Teacher Answer Key

Case Study

1. Blood is a protein stain, and heat denatures protein, which essentially cooks the stain into the fibers where detergent can no longer lift it out. The reading also notes that dryer heat sets stains permanently, so running the shirt through the dryer afterward removed any remaining chance of getting it out.

2. Sort it would have prevented week one, because dye that is not colorfast releases into the wash water and redeposits on lighter fabric, which is what turned the undershirts pink. Wash it cold protects color and prevents shrinking, and never dry an untreated stain addresses week two, since heat sets stains permanently while a stain that only survived washing is usually still removable. None of the three covers week three; the reading's rule for that is not to overload the washer, because clothes need room to move for agitation to reach them.

Multiple Choice

1. B
2. C
3. B

Matching

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

Fill-in-the-Blank

1) rub, 2) protease, 3) chloramine

Short Answer (Sample Responses)

Q1: A washing machine applies identical water temperature, agitation, and detergent to everything in the drum at once, so there is no way to protect one garment while treating another harshly. That means the settings have to be chosen for whatever item in the load is most easily damaged, which is exactly why sorting by color, fabric weight, and soil level exists.

Q2: Modern detergents contain enzymes such as protease, amylase, and lipase that are engineered to stay active at low temperatures, so they break down protein, starch, and fat soils without needing heat. Earlier detergents relied much more on hot water to do that work, which is why cold washing used to leave clothes noticeably less clean.

Q3: A clogged lint trap is a leading cause of household dryer fires, so clearing it every cycle is a genuine safety requirement. It is also a clothing issue because lint is fiber that broke off the garments themselves, so a full trap is direct evidence that the dryer is physically removing material from clothes and shortening their life.