Teacher Answer Key

Case Study

1. Selena has a large calorie budget from growth and running, so a low-nutrient food fits alongside everything else she still eats that day. Her grandfather eats far fewer calories while needing the same or more vitamins and minerals, so each low-nutrient calorie displaces one that had to carry nutrition, leaving no room for it.

2. B12 absorption declines with age because reduced stomach acid cannot release B12 bound to food protein, which is why fortified cereal supplies it in a form he can absorb. Thirst sensation also becomes blunted in older adults, so he will not report being thirsty, which is why putting water on the table works better than waiting for him to ask.

Multiple Choice

1. D

2. B

3. C

Matching

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

Fill-in-the-Blank

1) day, 2) twelve, 3) fortified

Short Answer (Sample Responses)

Q1: Calorie needs fall with age while vitamin and mineral needs stay the same or rise, so an older adult has to meet the same requirements on a smaller budget. A teenager eating far more calories has room for some low-nutrient food and still hits every target, while for an older adult that same food displaces nutrition the day cannot spare.

Q2: Neural tube defects form during the first few weeks of pregnancy, which is often before a person knows they are pregnant, so starting folic acid after a positive test can already be too late. That timing is why the recommendation is written for anyone who could become pregnant and why grain products are fortified with it.

Q3: Appetite and how much a person eats drop measurably when meals stop being social, after decades of eating with someone else. Combined with medications that dull taste, dental problems, and the effort of shopping and cooking for one, meals

get smaller and simpler at exactly the stage when every calorie needs to carry nutrition.