

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

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

## Answer Key: Beat, Breath, and Body: A 6th Grade Exercise Science Quest

Learners identify how the heart and lungs adapt to movement, providing a solid foundation for understanding physical fitness and long-term health.

**1. When you start playing a game of tag, your heart begins to pump faster. This immediate change is known as what type of response?**

**Answer:** B) Acute response

Acute responses are the immediate, temporary changes that happen in your body the moment you start physical activity.

**2. Oxygen is the primary fuel source used by the aerobic energy system during long-distance activities like a steady bike ride.**

**Answer:** A) True

The word 'aerobic' means 'with oxygen,' which is the system the body uses for long-duration, steady exercise.

**3. The number of times your heart beats per minute while you are completely resting and relaxed is called your \_\_\_\_\_ heart rate.**

**Answer:** C) Resting

Resting heart rate is a baseline measure of how many times your heart beats when you are not being active.

**4. If a student practices gymnastics every day for a year, their muscles become stronger and more flexible. What are these long-term changes called?**

**Answer:** C) Chronic adaptations

Chronic adaptations are the lasting changes your body makes over weeks or months to get better at a specific type of exercise.

**5. Recovery is the process where the body repairs itself and gets stronger after a workout is finished.**

**Answer:** A) True

Recovery is essential because it is the time when the body fixes tiny bits of wear and tear, making itself more fit for the next session.

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**6. During a fast 50-meter dash, your body needs energy very quickly. The system that provides energy for short, powerful bursts without using oxygen is the \_\_\_\_\_ system.**

**Answer:** A) Anaerobic

The anaerobic system provides quick energy for high-intensity movements that last only a short time.

**7. Why does your breathing rate increase when you are running during P.E. class?**

**Answer:** B) To take in more oxygen for the muscles

Muscles need more oxygen to create energy when they are working hard, so the lungs work faster to pull oxygen from the air.

**8. Doing a 'cool-down,' such as walking slowly after a hard run, can help your body return to its normal state more smoothly.**

**Answer:** A) True

A cool-down helps gradually lower heart rate and helps the body begin the recovery process by clearing waste products from the muscles.

**9. Exercise physiology is the study of how the \_\_\_\_\_ responds and changes because of physical activity.**

**Answer:** B) Human body

Physiology specifically looks at the biological functions and mechanics of living organisms.

**10. Which of these is an example of an acute response to lifting a heavy backpack?**

**Answer:** C) Muscles feeling tight or burning immediately

Feeling a 'burn' or muscle tension right during the activity is a sign of an immediate (acute) physiological reaction.