RLP-PEA · RLP Physical Education A — Fitness Science, Safety and a Personal Plan

Unit 2: Measuring My Fitness

Practice Workbook. The same problems, in the same order, as the Practice sections of the online lessons.

Name _____ Period _____

Lesson 2.1 — What Fitness Assessments Measure — Health Standards and Privacy

FLUENCY

1. Match each field test to the component it measures: (a) push-ups; (b) curl-ups; (c) sit-and-reach; (d) 3-minute step test.

2. Define *baseline*, *validity* and *reliability*.

3. Label each statement criterion-referenced (C) or norm-referenced (N): (a) "Better than 60% of 15-year-olds"; (b) "Resting heart rate is within 60 to 100 bpm"; (c) "Meets the 60-minutes-a-day guideline."

APPLICATION

4. An example student, Tomas, says the sit-and-reach shows he is "the fittest person in the family." Use the idea of validity to explain what is wrong with that claim.

5. List four conditions that must be kept the same between a baseline test and a retest for the comparison to be reliable.

6. An example student's push-up score was lower than expected on a day after she slept four hours and had trained hard the day before. How should she interpret the result?

7. In 2023 about 1 in 4 U.S. high school students were active at least 60 minutes on all of the past 7 days. Out of a group of 200 students, about how many is that, and how many were not? What does the lesson conclude from the statistic?

CHALLENGE

8. Explain why this course judges results against health standards and your own baseline rather than ranking students, and describe how you can report progress while keeping results private.

REVIEW

9. Review (Lesson 1.1): the school assessment tests health-related components. Name two skill-related components it does not test.

Lesson 2.2 — Home Fitness Assessment Day

FLUENCY

1. Put the assessment-day steps in the planned order: curl-ups, step test, resting heart rate, sit-and-reach, warm-up, push-ups.

2. What pace (cadence) is used for push-ups and curl-ups, and when does the curl-up test stop?

3. In the step test, the metronome is set to 96 beats per minute with one foot per beat (up, up, down, down). How many beats make one full step, and how many full steps are done in 3 minutes?

APPLICATION

4. In the sit-and-reach, the 9-inch mark sits at the box edge where the foot is. An example student, Jae, reaches 11.5 inches with the right leg and 9.5 inches with the left. (a) How far past the foot does each reach go? (b) How large is the difference between legs, and what might it tell him?

5. An example student's resting heart rate is 76 bpm on Monday morning and 70 bpm on Tuesday morning. What baseline should she record, and why does the lesson suggest averaging two mornings?

6. An example student's household stair is 7 inches high. Can he compare his step-test recovery count with published YMCA charts? Explain what he should do instead.

7. After the 1-mile walk/run, an example student counts 38 beats in 15 seconds. What is her finish heart rate? Name two safety conditions the lesson sets for the mile.

CHALLENGE

8. Identify two possible sources of error on assessment day other than step height, and write how you would control each at retest.

REVIEW

9. Review (Lesson 2.1): in the step test, is a recovery count of 95 better or worse than a count of 110 on the same stair? Explain.

Lesson 2.3 — Heart Rate, Target Zones and Perceived Exertion

FLUENCY

1. Using the CDC formula, find the estimated maximum heart rate for ages 14, 17 and 18.

2. Give the CDC percentage ranges of maximum heart rate for moderate and for vigorous activity, and the 0-10 effort ratings for each.

3. Convert each exercise count to beats per minute: (a) 24 beats in 10 seconds; (b) 41 beats in 15 seconds.

APPLICATION

4. Calculate the moderate and vigorous heart-rate zones for an example 17-year-old. Round to the nearest whole beat.

5. An example 14-year-old, Priya, records these after 3 minutes of each activity: slow walk 102 bpm, marching with high knees 140 bpm, jumping rope 168 bpm. Her maximum is 206. Which activities reached her moderate zone and which reached vigorous?

6. An example student watches his own pulse-check recording. He counted the first beat as "one" and started the timer 8 seconds after stopping. Name both errors and the correct technique.

7. An example student's wrist device shows 118 bpm, but her careful manual count right after jumping jacks is 15 seconds × 4 = 148 bpm. Which should she trust, and what could explain the difference?

CHALLENGE

8. An example person takes a medicine that keeps her heart rate low. Which intensity tools should she use instead of target heart-rate zones, and why does the lesson say the 220-minus-age formula is only an estimate?

REVIEW

9. Review (Lesson 1.2): where on the wrist do you feel the radial pulse, and which finger should you not use? Why?

Lesson 2.4 — Sports or Lifetime Activities? Comparing the Benefits

FLUENCY

1. Name the three kinds of benefit the lesson uses to compare activities and define each briefly.

2. Sort into team sports (T) or lifetime activities (L): soccer, yoga, cycling, basketball, hiking, swimming.

3. State two Missouri facts from the lesson: the length and endpoints of Katy Trail State Park, and one "first" from the 1904 St. Louis Olympics.

APPLICATION

4. Using the comparison matrix, describe one trade-off between swimming and basketball.

5. Adults are advised to get at least 150 minutes of moderate aerobic activity a week. (a) How many minutes is that per day on 5 days? (b) Compare it with the teen target of 60 minutes a day for 7 days.

6. An example student's walking measures 112 bpm and an effort of 3. Her moderate zone starts at 131 bpm. Give two ways from the lesson to make walking count toward her moderate minutes.

7. An example student, Marcus, loves soccer but will likely not have a team after high school. Recommend one lifetime activity that keeps soccer's main fitness benefits and explain using the matrix.

CHALLENGE

8. Write the four questions the lesson says to ask when comparing an activity, then apply them to yoga in two or three sentences.

REVIEW

9. Review (Lesson 2.3): an example 15-year-old's heart rate during basketball is 162 bpm. Using his vigorous zone of about 158 to 191 bpm, what intensity is this, and what would the talk test likely show?

Unit 2 checkpoint

1. Which test measures abdominal muscular endurance?
   A. Sit-and-reach
   B. Curl-ups
   C. Step test
   D. Resting heart rate
2. A _____ is a first measurement used as the starting point for later comparison.
3. True or false: A test is reliable if repeating it under the same conditions gives about the same score.
4. Which test is done first on assessment day?
   A. Step test
   B. Push-ups
   C. Resting heart rate
   D. Curl-ups
5. True or false: A home stair step test score can be compared directly with published 12-inch YMCA charts.
6. What is the estimated maximum heart rate of an 18-year-old?
   A. 198 bpm
   B. 202 bpm
   C. 208 bpm
   D. 238 bpm
7. Moderate-intensity activity is about 64% to _____% of maximum heart rate.
8. A 10-second exercise pulse count is 26 beats. What is the heart rate?
   A. 104 bpm
   B. 130 bpm
   C. 156 bpm
   D. 260 bpm
9. True or false: If a wrist device and a careful manual pulse count differ by more than a few beats, trust the manual count.
10. Which activity is low in impact and so builds little bone?
    A. Basketball
    B. Running
    C. Swimming
    D. Jumping rope
11. Adults are advised to get at least _____ minutes of moderate aerobic activity a week.

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