

Name: _____

Date: _____

Blast Beyond Basics: 7th Grade Solo Sports Success Quiz

How do elite athletes utilize biomechanics and periodization to peak? Analyze the physiology and psychology behind archery, cycling, and martial arts mastery.

1. In the sport of archery, which concept of physics is most critical for a consistent 'anchor point' to ensure accuracy?

- A. Centrifugal force
- B. Projectile motion
- C. Elastic potential energy
- D. Static friction

2. The 'F.I.T.T.' principle stands for Frequency, Intensity, Time, and Type, and is used to design effective fitness programs.

- A. True
- B. False

3. A cyclist who wants to improve power at the end of a long race would focus on training their _____ system through short, high-intensity intervals.

- A. Circulatory
- B. Anaerobic
- C. Skeletal
- D. Aerobic

4. When a martial artist performs a roundhouse kick, which sequence best describes the transfer of kinetic energy to maximize power?

- A. Wrist to shoulder to elbow
- B. Head to neck to spine
- C. Pivot foot to hips to leg
- D. Ankle to knee to toes

5. Proprioception, essential for sports like rock climbing, refers to the body's ability to sense its _____ in space.

- A. Weight
- B. Velocity
- C. Position
- D. Temperature

6. In 'Periodization' training, an athlete keeps their intensity and volume exactly the same for every workout throughout the entire year.

- A. True

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B. False

7. A marathon skater experiences 'burning' in their legs due to the buildup of lactic acid. This is a byproduct of which metabolic state?

- A. Low-intensity aerobic respiration
- B. Glycolysis under low-oxygen conditions
- C. Maximum heart rate recovery
- D. Dehydration and electrolyte loss

8. To avoid 'plateauing' during fitness training, an athlete must apply the principle of _____, gradually increasing the difficulty of their workouts.

- A. Specificity
- B. Reversibility
- C. Individualization
- D. Overload

9. The use of 'Visualization' or mental rehearsal is a sports psychology technique that can improve muscle memory and reduce performance anxiety.

- A. True
- B. False

10. Why is 'Dynamic Stretching' preferred over 'Static Stretching' immediately before an individual sport like tennis?

- A. It decreases blood flow to the extremities
- B. It mimics game-like movements and warms up the muscles
- C. It requires less mental focus
- D. It is only used for cooling down