

Content Area & Grade Level

Student Learning Outcome (SLO) document: an Instructional Planning Tool

SCIENCE GRADE LEVEL 7
 YEAR AT A GLANCE
 Student Learning Outcomes by Unit
 2015-2016

Unit Title

UNIT: Diversity of Life		Overarching/general themes:
Dates:		Characteristics of life; cell as basic unit of life and cell parts and functions; plant structures and development; animal investigation
Networks	Textual References	To Demonstrate Proficiency by the End of the Unit Students Will:
Networks A, C, & E: 9/9 to 12/2	Diversity of Life	
Networks B, D & G: 12/9 to 3/17	Teacher's Guide (FOSS)	
Networks F & H: 3/24 to 6/9		
1 session, 1 week	Investigation 1 What is Life?	<ul style="list-style-type: none"> Develop an operational definition of life that will be used and revised throughout the unit Investigate unknown materials to determine whether they are alive by observing for the common characteristics of life.
2 sessions, 1 week	Investigation 2 Introduction to the Microscope	<ul style="list-style-type: none"> Use a microscope as a tool to carefully observe and record observations in notebooks. Draw scale representations of images seen in a microscope to estimate size accurately. (TE 2.2) Explain how focal plane affects the image seen through a microscope.
3 sessions, 1+ week	Investigation 3 Microscopic Life	<ul style="list-style-type: none"> Observe a single-celled microorganism (paramecia) with a microscope and investigate structure-function relationships to generate evidence to support the idea that they are organisms. Use the appropriate tools of science to search for microorganisms in pond water. Observe and record structure and functions observed. Compare and contrast single-celled organisms with more complex organisms. (LS-3) Explain that the cell is the basic unit of life and that cells have the same needs and perform the same functions as more complex organisms. (LS-4)
2 sessions, 1-2 days	Investigation 4 The Ribbon of Life	<ul style="list-style-type: none"> Compare structure and function of cells from different organisms. (LS-3) Relate the structure and function of cells, tissues, organs, systems, and organisms. (LS-5) Explain that humans, and all other complex life-forms, are made of cells, and that cells have defined structures, such as membranes, cell walls, nuclei, chloroplasts, ribosomes, mitochondria, and cytoplasm. Close Reading: based on FOSS Student Resource book passage <i>The Insect Empire</i>
5 sessions, 1 week	Investigation 5 Seeds of Life	<ul style="list-style-type: none"> Dissect seeds to discover their structures. Describe seed structures in words and diagrams. Identify the embryo as dormant and living. Investigate the effect of light on germinated seeds. Document observations and write a narrative with relevant descriptive details and a well-structured event sequence. Compare the development of two groups of complex plants— monocots and dicots. (LS-1) CWA: Is it living?
6 sessions, 1+ week	Investigation 6 Transpiration	<ul style="list-style-type: none"> Design an experiment to determine what happens to water in a celery stalk. (TE-2.2) Collect and analyze data to develop evidence for an explanation for how water enters a plant's roots and flows through the plant during transpiration. Describe the process of transpiration, including plant parts and functions. Explain the relationship of transpiration to the water cycle.
2-3 sessions, 2-3 days	Investigation 7 Reproduction	<ul style="list-style-type: none"> Describe the structure-function relationships of plant flowers/parts. Use illustrations to clarify and provide detail. Develop a general model of how seeds disperse. Explain how seed-dispersal methods affect the distribution of plants.

Notice the dates that the unit is to be taught in each network (Unit Roll-out Dates)

Standards

Close Reading

CWA

These two columns show the "best estimate" of how much time is recommended for each Investigation or lesson

These are the expected Student Learning Outcomes for each lesson/investigation. The numbers are reference to the MA DESE STE Standards. You will also find references to the Close Reading Assignments and Common Writing Assignments that are aligned with this unit of study.