Science Grade 6 - 8
Unit 1
Canterbury Public Schools

Subject	Science
Grade Level	6-8
Unit Title	Life science
Unit Goals	Differentiate between atoms, elements, molecules, and compounds Compare and contrast animal and plant cells Identify the components and structure of DNA Describe factors that contribute to the extinction of a species Differentiate between learned and inherited behaviors
Pacing (# of weeks)	5 - 8 weeks
Standards	MS-LS 1 From Molecules to Organisms Structure 1-1 Living things are made of cells 1 - 2 Use a model to describe the function and parts of a cell 1- 3 Arguments supported by evidence that a body has a system of subsystems composed of cells 1 - 4 How organisms characteristics affect the probability of successful reproduction 1 - 5 Environmental and genetic factors that influence growth 1 - 6 The role of photosynthesis in cycling matter and energy flow 1 - 7 chemical reactions that support growth or energy 1 - 8 Gather and synthesize information that sensory receptors send messages to the brain
Content/Conceptual Knowledge (know)	• All living things are made up of cells, which is the smallest unit that can be said to be alive. An organism may consist of one single cell (unicellular) or many different numbers and types of cells (multicellular). (MS-LS1-1) • Within cells, special structures are responsible for particular functions, and the cell membrane forms the boundary that controls what enters and leaves the cell. (MS-LS1-2) • In multicellular organisms, the body is a system of multiple interacting subsystems. These subsystems are groups of cells that work together to form tissues and organs that are specialized for particular body functions. (MS-LS1-3)
Skills (be able to do)	MS-LS1-1. Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells. [Clarification Statement: Emphasis is on developing evidence that living things are

	made of cells, distinguishing between living and non-living things, and understanding that living things may be made of one cell or many and varied cells.] MS-LS1-2. Develop and use a model to describe the function of a cell as a whole and ways the parts of cells contribute to the function. [Clarification Statement: Emphasis is on the cell functioning as a whole system and the primary role of identified parts of the cell, specifically the nucleus, chloroplasts, mitochondria, cell membrane, and cell wall.] [Assessment Boundary: Assessment of organelle structure/function relationships is limited to the cell wall and cell membrane. Assessment of the function of the other organelles is limited to their relationship to the whole cell. Assessment does not include the biochemical function of cells or cell parts.] MS-LS1-3. Use arguments supported by evidence for how the body is a system of interacting subsystems composed of groups of cells. [Clarification Statement: Emphasis is on the conceptual understanding that cells form tissues and tissues form organs specialized for particular body functions. Examples could include the interaction of subsystems within a system and the normal functioning of those systems.] [Assessment Boundary: Assessment does not include the mechanism of one body system independent of others. Assessment is limited to the circulatory, excretory, digestive, respiratory, muscular, and nervous systems.] MS-LS1-6. Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms. MS-LS1-8. Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.
Essential Questions	How do we know if something is alive?
Enduring Understandings	Living things are made cells
Vocabulary	(useful, essential, important)
Common Learning Experiences broken down by standard addressed in the unit	Virtual labs, hands-on activities
Assessments	unit assessments, essay questions, performance based, quizzes
Resources	

Student Resources	(place value mats, concrete material)
Teacher Resources	For example:Texts, literature, math mats
Strategies	
Behaviors that will lead to success	