

# Webinar:

## Mastering Health Science Foundational Skills with Hands-On Learning Aids



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Presented by

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**Realityworks<sup>®</sup>**  
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# Attendees will:

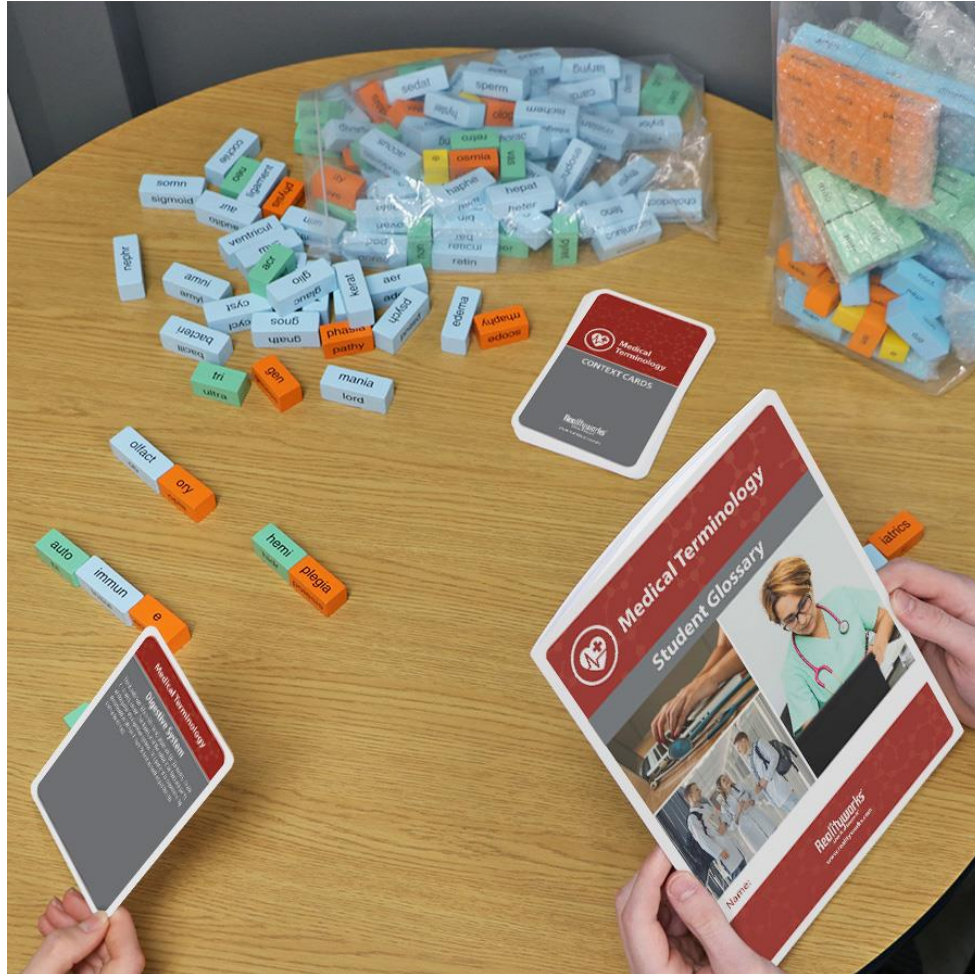
- Review foundational health science skills tools
- Explore included curricula including lessons, activities, and assessments
- Get implementation tips



# Foundational Health Science Tools



# Medical Terminology Class Kit



- Terminology blocks
- Student glossary
- 17-lesson curriculum
- Flashcards
- Context cards

# Medical Terminology Curriculum

1. Intro to Medical Terminology
2. Prefixes
3. Suffixes
4. Word Roots
5. Overview of the Body
6. Lymphatic System
7. Circulatory System
8. Muscular System
9. Integumentary System
10. Respiratory System
11. Urinary System
12. Digestive System
13. Reproductive System
14. Skeletal System
15. Endocrine System
16. Nervous System
17. Sensory Systems

# Medical Terminology Class Kit

Medical Terminology Curriculum

Name: \_\_\_\_\_ Class: \_\_\_\_\_

## Muscular System Quiz

Instructions: Write in or circle the best answer for each question below.

