little bleeding. Bites from animals also result in puncture wounds.



Courtesy of Army JROTC

Avulsions

An **avulsion** is tissue torn from, or pulled away from and hanging off of, the body. This type of injury may also result from an animal bite.



Courtesy of Army JROTC

When does a Wound Require Care?

Wounds can be minor or serious depending on their size, depth, location, and source. Minor wounds involve only the outer skin layer. They stop bleeding in a few minutes on their own or with gentle pressure and can be treated with just first aid. Serious wounds require first aid followed by medical treatment. Consider a wound serious if:

- The skin is cut or torn all the way through so that it gapes open
- Fat, muscle, or tendons are visible
- Bleeding is heavy and does not slow or stop after applying pressure for 15 to 20 minutes
- Soil or other debris cannot be washed from the wound
- There is loss of function like the inability to move a cut finger
- It is on the face, since even a small wound may leave a scar
- It is on the bottom of the foot
- Its source is a rusty or dirty object or an animal or human bite

Some extremely serious injuries that generally contain a combination of the four kinds of wounds, and always require immediate medical attention, are amputations, avulsions, and crushing injuries. They are generally the result of motor vehicle or industrial machinery accidents or explosions.

- An **amputation** is the complete removal of an extremity, such as a finger or leg.
- Crushing injuries occur when parts of the body are caught between heavy objects or when the body is thrown against a heavy object or vice versa. In addition to wounds, crushing injuries include bone fractures, as well as possible injuries to internal organs and internal bleeding.

Treatment of Wounds

Before beginning treatment of any injured victim, remember to always use the Universal Precautions, wear a facemask and rubber gloves, and any other protective gear. Doing so can prevent contraction of diseases that can be contracted through blood-borne pathogens.



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Minor Wound Care

Clean a minor wound by flushing it with cool water and washing it with mild soap. Dry it thoroughly with a clean cloth, apply a thin layer of antibiotic ointment to keep the wound moist and protect against infection, and cover it with a bandage to keep it clean.

Change the bandage whenever it gets wet or dirty, and consider leaving the bandage off at night when sleeping since exposure to air also helps the healing process. Contact a doctor if the wound does not appear to be healing after several days or shows signs of infection like redness, draining, or swelling.

Serious Wound Care

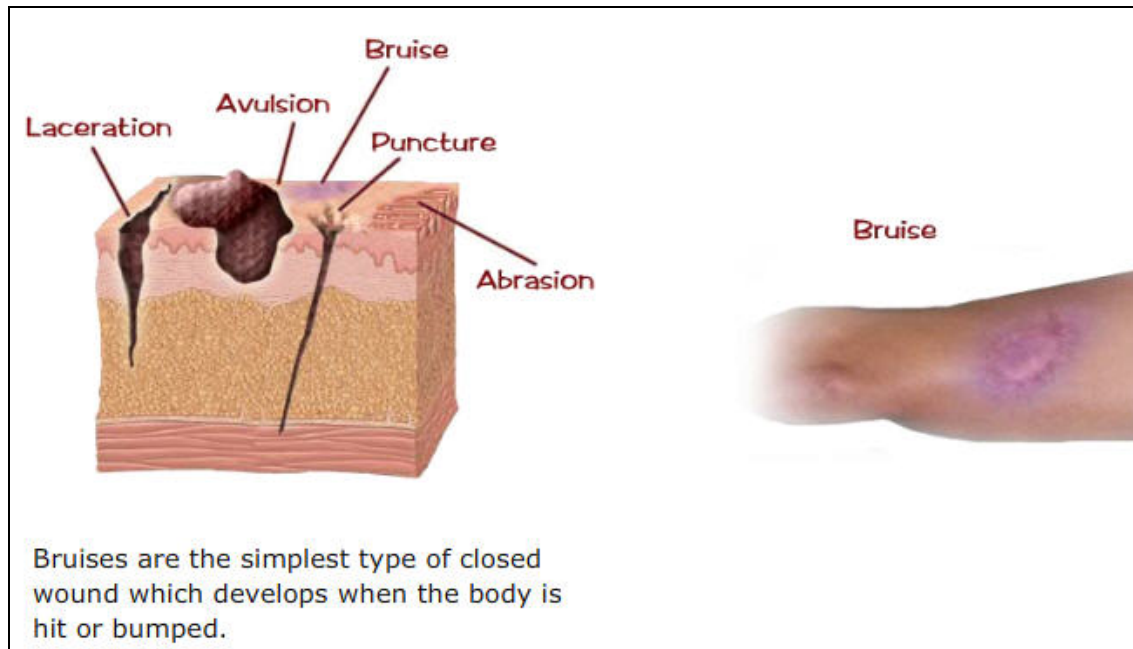
In the case of serious wounds, follow the steps for controlling bleeding listed in Lesson 3, which include applying direct pressure, elevating the wounded part, cleaning and bandaging the wound, and seeking medical treatment. For any wound caused by a rusty or dirty object or an animal bite, ask if the victim has had a tetanus shot within the past 10 years, and if not, suggest that he/she get one to guard against tetanus infection.

