

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

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

## Answer Key: Your Blueprint for Vitality: A 10th Grade Nutrition Guide

How does your body convert fuel into cellular power? Use this formative assessment to check recall on macronutrients and micronutrient functions.

**1. Which of these is considered a 'trace mineral,' meaning the body requires it in very small amounts to function properly?**

**Answer:** C) Selenium

While minerals like calcium and potassium are macrominerals, selenium is a trace mineral necessary in small quantities for antioxidant enzyme function.

**2. True or False: Fat-soluble vitamins, such as Vitamin A and Vitamin D, are stored in the body's liver and fatty tissues.**

**Answer:** A) True

Unlike water-soluble vitamins (like B and C) which are excreted, fat-soluble vitamins (A, D, E, K) are stored in the body's adipose tissue.

**3. The primary role of \_\_\_\_\_ in the human body is to serve as the building blocks for enzymes, hormones, and antibody production.**

**Answer:** B) Proteins

Proteins are composed of amino acids which the body uses to synthesize essential structures like enzymes and neurotransmitters.

**4. If a person is looking to increase their intake of Omega-3 fatty acids for brain health, which of these foods is the most appropriate choice?**

**Answer:** A) Walnuts

Walnuts are a significant plant-based source of Alpha-linolenic acid (ALA), a type of Omega-3 fatty acid.

**5. Nutritionists recommend consuming \_\_\_\_\_ carbohydrates, such as lentils or oats, because they take longer to break down and provide steady energy.**

**Answer:** D) Complex

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Complex carbohydrates contain longer chains of sugar molecules and fiber, resulting in a lower glycemic response compared to simple sugars.

**6. True or False: Dehydration can lead to a decrease in cognitive performance and physical coordination even before a person feels thirsty.**

**Answer:** A) True

Thirst is often a delayed signal of dehydration; mild fluid loss can impact focus and physical output earlier in the process.

**7. Which of the following is a primary function of insoluble fiber in the digestive system?**

**Answer:** B) Increasing the speed of waste moving through the intestines

Insoluble fiber adds bulk to the stool and helps food pass more quickly through the stomach and intestines.

**8. Anemia is a condition often caused by a deficiency in \_\_\_\_\_, which is necessary for the production of hemoglobin in red blood cells.**

**Answer:** C) Iron

Iron is a critical component of hemoglobin, the protein in red blood cells that carries oxygen from the lungs to the body.

**9. Which of these food combinations represents a 'complementary protein' source, often used by people on a plant-based diet to get all essential amino acids?**

**Answer:** B) Rice and black beans

While individual plant foods may lack certain amino acids, combining grains (like rice) and legumes (like beans) provides a complete amino acid profile.

**10. True or False: Low-density lipoprotein (LDL) is often called 'good' cholesterol because it removes excess cholesterol from the arteries.**

**Answer:** B) False

HDL is the 'good' cholesterol; LDL is known as 'bad' cholesterol because high levels can lead to plaque buildup in arteries.