

Name: _____ **Date:** _____

Sizzling Superfood Systems: The Advanced 6th Grade Nutrition Dare

Rising health advocates analyze the synergy of micronutrients and metabolic pathways to design high-performance dietary plans for developing bodies.

1. A middle school athlete is experiencing frequent muscle cramps and fatigue during soccer practice. Based on the concept of electrolyte balance, which combination would most effectively restore homeostasis?

- A. Purified water and a high-protein beef jerky stick
- B. Coconut water and a potassium-rich banana
- C. A caffeinated energy drink and a granola bar
- D. Low-fat chocolate milk and a gluten-free cracker

2. To maximize the absorption of fat-soluble vitamins like Vitamin K (found in kale) or Vitamin A (found in carrots), the digestive system requires the presence of _____.

- A. Complex carbohydrates
- B. Dietary lipids (fats)
- C. Citric acid
- D. Simple sugars

3. True or False: Iron found in plant-based sources, such as lentils, is absorbed by the body just as efficiently as the heme iron found in red meat.

- A. True
- B. False

4. When analyzing 'Empty Calories,' why is a 200-calorie sugary soda considered nutritionally inferior to a 200-calorie handful of walnuts?

- A. The soda has a higher thermic effect of food (TEF)
- B. The walnuts offer nutrient density, including Omega-3s and fiber
- C. The soda contains synthetic minerals that block hydration
- D. The walnuts contain more water which aids in cellular detox

5. The process by which the body breaks down a complex carbohydrate into _____, its simplest form, provides the primary fuel for brain function during a difficult math test.

- A. Amino acids
- B. Glycerol
- C. Glucose
- D. Polypeptides

6. Why is 'Fiber' considered a crucial component of a 6th grader's diet, even though the human body cannot actually digest or absorb it for energy?

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- A. It repairs microscopic tears in the muscle tissue
- B. It regulates blood sugar spikes and aids digestive motility
- C. It converts into Vitamin D when exposed to stomach acid
- D. It facilitates the rapid transport of oxygen to the lungs

7. True or False: A 'Complete Protein' source, such as quinoa or buckwheat, contains all nine essential amino acids that the human body cannot produce on its own.

- A. True
- B. False

8. A person following a strict vegan diet must be particularly careful to supplement _____, a nutrient primarily found in animal products that is vital for nerve tissue health.

- A. Vitamin C
- B. Vitamin B12
- C. Magnesium
- D. Potassium

9. If you were designing a 'Heart Healthy' meal planning strategy for a family, which type of fat would you prioritize for its ability to lower LDL (bad) cholesterol?

- A. Trans fats found in partially hydrogenated oils
- B. Saturated fats found in tropical oils like palm oil
- C. Monounsaturated fats found in olives and nuts
- D. Refined oils found in shelf-stable snack cakes

10. True or False: The 'Glycemic Index' (GI) is a system that ranks food based on how quickly it raises blood glucose levels, with white bread having a higher GI than steel-cut oats.

- A. True
- B. False