






**Lesson 13: Heart Rate**  
(Refer to Health Matters: Lesson #10)

**STEP ONE: Pre-Planning/Pre-Activities**

**STEP TWO: The Lesson Plan**

**STEP THREE: Instructor Reflection**

<b>Lesson 13: Heart Rate (Refer to Health Matters: Lesson #10)</b>	<b>Total Activities:</b>	<b>Date and Location:</b> <i>(Instructor should enter the date or time of year presented to the interns.)</i>
<b>STEP ONE: Pre-Planning/Pre-Activities:</b>		
<b>Implementation Time Frame:</b> This lesson should be implemented after you have completed the first few lessons and have discussed what is health and physical activity. The implementation time frame is flexible if you are waiting on a guest speaker or would like to bump this up earlier in the lessons.		
<b>Notes to Instructor</b> <ul style="list-style-type: none"> <li>● Address “Just Right Challenge” for skill layering and other opportunities for high expectations</li> <li>● Reference jobs / employment: competitive integrated employment (16+ hours, etc.) and how health relates to being able to perform the jobs necessary.</li> </ul>		
<b>Lesson Plan Summary:</b> This lesson focuses on your heart rate; what it is, how it changes, why it changes, and what rates we should aim for when exercising. Not everybody has a device that automatically tells them what their heart rate is at a given moment, so your interns will also learn how to feel for their pulses and calculate their heart rates.		
<b>Glossary:</b> <b>Heart Rate:</b> The number of times your heart beats in 1 minute. (normal heart rate is between 60-100 beats per minute)  <b>Pulse:</b> Like Heart rate, but it is the rate at which your arteries are expanding and contracting. Throughout the lesson you will learn where you can check for your pulse. Most of the time your pulse will be the same as your heart rate.  <b>Target Heart Rate:</b> A range of numbers that reflect how fast your heart should be beating when you exercise.		
<b>Prior to this training the instructor should complete the following:</b> Prepare individual folders/binders: <ul style="list-style-type: none"> <li>● Prepare handouts: (see below)</li> </ul> Prepare Guest Speaker (if inviting a guest speaker to present): <ul style="list-style-type: none"> <li>● Discuss expectations and any special accommodations your interns will need for this lesson.</li> <li>● Discuss Activity ideas</li> <li>● Prepare any handouts they will need</li> </ul>		
<b>Who Should Present / Attend the Training?</b> <b>Instructor or invited guest speaker</b> <ul style="list-style-type: none"> <li>● Present the lesson</li> <li>● Prepare the training room.</li> </ul> <b>Skills Trainers:</b> <ul style="list-style-type: none"> <li>● Assist with any of the above before the lesson begins</li> </ul>		
<b>What you will need: Materials &amp; Resources</b>		
<b>Handouts:</b>	Health Matters Curriculum: <ul style="list-style-type: none"> <li>● What is Heart Rate? (Lesson #10)</li> <li>● Calculating Target Heart Rate Zone (Lesson #10)</li> </ul>	

	<p>Other:</p> <ul style="list-style-type: none"> <li>• Where to check your heart rate? (Included in Lesson 13 folder)</li> <li>• How does moving affect my heart rate? (Included in Lesson 13 folder)</li> </ul>	
<b>Technology:</b>	<p>YouTube Videos:</p> <p>What is my target heart rate?</p> <ul style="list-style-type: none"> <li>• <a href="https://youtu.be/k60x24nN9CM">https://youtu.be/k60x24nN9CM</a></li> </ul> <p>Heart Rate and Pulse</p> <ul style="list-style-type: none"> <li>• <a href="https://youtu.be/DLmmN0jy-s0">https://youtu.be/DLmmN0jy-s0</a></li> </ul>	
<b>Other materials needed for activities:</b>	If available: Fingertip Pulse Oximeter	
<b>Enduring Understandings</b>		
<b>Enduring Understandings</b>	<ol style="list-style-type: none"> <li>1. Challenge your interns to check their heart rates at different times of the day (ie: morning, during work, after lunch time, before trying something new) and observe how fast their heart is beating.</li> <li>2. For those interns that have physical activity goals: Try to track their heart rates at resting and when completing a simple walk test (walking for 5-10 minutes); have their heart rates (resting and active) changed over time?</li> </ol>	
<b>Mastery Objectives</b>		
<p><b>Knowledge</b> </p> <p>What will they know as a result of the training?</p>	<p><b>Skills</b> </p> <p>What will they be able to do as a result of the training?</p>	<p><b>Check for Understanding / Evaluation</b></p> <p>What will the Instructor ask/do to determine interns' level of understanding? How can the intern demonstrate their level of understanding?</p>
<ul style="list-style-type: none"> <li>• Interns will be able to define heart rate and target heart rate.</li> </ul>	<ul style="list-style-type: none"> <li>• Interns will be able to demonstrate how to measure heart rate.</li> <li>• Interns will be able to identify 2 areas on their body where they can measure their heart rate.</li> <li>• If available: Interns will be able to use a fingertip pulse oximeter and identify their heart rate.</li> </ul>	<ul style="list-style-type: none"> <li>• Interns will be able to identify 3 factors that affect your heart rate.</li> <li>• Interns will be able to calculate their target heart rates with help.</li> <li>• Why does our heart rate change?</li> </ul>
<p><b>Boundary Spanning</b></p> 	<p>This would be a great lesson to reach out to a nurse or medical professional that can demonstrate how to measure heart rate and blood pressure. They would be able to speak on the importance of monitoring each.</p>	
<p><b>Safe Space</b></p>	<p>Ensure the training environment is a safe space where interns can share information, challenges and successes. Recognize that interns have different levels of readiness. Some interns may not have the background necessary for the information presented.</p>	

