

Name: _____

Date: _____

Blast Into the Body! Advanced 2nd Grade Exercise Physiology Mission

Rising young scientists design fitness blueprints and analyze how lungs and muscles adapt when the playground becomes a high-performance lab.

1. Imagine you are designing a new sport called 'Sky-Ball.' If players have to jump for 20 minutes, which long-term change would help their bodies perform best?

- A. Their hair grows longer to catch the wind.
- B. Their lungs get better at moving oxygen to their muscles.
- C. Their skin turns green to absorb sunlight for energy.
- D. Their bones become heavier so they stay on the ground.

2. When an athlete stops a heavy game of 'Freeze Tag' to rest, their body begins a process called _____ to fix tiny muscle tears and get stronger.

- A. Hibernation
- B. Melting
- C. Recovery
- D. Evaporation

3. True or False: If a student practices balancing on one foot every day for a month, their brain and muscles learn to work together more efficiently.

- A. True
- B. False

4. You notice your friend's face is very red and they are breathing fast after a race. Which physiological response are you observing?

- A. A chronic adaptation
- B. An acute response
- C. A sleep cycle
- D. A dietary habit

5. If you are sprinting as fast as you can to catch a bus, your body uses its _____ energy system for a quick burst of power.

- A. Solar
- B. Long-distance
- C. Immediate
- D. Hydrating

6. True or False: Your heart rate stays exactly the same when you transition from sitting at a desk to playing tag.

- A. True

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B. False

7. Why would a coach ask players to walk slowly for five minutes after a hard soccer game?

- A. To make the players late for dinner.
- B. To help the body wash away waste products and start recovery.
- C. To practice walking in a straight line.
- D. To make the muscles stiffer for the next day.

8. A scientist studying how a gymnast's heart changes after years of training is looking at a _____ adaptation.

- A. Sudden
- B. Chronic
- C. Accidental
- D. Painful

9. Which of these is a 'fuel' your body uses during a long, steady hike in the woods?

- A. Oxygen and stored energy
- B. Carbon dioxide and rocks
- C. Gravity and noise
- D. Cold air and shadows

10. True or False: Sweat is an acute response that helps the body stay cool while working hard.

- A. True
- B. False