

Grade 7: Characteristics and Needs of Life

Stage 1 Desired Results		
ESTABLISHED GOALS: <u>Competencies:</u> <i>Nature of Science- Students will work collaboratively and individually to generate testable questions or define problems in terms of given constraints and criteria; plan and conduct investigations or apply engineering design practices to analyze and interpret data, and construct and communicate evidence-based explanations or possible optimal solutions.</i> <i>Students will demonstrate the ability to analyze and summarize text and integrate knowledge to make meaning of discipline-specific materials.</i> <i>Students will demonstrate the ability to produce coherent and supported writing in order to communicate effectively for a range of discipline-specific tasks, purposes, and audiences.</i> <i>Students will demonstrate the ability to speak purposefully and effectively by strategically making decisions about content, language use, and discourse style.</i> <u>Content Standards:</u> MS-LS1-4 Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively. MS-LS1-5 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.	<i>Transfer</i>	
	<i>Students will be able to independently use their learning to approach a range of problems using a scientific method to determine if something is alive.</i>	
	<i>Meaning</i>	
	ENDURING UNDERSTANDINGS <i>Students will understand that...</i> - living things are made of cells, reproduce, grow and develop, maintain homeostasis, respond to their environment, and use energy. - living things have certain needs for survival including food, water, and shelter. - scientists approach problems in a systemic manner that allows them to construct explanations and find solutions.	ESSENTIAL QUESTIONS - How do you know if something is alive? - What do living things need to survive? - How do living things meet their needs? - How do scientists approach problems?
	<i>Acquisition</i>	
	<i>Students will know...</i> - that certain conditions are needed for seed germination. - that local conditions affect the growth of the adult plant. - that plants use the energy from light to make sugars (food) from carbon dioxide from the atmosphere and water through the process of photosynthesis, which also releases oxygen. These sugars can be used immediately or stored for growth or later use. - that plants reproduce in a variety of ways, sometimes depending on animal behavior and specialized features for reproduction.	<i>Students will be skilled at...</i> - developing testable questions, making logical predictions, collecting and analyzing data, and using specific evidence to interpret and draw conclusions, communicate findings, and develop scientific explanations. - using scientific tools (metric ruler, electronic scale, graduated cylinder) to make observations and collect data. - applying the engineering design process to optimally improve or solve problems using evidence. - using scientific hypotheses, theories and laws to objectively explore and describe the natural and engineered world, investigate changes over time and revise or reinterpret knowledge

	<u>vocabulary:</u> observation, inference, scientific method, variable, independent variable, dependent variable, claim, evidence, reasoning, photosynthesis	based on new evidence. analyzing structures to determine function
Content Area Literacy Standards		21st Century Skills
- RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts. - RST.6-8.2 Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions. - RST.6-8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics. - RST.6-8.8 Distinguish among facts, reasoned judgment based on research findings, and speculation in a text. - WHST.6-8.1 Write arguments focused on discipline-specific content. - WHST.6-8.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. - WHST.6-8.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. - WHST.6-8.5 With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. - WHST.6-8.6 Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently. - WHST.6-8.7 Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. - WHST.6-8.8 Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation. - WHST.6-8.9 Draw evidence from informational texts to support analysis, reflection, and research.		<i>reason effectively</i> <i>make judgments and decisions</i> <i>communicate clearly</i> <i>collaborate with others</i> <i>access and evaluate information</i> <i>use and manage information</i> <i>be flexible</i>

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Stage 2 - Evidence	
<i>Evaluative Criteria</i>	<i>Assessment Evidence</i>
	PERFORMANCE TASK(S):
	OTHER EVIDENCE:

Stage 3 – Learning Plan	
Summary of Key Learning Events and Instruction	
<i>Language Arts Integration</i>	<i>Mathematics Integration</i>
● 1.OA.1 Use	● 1.OA.1 Use
<i>Technology Integration</i>	<i>District Materials</i>
● 1.OA.1 Use	
<i>Science and Engineering Practices</i>	

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