	<p>For example:</p> <ol style="list-style-type: none"> <li>1. Provide safety rules, such as: exits, restrooms, alarms, where to gather if an alarm goes off, when breaks will be, take a break if you need one</li> <li>2. Allow interns to move, fidget, stand, lean, and create accommodation to stay awake and focus</li> <li>3. Explain acronyms and jargon</li> <li>4. Describe all slides and written materials for low or non-readers.</li> <li>5. Place anyone with audio-visual disabilities in the front of the room (lip reading, etc.)</li> <li>6. Modify activities that require standing up for people using wheelchairs or with other mobility limitations.</li> <li>7. Acknowledge everyone's opinions</li> </ol>
<b>Differentiation Strategies</b>	Use this video to introduce the topic of heart rate: What is my target heart rate? <a href="https://youtu.be/k60x24nN9CM">https://youtu.be/k60x24nN9CM</a>
<b>Citations &amp; Sources</b>	Health Matters Curriculum YouTube Videos

<b>STEP TWO: The Lesson Plan</b>	
<p>Time: 5 minutes <b>Opening/ Connect to Purpose</b></p>	<p>Introduction: Last lesson we reviewed our goals and made action plans. In the beginning when we first started talking about physical activity, we learned about how much energy it takes to do different types of exercise and physical activity. We have discussed keeping our bodies healthy through eating right, exercising, and getting enough sleep. Today we are going to talk about Heart Rates; our heart is the most important muscle in your body. (Refer to Unit 2 lesson 10).</p>
<b>Activity 1 – Name of the activity</b>	
<p>Time: 5 minutes Description</p> <p><b>VocFit Crosswalk:</b> <b>General:</b> Follows directions <b>Cognitive abilities:</b> Count</p>	<p>Use the handout: "Where to check my Heart Rate?"</p> <ul style="list-style-type: none"> <li>• As a group, identify the areas you can check your heart rate. Use two fingers to feel for the heart rate. (Can your interns feel it? )</li> </ul>
<p>Time: 15-20 minutes Description</p> <p><b>VocFit Crosswalk:</b> <b>Physical Abilities:</b> Stand, perform physical activities repetitively, lift heavy materials <b>General:</b> Listens and pays attention, follows directions</p>	<p>What affects heart rate? Discussion:</p> <ul style="list-style-type: none"> <li>• Brainstorm as a group some ideas of factors that affect heart rate. Here are some suggestions: <ul style="list-style-type: none"> <li>○ Exercise</li> <li>○ Age</li> <li>○ Medications</li> <li>○ Caffeine</li> <li>○ Stress</li> <li>○ Body temperature</li> <li>○ Illnesses</li> </ul> </li> </ul>

