Semester 1 of 1					
Unit Number: Title and Duration	**Purpose**	**Priority Grade-Level Standards**	**Content Goals**	**Learner Outcomes**	**Resources and Materials**
Unit 1: Cell Theory and Cell Structure	To determine: • What makes an organism alive?	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. MS-LS1-2 Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function.	The student will: • Understand what the cell theory is and how it has impacted current understanding of the cell and its functions. • Be able to identify similar functions and structures of all cells. • Identify basic cellular differences between plant and animal cells.	The student will be able to do: • Assessment through unit test. • Inquiry lab of cheek & onion cells • Creation of a labeled salt dough model	Kessler Science 5E Lessons: • Cell Theory • Prokaryotic & Eukaryotic Cells • Plant & Animal Cells
Unit 2: Inherited Traits & DNA	To determine: • How individuals of the same species, and even siblings, have different characteristics?	MS-LS3-1 Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may	The student will: • Understand what inherited traits are. • Understand how traits are governed by the	The student will be able to do: • Assessment through unit test • Potato People Inherited Traits Activity	Kessler Science 5E Lessons: • Inherited Traits/Genetics • Mitosis/Meiosis

	• How are characteristics of one generation passed to the next?	affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism. MS-LS3-2 Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.	genetic material found in the genes within chromosomes in the cell nucleus. • Be able to describe how a Punnett Square describes the genetic relationship between parent & offspring. • Describe the basic structure of DNA and that it contains hereditary material that gets passed from generation to generation. • Understand that mutations can be beneficial, neutral, or harmful.	• Strawberry DNA extraction • Genetic Mutations Project or Investigate GMOs	• Sexual/Asexual Reproduction
Unit 3: Ecosystems	To determine: • How and why do organisms interact with their environment and what are the	MS-LS2-1 Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of	The students will: • Be able to identify abiotic and biotic parts of an ecosystem and understand how	The student will be able to do: • Assessment through Unit Test • Human Impact Project	Kessler Science 5E Lessons: • Biotic/Abiotic Factors • Biodiversity

	effects of these interactions?	organisms in an ecosystem. MS-LS2-3 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. MS-LS2-4 Construct an argument supported by empirical evidence that shows changes to physical or biological components of an ecosystem affect populations.	organisms and populations compete for these resources. • Understand how biodiversity contributes to the sustainability of an ecosystem.		• Short- & Long-Term Environmental Impacts to Organisms McGraw Hill: *Integrated Science, Course 2*, Ch. 9: Interaction of Living Things
End of Semester 1					