Amputation, Avulsion and Crushing Injury Care

For extremely serious injuries such as amputations, avulsions, or crushing injuries, call EMS, control bleeding, monitor breathing, treat for shock, and provide comfort to the victim until medical help arrives. Remember that tourniquets should only be used in

extreme, life-threatening situations, and pressure points should only be used if you are trained to do so.

Bruises



Courtesy of Army JROTC

Bruises are injuries that discolor but do not break the skin tissue. They can be caused by a fall, a blow, or bumping into something. Though sometimes very ugly and lasting for several weeks, they are usually not very serious.

Treatment of Bruises

Wrap ice or an ice pack in a clean towel and apply it to the bruise. To reduce swelling, elevate the bruised part for 20 to 30 minutes if the injury is mild or for a few hours if it is severe. Seek medical attention if swelling increases unusually, pain increases, the bruise site appears deformed, or there is an inability to move a body part associated with the bruise.

Conclusion

You have just learned important procedures for treating poisons, wounds, and bruises, as well as when to apply basic first aid and life-saving skills in these situations. Remember that while it is important to administer first aid treatment as quickly as possible in most situations, some rescue situations require careful assessment before you proceed, so that you do not become a victim yourself. Remaining calm, thinking logically and clearly, and knowing what steps to take and when to take them will help you successfully perform first aid.



Lesson Check-up

1. Describe the characteristics of the four types of skin wounds.
2. What are some demonstrated symptoms of someone who has inhaled poison?
3. Describe some poisons that may be unfamiliar to most people.
4. How would you treat someone who has been bruised?

Performance Assessment Task

Unit 4: Wellness, Fitness, and First Aid

First Aid for Poisons, Wounds, and Bruises [U4C2L6]

This performance assessment task gives you an opportunity to document your achievement of the lesson's competency:

Determine first aid for poisoning, wounds, and bruises

Directions

For this performance assessment task, you will summarize first aid for poisoning, wounds, and bruises. For this assessment you will:

1. Create How-To cards for the first aid procedures you learned in this lesson.
2. Use the attached scoring guide criteria for what you need to do to complete this task.
3. Submit your completed performance assessment task and scoring guide to your instructor for evaluation and a grade.

RECOMMENDATION: It is recommended that you add this performance assessment task to your Cadet Portfolio.

First Aid for Poisons, Wounds, and Bruises Performance Assessment Task Scoring Guide

Comments:

Name: _____ ***Date:*** _____

Evaluator's Signature: _____ ***Date:*** _____

Student Learning Plan

Unit 4: Wellness, Fitness, and First Aid First Aid for Poisons, Wounds, and Bruises [U4C2L6]



What you will accomplish in this lesson:

Determine first aid for poisoning, wounds, and bruises



Why this lesson is important:

As consumers, we buy more than a quarter of a million different household products - materials used in and around the house for medication, cleaning, cosmetic purposes, exterminating insects, and killing weeds. These items are valuable in the house and for yard maintenance, but misuse, especially when products are used in inappropriate applications or quantities, can cause illness, injury, and even death. In this learning plan, you will learn how to provide first aid treatment for various kinds of poisonings, wounds, and bruises.



