Teacher Answer Key

Case Study

1. Calories only measure energy, which comes from the macronutrients, so two meals can match on calories and still be completely different foods. Priya's breakfast carried micronutrients and fiber along with its energy, while Dontae's carried sugar and fat with almost no vitamins, minerals, or fiber attached.

2. He meant his breakfast was almost pure macronutrient with no micronutrients riding along. The calories were real, so he was not underfed in terms of energy, but the vitamins and minerals that let his body actually use that energy were essentially absent, which is what empty calories describes.

Multiple Choice

1. C

2. B

3. A

Matching

1-B, 2-C, 3-E, 4-A, 5-D

Fill-in-the-Blank

1) gram, 2) iron, 3) body

Short Answer (Sample Responses)

Q1: Calories come only from macronutrients, so a diet built on sugar and fat can meet or exceed energy needs while delivering almost no vitamins or minerals. Because micronutrients are the tools that let the body use that fuel, the person is well fed on energy and underfed on everything else.

Q2: The eight B vitamins and vitamin C are water-soluble, so they dissolve into the cooking water and get poured down the drain. Roasting and steaming keep the vitamins in or on the vegetable instead of pulling them out into liquid that gets discarded.

Q3: Iron needs rise sharply once monthly blood loss begins, because iron is lost with the blood and has to be replaced from food. That increase lands during the teenage years, when eating patterns are often least consistent, and the symptoms look enough like ordinary teenage tiredness to be missed.