1. This type of cancer primarily targets skeletal muscle. However, hollow organs (such as the intestines, blood vessels, stomach, and bladder) can sometimes be involved. \_\_\_\_\_.
2. This muscle is central to breathing. \_\_\_\_\_.
3. What are muscles that narrow an opening or tube, such as the opening to the bladder, called? \_\_\_\_\_.
4. What is the diagnostic study that involves inserting a needle into muscle tissue to evaluate their electrical activity? \_\_\_\_\_.
5. True or False? A rheumatologist treats nervous system diseases. (circle one)
6. \_\_\_\_\_ is a rare condition characterized by inflammation affecting neck and proximal limb muscles close to the trunk.
7. \_\_\_\_\_ is a term that describes paralysis (complete loss of motor function) of all four extremities.
8. True or False? Pleomorphic rhabdomyosarcoma primarily affects children. (circle one)
9. This is the term for a doctor trained to perform injections on patients to alleviate musculoskeletal pain and improve function, if possible. \_\_\_\_\_.
10. \_\_\_\_\_ is an autoimmune condition in which one's immune cells attack receptors on the muscle cell that receive messages from the motor neuron (the neuromuscular junction).

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# Implementation ideas



- Use it in a standalone medical terminology course
- Revisit lessons when teaching specific body systems
- Small group competitions:
  - Who can create the most words in 10 minutes?
  - Who can write the correct definitions for their words?

# Medical Math Training Kit



- Student workbooks
- Online access to slide presentations
- Online lessons
- Spiral-bound curriculum

# Medical Math Curriculum

1. Fractions, decimals, ratios, and percentages
2. Measurement systems
3. Conversions
4. Methods and oral medications
5. Pediatric dosages
6. Injection calculations
7. Infusion calculations



# Medical Math Class Kit

## Math Review: Fractions, Decimals, Ratios, and Percentages

### Fractions, Decimals, Ratios, and Percentages

#### Decimals

##### Did you know?

Decimal points can be a matter of life or death. Misplaced decimal points in a medication dosage can cause patient harm or even death. Be sure to double check your accuracy and use preceding zeros for amounts less than 1 (example: 0.25).

#### Rounding

- Determine end value.
- Look at number to the right of the end value.
  - » Round up if 5 or higher; if 4 or less, number stays the same.

#### Adding Decimals

- Align the decimals.
- Add zeros to make them the same length.
- Add.

Add 0.91, 0.4, and 1.65

$$\begin{array}{r} 0.91 \\ 0.40 \\ + 1.65 \\ \hline 2.96 \end{array}$$

#### Subtracting Decimals

- Align the decimals.
- Add zeros to make them the same length.
- Subtract.

Subtract 1.5 from 2.35

$$\begin{array}{r} 2.35 \\ - 1.50 \\ \hline 0.85 \end{array}$$

#### Practice Questions

1) Round 0.258 to the tenths

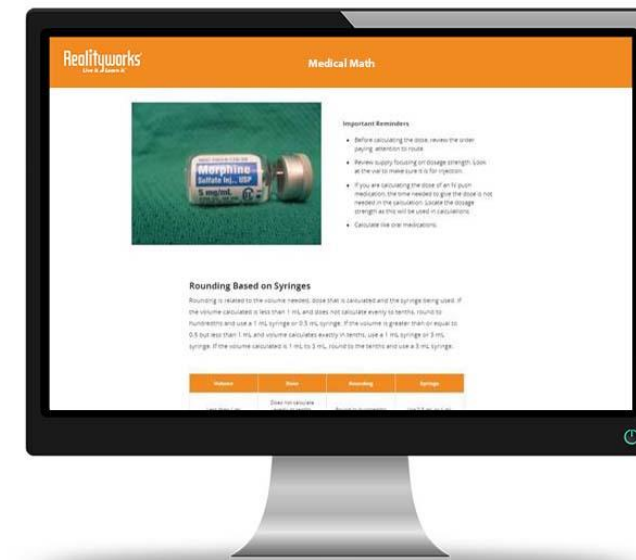
2) Round 1.9 to the nearest whole number