What you will learn in this lesson:

- Identify the causes and symptoms of poisoning
- Describe how to treat a poison victim
- Distinguish among the four types of open wounds
- Describe how to treat wounds and bruises
- Define key words: abrasions, amputation, avulsion, incisions, lacerations, solvents



You will have successfully met this lesson's purpose:

- by summarizing first aid for poisoning, wounds and bruises
- when you list symptoms of inhaled and oral poisoning
- when you describe first aid for inhaled and oral poisoning
- when you describe when a wound requires care
- when you describe first aid for minor and serious wounds
- when you describe first aid for bruises



Learning Activities:

These learning activities are designed to help you learn the target skills and knowledge for this lesson. Your instructor may assign additional or alternative learning activities.

INQUIRE PHASE: What do you already know?



- ____ 1. THINK ABOUT what you know about poisons, wounds, and bruises. PREPARE for this lesson by discussing *What you will accomplish in this lesson; What you will learn in this lesson; Why this lesson is important*, and *When you will have successfully met this lesson's purpose*.
- ____ 2. On your own, COMPLETE Exercise #1: Agree/Disagree. REVIEW the correct answers with your class.
- ____ 3. REFLECT on what you need to learn about poisoning, wounds, and bruises. ANSWER the reflection questions presented by your instructor.

GATHER PHASE: So, what else do you need to know or learn?

- Part 1**
- _____ 1. VIEW a presentation on poisoning.
 - _____ 2. With your team, CREATE a T-Chart or Flow Map on your assigned topic. JIGSAW your student text to learn more about the topic. Be ready to present your chart or map to class in the next phase of your learning.
 - _____ 3. REFLECT on household poisons. ANSWER the reflection questions presented by your instructor.

- Part 2**
- _____ 4. VIEW a presentation on wounds and bruises.
 - _____ 5. With your team, CREATE a T-Chart or Flow Map on your assigned topic. JIGSAW your student text to learn more about the topic. Be ready to present your chart of map to class in the next phase of your learning.
 - _____ 6. REFLECT on how to treat and prevent wounds. ANSWER the reflection questions presented by your instructor.

PROCESS PHASE: Now what can you do with this new information you've learned?

- Part 1**
- _____ 1. With your team, PRESENT your assigned topic to the class. TAKE NOTES on other teams' presentations about symptoms and first aid for poisoning.
 - _____ 2. REFLECT on first aid for poisoning. ANSWER the reflection questions presented by your instructor.

- Part 2**
- _____ 3. With your team, PRESENT your assigned topic to the class. TAKE NOTES on other teams' presentations about first aid for wounds.
 - _____ 4. REFLECT on how to treat and prevent wounds. ANSWER the reflection questions presented by your instructor.

**Assessment Activities:****APPLY PHASE: What else can you do with what you've learned today?**

- _____ 1. COMPLETE the First Aid for Poisons, Wounds, and Bruises Performance Assessment Task. SUBMIT your completed performance assessment task to your instructor for feedback and a grade.
- _____ 2. REVIEW the key words of this lesson.
- _____ 3. REFLECT on what you have learned in this lesson and how you might use it in the future.

**Self-Paced Learning and Assessment Activities:**

Independently complete the activities outlined below:

1. **Inquire Phase:** Complete the Learning Activities 1 – 3 or as modified by your instructor.
2. **Gather Phase:** Complete the Learning Activities 1 – 6 or as modified by your instructor.
3. **Process Phase:** Complete the Learning Activities 1 – 4 or as modified by your instructor.
4. **Apply Phase:** Complete the Learning Activities 1 – 3 or as modified by your instructor.