



CHECK YOUR LEARNING

Suggested Answers

1. Complex organisms have organs and organ systems that perform very different, specialized functions. Different functions require specialized cell types.
2. Four activities my body must do to stay alive are breathe, eat, eliminate waste, and stay warm.
3. Red blood cells are smooth, flat, round, and concave (pinched in) in the middle to pass easily through blood vessels. Muscle cells are organized in fibres that, when activated by a nerve signal, suddenly contract and pull together, causing the attached bone to move.
4. Because every cell came from one fertilized egg cell, the original zygote had all of the instructions (DNA) for forming all of the different types of cells in the body. Every cell has exactly the same DNA.
5. Plant cells specialize in different ways in some cases. For example, plants do not have blood, so they do not have blood cells. Plants do transport water, so they have special cells for water transport. Animals do not photosynthesize, so they do not have cells with chloroplasts like plants do. Similarly, only plants have guard cells to prevent water loss in leaves.
6. With only one cell, single-celled organisms cannot specialize.