3)  $8.2 + 0.07 + 11 =$

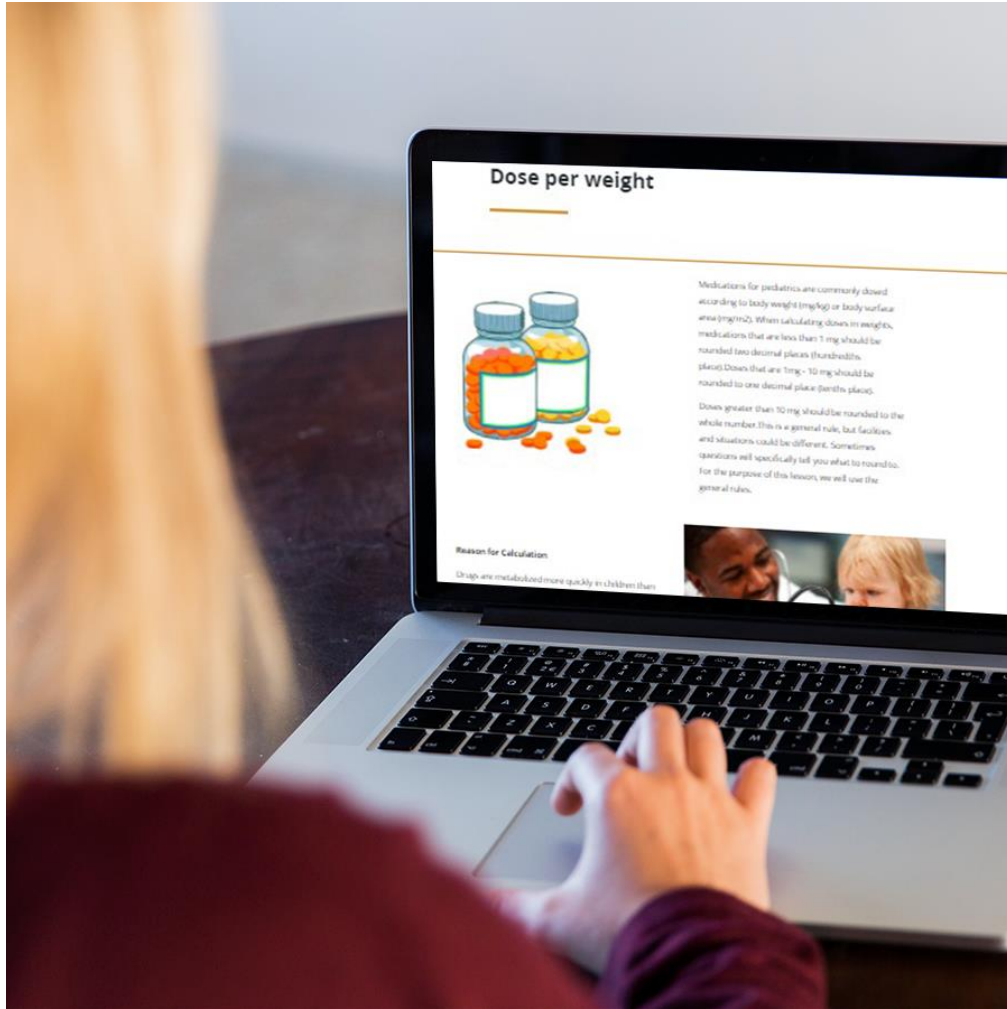
4)  $0.25 + 1.2 + 3.86 =$

5)  $6.75 - 0.5 =$

6)  $0.41 - 0.2 =$



# Implementation ideas



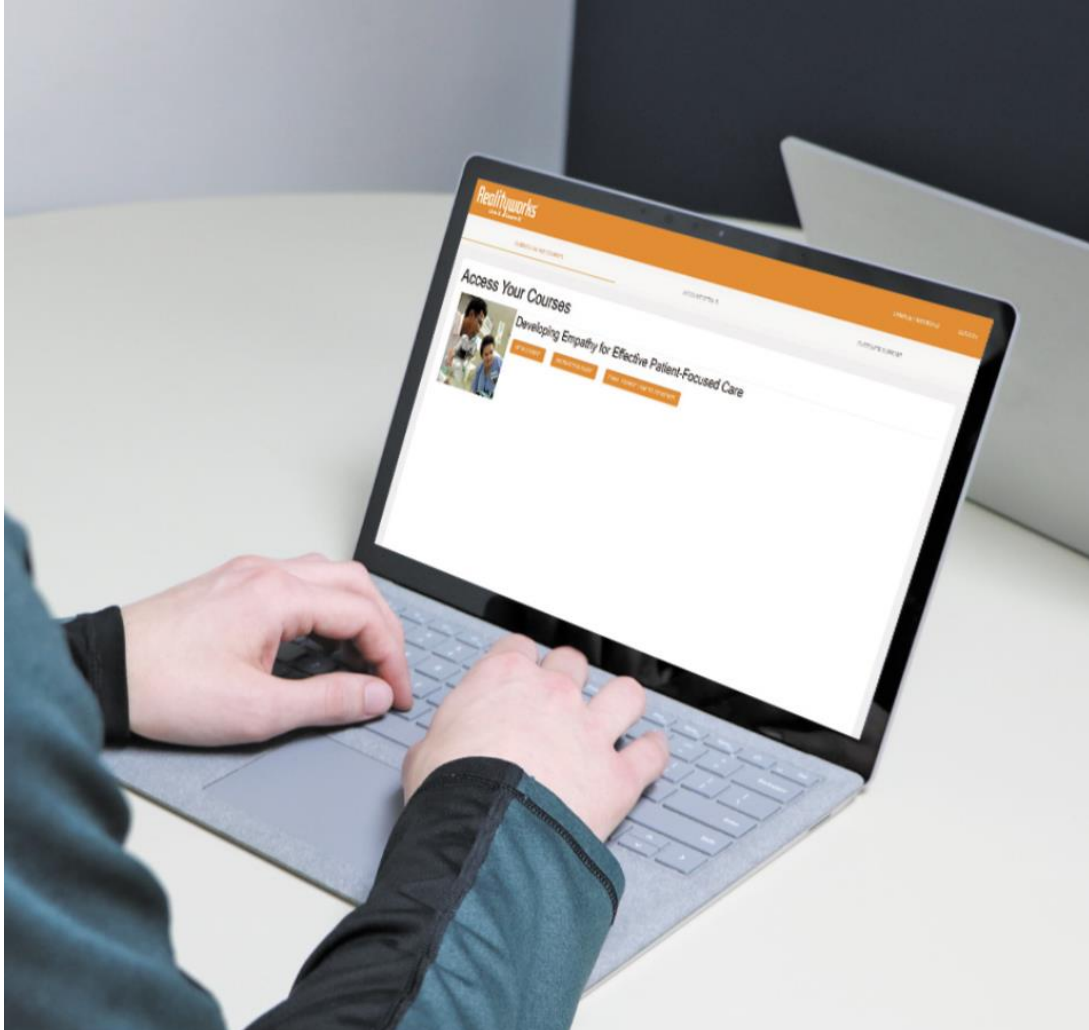
- You choose: In person or online curriculum!
- **Try the online lessons for free:**  
<https://www.realityworks.com/product/medical-math-training-kit/>

# Healthcare Interpersonal Skills Program

- Spiral-bound curriculum
- Online Empathy lessons
- Student workbooks
- Scenario cards (10 sets)



