

Seventh Grade – unit 3

Code	Statements & Expectations	Page	Learning Targets
L.OL.M.2	<p>Cell Functions – All organisms are composed of cells, from one cell to many cells. In multicellular organisms, specialized cells perform specialized functions. Organs and organ systems are composed of cells, and function to serve the needs of cells for food, air, and waste removal. The way in which cells function is similar in all living organisms.</p>	5	
L.OL.07.21	<p>Recognize that all organisms are composed of cells (single cell organisms, multicellular organisms).</p>	5	<p>L.OL.07.21.a I can explain what a single celled organism is and give an example. (Protists) L.OL.07.21.b I can explain what a multicellular organism is and give an example. (Plants)</p>
L.OL.07.22	<p>Explain how cells make up different body tissues, organs, and organ systems.</p>	6	<p>L.OL.07.22.a I can describe that tissues are made of cells with similar structure. L.OL.07.22.b I can describe that organs are made of tissues of different types. L.OL.07.22.c I can describe that organ systems provide the needs of cells for food, air, and waste removal</p>
L.OL.07.23	<p>Describe how cells in all multicellular organisms are specialized to take in nutrients, which are used to make the materials that a cell or organism needs.</p>	7	<p>L.OL.07.23.a I can recognize that cell functions include general and specialized jobs performed by cells. L.OL.07.23.b I can describe the basic life functions performed by cells (take in food,</p>

			oxygen and waste removal). L.OL.07.23.c I can explain how nutrients pass through cell membranes through cell membranes by diffusion.
L.OL.07.24	Recognize that cells function in a similar way in all organisms.	7	L.OL.07.24.a I can recognize that cell functions include general and specialized jobs performed by cells. L.OL.07.24.a I can recognize that the cells of all organisms require nutrients to provide energy and building materials.
L.OL.M.3	Growth and Development – Following fertilization, cell division produces a small cluster of cells that then differentiate by appearance and function to form the basic tissues of multicellular organisms.	7	
L.OL.07.31	Describe growth and development in terms of increase of cell number and/or cell size.	8	L.OL.07.31.a I can describe the difference between asexual and sexual reproduction. L.OL.07.31.b I can describe the growth of one-celled organism is limited to increase in cell size. L.OL.07.31.c I can describe the growth of multicellular organisms I due to both increase in cell size and increase in cell number. L.OL.07.31.d I can explain cell division.
L.OL.07.32	Examine how through cell division, cells can become specialized for specific functions.	8	L.OL.07.32.a I can chart a sexually reproduction multicellular organisms starting with a fertilized egg. L.OL.07.32.b I describe that some cells produced by cell division develop specialized

			<p>structure and are able to perform particular functions.</p> <p>L.OL.07.32.c I can explain that a variety of specialized cells formed through cell division make up different tissues, performing different functions.</p>
L.OL.M.6	<p>Photosynthesis - Plants are producers; they use the energy from light to make sugar molecules from the atoms of carbon dioxide and water. Plants use these sugars along with minerals from the soil to form fats, proteins and carbohydrates. These products can be used immediately, incorporated into the cells of a plant as the plant grows, or stored for later use.</p>	9	
L.OL.07.61	<p>Recognize the need for light to provide energy for the production of carbohydrates, proteins and fats.</p>		<p>L.OL.07.61.a I can explain the process of photosynthesis.</p> <p>L.OL.07.61.b I can explain that photosynthesis uses light energy to produce simple carbohydrates.</p> <p>L.OL.07.61.c I can chart the process of photosynthesis and the by-products from photosynthesis.</p> <p>L.OL.07.61.d I can give an example of a carbohydrate.</p> <p>L.OL.07.61.e I can give an example of a protein.</p> <p>L.OL.07.61.f I can give an example of fats and oils.</p>

L.OL.07.62	Explain that carbon dioxide and water are used to produce carbohydrates, proteins, and fats.		<p>L.OL.07.62.a I can describe that carbon dioxide and water are used in the process of photosynthesis to make simple carbohydrates.</p> <p>L.OL.07.62.b I can explain how land plants use light energy(photosynthesis)to produce simple carbohydrates from carbon dioxide in the air and water from the soil.</p> <p>L.OL.07.62.c I can explain how water plants use light energy to produce simple carbohydrates from carbon dioxide and water from the water.</p> <p>L.OL.07.62.d I can explain how plants use sugar from photosynthesis as a building block to make bigger carbohydrates and fats.</p>
L.OL.07.63	Describe evidence that plants make, use, and store food.		<p>L.OL.07.63.a I can describe how plants grow using light as a source of energy.</p> <p>L.OL.07.63.b I can show that plants store food for growth.</p> <p>L.OL.07.63.c I can show that plant structures have high caloric value.</p>
P.EN.07.43	Explain how light energy is transferred to chemical energy through the process of photosynthesis.		<p>L.OL.07.43.a I can describe through illustrations that light energy is stored as chemical energy in sugar molecules in the process of photosynthesis.</p> <p>L.OL.07.43.b I can describe that plants use light energy to build high-energy sugar molecules (chemical energy) from lower energy molecules(carbon dioxide and water).</p>
L.HE.07.21	Compare how characteristics of living things are passed on through generations, both asexually and		<p>L.HE.07.21.a I can distinguish between the characteristics and sources of genetic material of young produced by sexual and asexual reproduction.</p>

	sexually.		<p>L.HE.07.21.b I understand that reproduction is a requirement for the survival of a species.</p> <p>L.HE.07.21.c I can describe how genetic material is passed to the next generation through sexual reproduction.</p> <p>L.HE.07.21.d I can describe how genetic material is passed to the next generation through asexual reproduction.</p> <p>L.HE.07.21.e I can understand that cloning is an example of asexual reproduction.</p>
L.HE.07.22	Compare and contrast the advantages and disadvantages of sexual vs. asexual reproduction.		<p>L.HE.07.22.a I understand sexual reproduction produces variation among offspring.</p> <p>L.HE.07.22.b I understand that the variations provide combinations of characteristics helpful to species survival.</p> <p>L.HE.07.22.c I understand that asexual reproduction can produce large numbers of offspring that identical to the previous generation.</p> <p>L.HE.07.22.d I can recognize that asexual reproduction doesn't need a mate.</p>