

Name/Title: Maintaining Target Heart Rates Using DDR

Purpose of Event: As a result of this lesson students will be able to:

- Calculate target heart rate zones based on individual resting heart rate
- Maintain target heart rate zones while participating in various activities

Suggested Grade Level: 9-12

Materials Needed: DDR unit and practice pads, jump rope, flexibility cards, box step up, stop watch, [students work sheet](#), pencils, and heart rate monitors (optional).

Description of Idea

Introduction:

What does our heart rate tell us? Is our heart rate important and does it change? The heart rate tells us the amount of exertion that is being placed on the body at a given time. The heart rate is able to adapt over time from the demands it faces. It will increase in size and become more efficient with its contractions, thus circulating more blood with less effort throughout the body. Who knows what target heart rate (THR) means? Your target heart rate is the desired range of heart rate reached during exercise which enables your heart and lungs to receive the most benefit from a workout. It is the ideal intensity level at which your heart is being exercised but not overworked.

Today we will be participating in various activities, while learning the effect they have on your heart rate. In these various activities a different effort level and intensity will needed to maintain our heart rate in the THR zone in which you will be calculating.

Activity:

Each student will have a heart rate monitor, checked for accuracy before starting. If HR monitors are unavailable, then have students self-checking their individual heart rate by taking a manual pulse. Before beginning the activity, have the students sit quietly and determine their resting heart rate. Students will record this information on the worksheet provided to help determine their target heart rate zones. After the students have determined their resting heart rate, use the Karvonen formula (attached) to determine their individual target heart rate zone and record this information on their worksheet.

Students will participate in four, 10 minute stations rotating on the teacher's prompt.

Students will be asked to check their heart rate at least two times during each station and immediately following exercise at each station. Use the DDR music as a prompt. Each time a song ends the students will check and record their heart rates.

7. DDR station: Set the game in Free Play mode and allow students to choose their difficulty

level based on individual ability levels. Students will rotate from live pads to practice pads following each song.

8. Box step up/ Run, Jog, Walk: Students will choose to step up and down from the box (bench) or participate in a run, jog, walk pace around the “gym” in order to maintain their heart rate stay in the zone.

9. Jump Rope/Flexibility: Students will alternate jumping rope and performing a variety of stretches from provided flexibility cards in order to maintain their heart rate in the zone.

10. Small-sided games: provide students a choice to play small sided games of ultimate Frisbee or football, basketball, and indoor ‘boccer’, etc.

Closure:

Have the students complete the [students work sheet](#). Review the target heart rate zone and how to calculate it. Check for understanding from the students on why the target heart rate zone is important and how it helps with heart conditioning.

Variations:

(Harder) Have students maintain their heart rate at the upper level of their THR zone for each station. Have the students perform the jump rope and box step ups to the beat of the music.

Adaptations for Students with Disabilities:

(Easier) Have the students place the jump rope on the floor and practice foot drills.

Submitted by **Lisa Hansen** who teaches at University of South Florida in Tampa, FL. Additional authors for this idea were Tom Watterson. Thanks for contributing to PE Central! **Posted on PEC: 7/5/2010.**

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