# Healthcare Interpersonal Skills Curriculum



1. Communication
2. Teamwork
3. Problem solving
4. Critical thinking
5. Work ethic
6. Listening
7. Responsibility
8. Patience
9. Trust
10. Integrity
11. Empathy

# Implementation ideas

## Healthcare Interpersonal Skills Kit

### Communication

#### Focus: Patient-Centered

**Scenario:** Sylvia is working as a medical assistant for a family practitioner. The physician wrote a prescription for Douglas, one of their patients, and asked Sylvia to instruct him on how to take his new high blood pressure medicine. Sylvia enters Douglas's exam room and starts explaining the prescription. She instructs him when to take it, how much to take, what the side effects are, and what to do if he experiences adverse effects. Douglas is an elderly gentleman and immediately becomes flustered, telling Sylvia she is speaking too fast and it's all "mumbo jumbo."

### Points of view to consider:

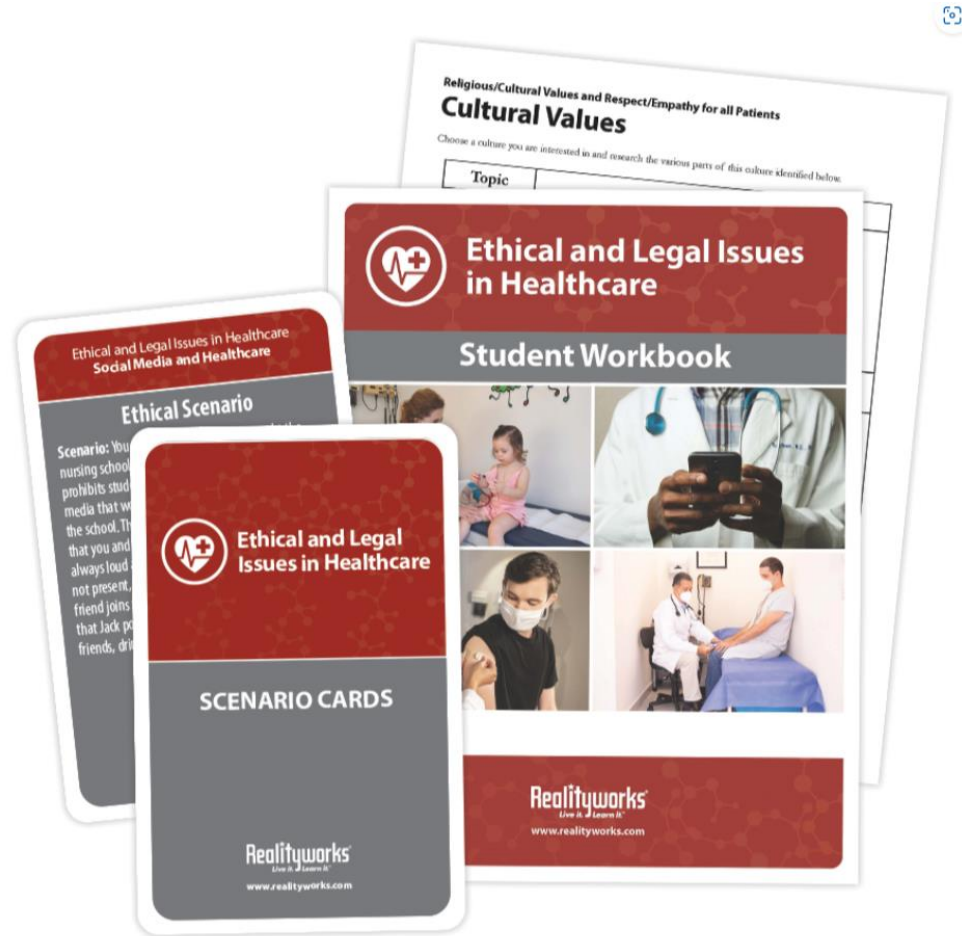
- Sylvia, a medical assistant
- Douglas, a patient

### Key questions:

- How can Sylvia help Douglas understand his medication and how to take it?
- Why might it be more difficult for older patients to understand instructions?
- If Douglas had a family member with him in the waiting room, do you think Sylvia should allow them in the exam room while she explained the instructions? Why or why not?
- Would it be better if the physician explained the instructions to Douglas?

