

## LABORATORY EXERCISE 6

### MOVEMENTS THROUGH CELL MEMBRANES

#### Instructional Suggestion

Instead of using human blood for Procedure C, you may want to substitute some other type of animal blood obtained from a meat packing house, a veterinarian, or a biological supplier. The hemolysis experiment, using RBCs from a save source, demonstrates concepts of osmosis, tonicity, and membrane characteristics.

#### Laboratory Report Answers

##### **PART A**

- |                           |   |
|---------------------------|---|
| 1. (experimental results) | 4. Diffusion is the movement of a substance from an area of higher concentration to an area of lower concentration as a result of molecular motion. |
| 2. (experimental results) |   |
| 3. Answers will vary.     |   |



#### Critical Thinking Application Answer

- |        |        |
|--------|--------|
| 1. yes | 4. no  |
| 2. yes | 5. yes |
| 3. no  |        |

##### **PART B**

- |  |  |
|--|--|
| 1. Answers will vary.                                | 4. Osmosis is the movement of water molecules from an area of higher concentration to an area of lower concentration through a selectively permeable membrane. |
| 2. Answers will vary.                                |  |
| 3. A greater volume of fluid is in the thistle tube. |  |



#### Critical Thinking Application Answers

- |        |        |
|--------|--------|
| 1. yes | 4. yes |
| 2. yes | 5. yes |
| 3. no  |        |

##### **PART C**

- |  |   |
|--|---|
| 1. (sketches)  | 3. Tube 1. There was a net movement of water into the cells.            |
| 2. Tube 3. There was a net movement of water out of the cells. | 4. Tube 2. There was no net movement of water into or out of the cells. |