Teacher Answer Key

Case Study

1. Water is denser than oil, so it would sink into oil above 600 degrees F and flash to steam, expanding about seventeen hundred times. That expansion under the burning oil would have blown flaming droplets across the room and onto Tyler.

2. Sliding the pan from the side keeps her hand and arm behind the cover instead of above the flames. The lid smothers the fire by cutting off oxygen, and it stays on until the pan cools because removing it early lets oxygen back to fuel still hot enough to reignite.

Multiple Choice

1. C

2. A

3. C

Matching

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

Fill-in-the-Blank

1) lid (or: baking sheet), 2) oxygen, 3) roll

Short Answer (Sample Responses)

Q1: Most cooking fires start with unattended cooking, usually frying, when someone steps away for what they expect to be a moment. Oil gives no warning before it catches fire, so a person in the room catches it while it is still a small problem.

Q2: The fire must be smaller than you are, you must have the correct extinguisher, the room must not be filling with smoke, and you must have a clear escape route behind you. If any one is missing, leave and close the door.

Q3: Moving the pan spreads fire along your entire path and holds burning oil close to your body and face. Any stumble splashes flaming oil onto you, and the draft from walking can feed the flames.