- Small group discussions
- Large group icebreakers
- Writing assignments
- Introduce one skill each week!

# Ethical and Legal Issues in Healthcare



- Student workbooks
- Scenario cards (5 sets)
- Online access to curriculum
- Downloadable curriculum

# Ethical and Legal Issues in Healthcare Curriculum

1. Legal responsibilities and implications
2. Patient's basic rights and responsibilities
3. Informed and implied consent and Advanced Directives
4. Safety, privacy, and confidentiality of health information
5. Social media and healthcare
6. Ethical foundations
7. Ethical vs. legal issues impacting healthcare
8. Contemporary ethical dilemmas and their implications
9. Religious/cultural values and respect/empathy for all patients
10. Ethical issues involving lack of capacity and end-of-life care

# Ethical and Legal Issues in Healthcare

Ethical and Legal Issues in Healthcare

Name: \_\_\_\_\_ Class: \_\_\_\_\_

## Legal Responsibilities and Implications Post-Test

Select the best answer to the following multiple-choice questions:

1. Which of these is considered the most harmful form of defamation?
  - a. Slander
  - b. Battery
  - c. Libel
  - d. Malpractice
2. "A threat or attempt to inflict physical contact or bodily harm on a person, such as lifting a fist in a threatening manner." What is this the definition of?
  - a. Assault
  - b. Battery
  - c. Abuse
  - d. Negligence
3. Which of the following does not need to be proven to be charged with slander?
  - a. The statement was false
  - b. The person speaking was underprivileged
  - c. The person acted negligently when speaking
  - d. The statement was not privileged
4. As a healthcare professional, following legal responsibilities protects you, your employer, and \_\_\_\_\_.
  - a. The public
  - b. The patient's family
  - c. Your colleagues
  - d. The patient
5. What type of "code of conduct" is based on morals and society's expectations?
  - a. Ethical
  - b. Moral
  - c. Civil
  - d. Legal

# Implementation ideas



- Small group discussions
- Large group icebreakers
- Writing assignments
- Think-Pair-Share

# Soft Skills Program for Caring for Patients with Intellectual Disabilities, Mental Illness, or PTSD

- 4 MP3 players with headphones
- Online curriculum
- Scenario cards (4 sets)
- Student workbooks



# Soft Skills Program for Caring for Patients with Intellectual Disabilities, Mental Illness, or PTSD

1. Defining intellectual disability
2. Defining mental illness
3. Strategies for caring for patients with intellectual disability
4. Strategies for caring for individuals with mental illness
5. Strategies for caring for patients with PTSD



# Soft Skills Program for Caring for Patients with Intellectual Disabilities, Mental Illness, or PTSD

Soft Skills for Caring for Patients  
with ID, MI or PTSD Curriculum

Name: \_\_\_\_\_ Class: \_\_\_\_\_

## Intellectual Disability Closing Activity

Instructions: Please read through the following scenarios and label them as a strong representation of person-centeredness or a poor representation of person-centeredness. Remember that person-centeredness care and advocacy is where the individual is at the center of their life. They are actively involved in their own decision-making and get to direct the supports that they want and need from others.

