

Accommodating Individual Needs

Suggests specific instructional strategies to accommodate individual needs to ensure all students are given opportunities to provide evidence of achieving the expectations. Strategies are specific to learners requiring program adaptation for Extra Support, Enrichment, and ESL/ESD.

ACCOMMODATING INDIVIDUAL NEEDS	
<p>Extra Support</p> <ul style="list-style-type: none">• Build a concept map showing the connections between water-table concepts.• Link the information about the water table to the water cycle.• Ask students to draw their own diagram of the water table and explain each of the key terms in their own words.• Classify information about the water table into four areas: sources of water (precipitation, melting); forces involved (gravity, capillary action); resulting processes (percolation, absorption of water by roots, wells); and moisture conditions (wet or dry soil, saturated zone, aquifers, aquitards). Ask students to use arrows on their diagrams to identify where each takes place.• One member of each group should read the activity aloud to accommodate students with reading difficulties.• Students who have difficulty with written work could write answers in point form using key vocabulary or diagrams. Or, you could assess these students' understanding of concepts using oral responses to questions.	<p>ESL/ESD</p> <ul style="list-style-type: none">• Focus on the new vocabulary in this spread by asking students to list the key words and illustrate the meaning of each, such as moisture (rain falling); saturation (sponge dripping with water); percolation (coffee dripping through a filter), and so on.• This spread requires a fair amount of reading. You could place the student with a bilingual peer and/or make an audiocassette of the text in advance so that students can review it and/or read the spread aloud with the class. This involves students in the oral reading activity to the extent of their ability. In this case discuss the key ideas as you go, clarifying with dialogue and questions.• Graphic organizers such as a concept map could be used to organize the information. <p>Enrichment</p> <ul style="list-style-type: none">• There are two major concerns regarding aquifers: depletion and contamination. Explain how human activity has caused these concerns.• To what extent do farmers rely on capillary action to supply their crops with water? Why?• How does the geology of a given region affect the water table?
SUGGESTED ANSWERS TO QUESTIONS	
<p>Understanding Concepts</p> <ol style="list-style-type: none">1. As rain falls or snow melts, water percolates into the soil and the water table rises. In winter, as water accumulates as snow on the frozen surface, the water table may fall. On hot days, when evaporation exceeds precipitation, the water table will drop. Following a rain, ground water from a nearby higher area tends to move downward, causing the water table of the surrounding area to rise slightly.2. The water is attracted to the soil particles and therefore spreads out in the top layers of the soil.3. An aquitard is an impervious (impermeable) layer of clay, silt, or rock. Water cannot penetrate it quickly. Water moves upward by capillary action through the narrow spaces between the soil particles. In this way, it can travel from deep within the soil and evaporate at the surface. Water percolates downward through the narrow spaces between the soil particles, dissolving minerals as it travels.	<p>Making Connections</p> <ol style="list-style-type: none">4. Since water can seep into a well, it can also seep out. Water moved from the well into the dry soil and rock around it. <p>Exploring</p> <ol style="list-style-type: none">5. (a) Drilled wells can be deeper. Drills can cut through rock if necessary to reach the water table. Dog wells can be wider (i.e., hold more water in a well of a given depth). (b) The pump creates a temporary vacuum in a chamber. Water flows in to fill the vacuum. The chamber is then sealed. In the process of creating the vacuum again, the water in the chamber is forced out of the spout. (c) Any trench or hole in the ground surface that reaches the water table will fill with water that can be used by livestock. However, most provinces have legislation against watering animals directly from water bodies, to prevent pollution of the ground water.
<p>34 Water Systems</p>	

Suggested Answers to Questions
Provides direction to assess student responses to the questions for each lesson.