Standard 3: Life Science—7th grade

	1 Novice	2 Nearing Proficient	**3** **Proficient**	4 Advanced
Cell Structure, Function, and Organization 3.1	Student observes single and multi-celled organisms with help	Student observes single and multi-celled organisms	**Student observes and identifies single and multi-celled organisms**	Student observes and identifies single and multi-celled organisms from many sources (bacteria, protists, fungi, plants, and animals)
	Incorrectly identifies cell structures and functions	Identify Cell structures and functions with prompting	**Identify cell structures and describe their functions in meeting the needs of cells independently with aides**	Identify cell structures and describe their functions in meeting the needs of cells independently adding analogy to real world
	Defines prokaryotic vs. eukaryotic with help	Define prokaryotic vs. eukaryotic	**Understand prokaryotic vs. eukaryotic**	Apply prokaryotic vs. eukaryotic to examples
	Identifies levels of organization (cells, tissues, organs, systems) with help	Identify levels of organization (cells, tissues, organs, systems)	**Define cell, tissue, organ, system, and organism related to humans**	Illustrate the hierarchal relationship of cells, tissue, organ, system, and organisms for all living things (bacteria, protists, fungi, plants, and animals)
Energy Processes 3.2	Incorrectly explains processes of respiration, fermentation, and photosynthesis	Explains the processes of respiration, fermentation and photosynthesis	**Explains the processes of respiration, fermentation and photosynthesis using formulas**	Explains the processes of respiration, fermentation and photosynthesis using formulas by relating the three processes
	Defines food web vocabulary with help	Defines food web vocabulary	**Defines food web vocabulary and explains the level of organization**	Defines food web vocabulary, explains levels of organization, and can apply organisms into groupings using the proper vocabulary
	Incorrectly interprets relationship in food web diagram	Interprets relationship in food web diagram with help	**Understand the relationship in food web diagram independently, including flow of energy**	Construct own food web and discuss loss of energy and ramifications of disruption to food web

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Genetics 3.3	States the function and number of chromosomes in humans with help	State the function and number of chromosomes in humans	**State the function and number of chromosomes in humans and other organisms**	State the function and number of chromosomes in humans and other organisms and how that relates to viable reproduction
	Mitosis: Know phases and purpose with help	Mitosis: Know phases and purpose	**Mitosis: Know phases, sequence and purpose**	Mitosis: Know phases, sequence, events and purpose
	Meiosis: Know phases and purpose with help	Meiosis: Know phases and purpose	**Meiosis: Know phases, sequence and purpose**	Meiosis: Know phases, sequence, events and purpose
	Incorrectly differentiates between asexual and sexual reproduction	Differentiate between sexual and asexual reproduction with help	**Differentiate between sexual and asexual reproduction**	Differentiate between sexual and asexual reproduction explaining impact on the organisms that use each
	Incorrectly defines and identifies gene, inheritance, phenotype, and genotype	Defines and identifies gene, inheritance, phenotype, and genotype with help	**Defines and identifies gene, inheritance, phenotype, and genotype**	Defines, identifies and illustrates gene, inheritance, phenotype, and genotype
	Defines and identifies dominant and recessive traits using a single perspective with help	Defines and identifies dominant and recessive traits using a single perspective	**Defines and identifies dominant and recessive traits**	Defines and identifies dominant and recessive traits with comprehensive examples
	Identifies examples of inherited characteristics	Identifies examples of inherited characteristics with prompting explains the contribution of genes	**Identifies examples of inherited characteristics and explains the contribution of genes**	Identifies examples of inherited characteristics and explains the contributions of genes with comprehensive examples
	Uses and interprets Punnett squares with errors	Defines, uses and interprets Punnett squares with incomplete understanding of prediction of simple genetic crosses	**Defines, uses and interprets Punnett squares to predict simple genetic crosses**	Thoroughly defines, uses and interprets Punnett squares to predict simple and more complex genetic crosses

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Interdependence of Organisms 3.4	Identify a population versus a community with help	Identify a population versus a community given examples	**Distinguish between a population and a community**	Explain the relationships of populations within a community
	Identifies the living and non-living components of an environment	Identifies the living and non-living components of an environment and can sometimes explain impacts with help	**Identifies the living and non-living components of an environment and explain how populations are impacted by changes in these factors**	Identifies living and non-living factors and explain how populations are impacted by changes in these factors using specific examples
	Identifies the three different types of symbiosis with help	Identify the different types of symbiosis	**Identify the different types of symbiosis and their positive and negative effects**	Identify the different types of symbiosis with specific examples and explain their positive and negative effects within specific community
	Provides examples of adaptations with help and has incomplete understanding of the relationship with natural selection	Explains and provides examples of adaptations and has a general understanding of the relationship with natural selection	**Defines natural selection and explains the relationship between adaptations and natural selection**	Apply genetics to adaptations and natural selection/extinctions
	Identifies natural selection as a mechanism of evolution and knows that fossils exist	Identifies natural selection as a mechanism of evolution, knows there are lines of evidence that support evolution and knows that the fossil record supports the theory	**Identifies natural selection as a mechanism of evolution, identifies lines of evidence that support evolution and explains how the fossil record provides evidence of life forms' appearance, diversification, and extinction**	Identifies natural selection as a mechanism of evolution, identifies multiple lines of evidence that support evolution and gives a comprehensive explanation how the fossil record provides evidence of life forms' appearance, diversification, and extinction

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Classification 3.5	List order of classification (domain, kingdom, phylum, class, order, family, genus, species) with help	List order of classification (domain, kingdom, phylum, class, order, family, genus, species)	**List order of classification (domain, kingdom, phylum, class, order, family, genus, species) and explain their relationship**	List order of classification (domain, kingdom, phylum, class, order, family, genus, species) and put organisms into classification schema
	Makes errors while using a dichotomous key to identify organisms	Use a dichotomous key with help to identify organisms	**Use a dichotomous key to identify organisms**	Create a working dichotomous key