| Scenario                                                                                                                                                                                                                                                                                              | Circle the representation of person-centeredness |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Susie is a 35-year-old woman who wishes to live in her own community. She has expressed this to her mother, who is worried about Susie living alone but wants to honor her choice. Susie's mother helps Susie to contact her case manager and have a meeting to discuss her community living options. | Strong<br>Poor                                   |
| Joshua is working in his community. He has a job coach who goes out with him to help him on job-related tasks. Today, Joshua's job coach told his boss that Joshua is only capable of doing what he is doing and not to give him any more tasks to learn because Joshua "just can't learn anymore."   | Strong<br>Poor                                   |
| Terry and her husband Sam live together. They want to adopt a dog, but they both use a wheelchair for mobility and their care provider is allergic to dogs. Their care provider tries to tell them that they cannot get a dog so she can keep her job.                                                | Strong<br>Poor                                   |
| Wilbur recently graduated from high school. He is 20 years old and has autism. He was walking onto the bus when a community member called him a "retard."                                                                                                                                             | Strong<br>Poor                                   |

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# Implementation ideas



- Small group discussions
- Large group icebreakers
- Writing assignments
- Think-Pair-Share

# AED Trainer



- AED trainer and case
- 2 adult training pads
- 2 pediatric training pads
- Remote control
- Online curriculum

Cardiac arrest management and  
AED

# AED Trainer

Cardiac Arrest Management and AED Curriculum

Name: \_\_\_\_\_ Class: \_\_\_\_\_

## Cardiac Arrest Management and AED Post-test

Select the best answer to the following multiple-choice questions:

1. What is cardiac arrest?
  - a. When the lungs cannot provide enough oxygen to the brain
  - b. Cardiac arrest is a genetic defect
  - c. Failure of the heart to pump effectively
  - d. None of the above
2. Cardiopulmonary resuscitation is a combination of which two components?
  - a. Airway, breathing
  - b. Call 911, check for a pulse
  - c. Rescue breathing, chest compressions
  - d. AED, transport to a hospital
3. Where do you place the AED pads on an adult?
  - a. Middle of the chest, middle of the back
  - b. Patient's right upper chest under the collarbone, left lower chest
  - c. Patient's left upper chest over the heart, right lower chest
  - d. All the above are correct
4. In what order is CPR performed?
  - a. ABC: Airway, Breathing, Circulation
  - b. CBA: Circulation, Breathing, Airway
  - c. CAB: Compressions, Airway, Breathing
  - d. BAC: Breathing, AED, Compressions
5. After an AED delivers a shock, how long do you continue CPR before reevaluating the patient?
  - a. 1 minute
  - b. 2 minutes
  - c. 4 minutes
  - d. 5 minutes



# BVM Ventilation Trainer



- Bag valve mask trainer torso
- Controller
- Adult BVM
- Storage case
- Online curriculum

# BVM Ventilation Trainer Curriculum

1. Purpose and parts of a bag valve mask
2. Correct use of a bag valve mask
3. Troubleshoot common bag valve mask problems



# Infant Health and Safety Pack



- Choking baby
- Infant CPR manikin
- Scenario cards
- Online access to curriculum
- Student workbooks
- Posters

# Infant Health and Safety Pack Curriculum

## Airway Obstruction

1. Identifying objects that can cause choking
2. Why the Heimlich Maneuver should NOT be used
3. Handling an infant airway obstruction emergency
4. Hands-on practice

## Emergency Infant CPR

1. Assessing an emergency situation
2. How to call for emergency medical assistance
3. How to perform infant CPR
4. Hands-on practice

# Infant Health and Safety Pack

Infant Airway Obstruction Emergency Procedures

## Check Your Skills

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Directions: Take turns with your partner demonstrating and assessing the rescue skills you have learned. For example, one will demonstrate the steps to help a choking infant while the other checks off each step as it is performed. If any steps are missed or performed incorrectly, stop, explain the correct procedure, and practice the sequence of steps again. Peer evaluators: be sure to add up the total points earned for the skill, make any comments and/or notes as needed, and sign at the conclusion of the demonstration.

