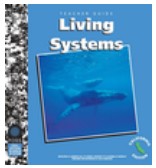

Fifth Grade: FOSS
Life Science - Living Systems

Investigation Title and Synopsis	Concepts	Assessments and TE Page Numbers
1. Living Cells Students study four related human/body transport systems that provide all the cells water, food, gas exchange, and waste disposal. The structures and functions of the circulatory, respiratory, digestive, and excretory systems are explored through a variety of multimedia activities. Students observe and analyze an investigation of gastric juice in the stomach.	• Cells require water, food, gases, and waste removal to live • In humans, oxygen is transported to the blood and carbon dioxide is transported from the blood in the respiratory system • In the human circulatory system, blood transports resources to the cells and wastes from the cells • Cells use simple substances for energy and building blocks • The digestive system breaks down complex substances into simple substances which move into the bloodstream • Kidneys filter wastes from blood and convert them into urine for excretion • The respiratory, circulatory, digestive, and excretory systems work together to ensure that cells receive the resources they need to live	• Pretest (pages 237-241) • Part 1 Embedded Assessment: (pages 186-187)/ Science Notebook Sheet 1 *Circulatory System Review* (page 143) • Part 2 Embedded Assessment: (pages 188-189)/ Science Notebook Sheet 2 *The Disassembly Review* (page 144) • Benchmark Assessment I-Check 1 (pages 242-245)
2. Vascular Plants Students investigate the transport system in vascular plants and learn about the specialized structures xylem and phloem tubes. Students design and conduct a scientific investigation and discover that leaves play an important role in the transport of water to cells in vascular plants. They use multimedia resources to gather information about plants. They collect and classify plant leaves, based on appropriate criteria.	• Life happens in cells • Vascular plants have two transport systems, one to transport water and minerals from roots to leaves, and one to transport sugar from leaves to cells that need it • In vascular plants, water and minerals are transported to cells in xlyem tubes: sugar is transported to cells in phloem tubes	• Part 1 Embedded Assessment: (pages 190-193)/Science Notebook Sheet 4 *Celery Experiment A* (page 146)/Science Notebook Sheet 5 *Celery Experiment B* (page 147)/ Science Notebook Sheet 6 *Response Sheet-Vascular Plants* (page 148)

Investigation Title and Synopsis	Concepts	Assessments and TE Page Numbers
2. Vascular Plants (cont'd)	• Vascular bundles are arranged in predictable patterns of veins in the leaves of vascular plants • Scientists classify objects and information by organizing them into groups with similar attributes	• Part 2 Embedded Assessment: (pages 186-187)/Science Notebook Sheet 6 *Circulatory System Review* (page 148) • Benchmark Assessment I-Check 2 (pages 246-248)
3. Sugar and Cells Students analyze an experiment to determine the conditions under which plants produce food (photosynthesis). They design an investigation to determine what conditions are needed to activate an organism (yeast) and are introduced to the process by which plant and animal cells obtain energy from food (cellular respiration). They design and conduct an experiment to determine the sugar content of common foods.	• Chlorophyll absorbs sunlight • Photosynthesis requires carbon dioxide, water, and light • Photosynthesis produces sugar and oxygen gas • Plant and animal cells break down sugar and oxygen into carbon dioxide and water to obtain energy (cellular respiration) • Animals obtain six classes of nutrients from food: protein, carbohydrate, fat, minerals, vitamins, and water • The volume of gas produced by yeast is proportional to the amount of sugar present	• Part 1 Embedded Assessment: (pages 194-195)/Science Notebook Sheet 8 *Making Food Experiment* (page 150) • Part 2 Embedded Assessment: (pages 196-197)/Science Notebook Sheet 10 *Response Sheet-Sugar and Cells* (page 152) • Benchmark Assessment I-Check 3 (pages 249-252) • Posttest (pages 237-241)