<p><b>Cognitive Abilities:</b> Count, organize information, shift attention back and forth between tasks.</p>	<p>Experiment:</p> <ul style="list-style-type: none"> <li>● Use: “How does moving affect my heart rate?” handout (edit as it fits your interns) <ul style="list-style-type: none"> <li>○ Measure each individual’s heart rate (measure manually or you can a Fingertip pulse oximeter if available)</li> <li>○ Then perform the following activities and measure each intern’s heart rates after the activity.</li> </ul> </li> <li>● Track the measured heart rate and observe the differences.</li> </ul>
<p>Time: 5 minutes Description</p> <p><b>VocFit Crosswalk:</b> <b>Cognitive Abilities:</b> Add, subtract, multiply, and divide</p>	<p>Target heart rate zone:</p> <ul style="list-style-type: none"> <li>● Use “Calculating Target Heart Rate Zone” handout</li> <li>● Instead of using the example at the bottom, use your interns’ ages to calculate their target heart rates.</li> <li>● Compare this to the heart rates they measured in the previous activity (at rest, moving)</li> </ul>
<p>Time: 10 minutes Description</p> <p><b>VocFit Crosswalk:</b> <b>Cognitive Abilities:</b> Comprehend/read instructions <b>Interpersonal Skills:</b> Listen actively</p>	<p>Check for understanding by using the “What is your Heart Rate?” Worksheet:</p> <ul style="list-style-type: none"> <li>● Have interns complete handout individually</li> <li>● Then come back as a group to discuss the answers.</li> </ul>
<p>Time: 5 minutes <b>Closing</b></p>	<p>Review the factors that affect each individual’s heart rates. Challenge your interns to be more aware of their heart rates throughout the day. Review glossary and check for understanding using the mastery objectives.</p> <p>Give your interns a preview of the next lesson: Blood Pressure.</p>
<p><b>Extension Activities: Critical Thinking Questions and Evaluation Tools</b></p>	
<p><b>Extension Activities:</b> <b>Critical Thinking Questions and Evaluation Tools</b></p> <p><a href="http://www.mandela.ac.za/cyberhunts/bloom.htm">http://www.mandela.ac.za/cyberhunts/bloom.htm</a></p>	<ol style="list-style-type: none"> <li>1. Knowledge/Remembering: <ul style="list-style-type: none"> <li>● Define the terms in the glossary of this lesson: Heart rate, pulse, and target heart rate.</li> </ul> </li> <li>2. Comprehension/Understanding: <ul style="list-style-type: none"> <li>● What are the different factors that can affect your heart rate? Do they increase or decrease your heart rate?</li> </ul> </li> <li>3. Applying: <ul style="list-style-type: none"> <li>● What can an increase in heart rate (when you can feel your heart pounding faster) without exercising mean? (i.e. stress? Anticipation of something? Too hot in the room? Nerves? Anger?)</li> </ul> </li> <li>4. Analyzing: <ul style="list-style-type: none"> <li>● Can you feel when your heart rate speeds up?</li> <li>● What other symptoms do you feel? (i.e.: sweating, breathing faster/harder, etc.)</li> </ul> </li> <li>5. Evaluating: <ul style="list-style-type: none"> <li>● Where on your body can you measure your pulse/heart rate?</li> </ul> </li> </ol>

	<ul style="list-style-type: none"> <li>• When throughout the day, do you feel your heart rate speeding up? How does that feel? How do you slow it down?</li> </ul> <p>6. Creating:</p> <ul style="list-style-type: none"> <li>• Make an individualized chart of what your interns' target heart rates are for a reference point.</li> </ul>
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<b>STEP THREE: Instructor Reflection</b>	
<b>What did you learn in the process of presenting this lesson?</b>	
<b>Moving on from this Lesson</b>	<ol style="list-style-type: none"> <li>1. Review these concepts at the start of the next lesson on blood pressure.</li> <li>2. Continue to encourage your interns to be aware of their heart rate during different situations. (i.e.: when they are stressed, working hard, and even at rest.)</li> </ol>
<b>Intern Reflection on the Lesson</b>	<ol style="list-style-type: none"> <li>1. What did I do well during this lesson?</li> <li>2. What could I do better next time?</li> <li>3. How can I use what I learned?</li> <li>4. What was the most important thing I learned?</li> </ol>
<b>Instructor Reflection on the Lesson</b>	<ol style="list-style-type: none"> <li>1. Did all the interns understand the material?</li> <li>2. Will they be able to use it in their department and in their day-to-day life?</li> <li>3. Did the lesson take less or more time than was planned?</li> <li>4. What should be added to the lesson to make it more meaningful?</li> <li>5. Do they understand how this information relates to the overall goal of competitive integrated employment?</li> <li>6. Were there any surprises in the comments, questions or training that would impact this lesson in the future?</li> <li>7. Did the lesson take less or more time than was planned?</li> <li>8. What could I do differently to improve this lesson?</li> </ol>

Training Plan modified from:

Wiggins, G. P., & McTighe, J. (2006). *Understanding by design* (Expand 2nd ed.). Upper Saddle River, N.J: Pearson Education, Inc