|                                                                                                                                                                                                                                                                                                                      | Excellent | Good | Fair | Poor |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|------|------|
|                                                                                                                                                                                                                                                                                                                      | 1         | 2    | 3    | 4    |
| 1. If alone, shout for help: <ul style="list-style-type: none"><li>If someone comes, have them call for emergency medical assistance.</li><li>If no one comes, continue rescue skills for one minute, and then call for emergency medical assistance.</li></ul>                                                      |           |      |      |      |
| 2. Hold the infant face down on your forearm, supporting the infant's head and jaw with your hand. Keep airway open by not letting the infant's head drop forward. Sit or kneel and rest your arm on your right thigh, holding the infant's shoulders below his/her hips. Straddle the infant's legs on your arm.    |           |      |      |      |
| 3. Give up to five "back slaps" with the heel of your free hand between the infant's shoulder blades. Each slap <b>slightly</b> harder to help the obstruction dislodge.                                                                                                                                             |           |      |      |      |
| 4. If the object does not come out after 5 back slaps, turn the infant onto his/her back by holding the back of the infant's head with your free hand and flipping the infant to your free forearm, supporting the infant's head and neck with your hand.                                                            |           |      |      |      |
| 5. Give up to five "chest thrusts" on the breastbone using two fingers of your free hand, placing your fingertips one finger width below the nipple line. Press straight down $\frac{1}{2}$ to $\frac{1}{2}$ the depth of the infant's chest. (1 second in length.) Allow the chest to come back to normal position. |           |      |      |      |
| 6. Alternate giving five "back slaps" and five "chest thrusts" until the object comes out; the infant breathes, coughs, or cries; or until the infant stops responding. If the infant stops responding and becomes unconscious or limp, perform the steps of infant CPR).                                            |           |      |      |      |

Total Points Earned: \_\_\_\_\_

Comments/Notes: \_\_\_\_\_

Peer Evaluator Signature: \_\_\_\_\_



# Implementation ideas



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# Blood Pressure Simulator



- Sphygmomanometer with cuff
- Electronics box
- Pulse simulator
- Online access to curriculum

# Blood Pressure Simulator

1. Patient-focused care
2. Procedures for taking blood pressure

Introduction to Blood Pressure

## Introduction to Blood Pressure Check-Off (Instructor Resource)

**PART ONE:** Demonstrate how to use the training tool to take a blood pressure using the following steps:

|     |                                                                                                                            |  |
|-----|----------------------------------------------------------------------------------------------------------------------------|--|
| 1.  | Gather appropriate equipment                                                                                               |  |
| 2.  | Knock, enter room and provide for privacy                                                                                  |  |
| 3.  | Identify yourself with name and title (student nurse, medical assistant, nurse aide, etc.)                                 |  |
| 4.  | Wash your hands with sanitizer or soap/water                                                                               |  |
| 5.  | Identify patient by asking name and date of birth; state that you would verify this information with a medical record      |  |
| 6.  | Explain the procedure to the patient and ask if they have any questions                                                    |  |
| 7.  | Verbalize that the patient would be positioned appropriately (seated, arm at heart level, legs uncrossed)                  |  |
| 8.  | Place the cuff around the upper arm noting proper cuff size and placing it so the ARTERY label is over the brachial artery |  |
| 9.  | Place the dial in view                                                                                                     |  |
| 10. | Place the diaphragm of the stethoscope over the brachial artery at the antecubital space                                   |  |
| 11. | Pump the BP cuff 30 mm HG above the patient's usual systolic pressure                                                      |  |
| 12. | Obtain a reading accurate within 2 points +/- of the blood pressure model                                                  |  |
| 13. | Ask your patient if they are comfortable and if they have any questions                                                    |  |
| 14. | Wash your hand with sanitizer or soap/water                                                                                |  |
| 15. | Document the blood pressure below                                                                                          |  |
|     | Date:                                                                                                                      |  |
|     | Time:                                                                                                                      |  |
|     | Blood Pressure:                                                                                                            |  |
|     | Score:                                                                                                                     |  |

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# Implementation ideas



- Use with a standardized patient, student, or place on a manikin
- Instructors, play Korotkoff sounds through a headset for themselves or through a speaker for the whole the class to hear
- Career exploration
- Vital signs lab day
- We recommend five simulators for a 20-student classroom.



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# Questions?

