

Big Idea: Living things have characteristics that make them different from each other and can help them thrive. What types of special characteristics can can help living things survive? Guiding Questions: Do all living things have the same life cycle? Are there advantages to being different?							
21st Century Themes/Skills:							
<i>DCI (Disciplinary Core Ideas)</i>	<i>Science and Engineering Practices</i>	<i>Crosscutting Concepts</i>	<i>Student Learning Objectives</i>	<i>Differentiated Activities (Consider the 5 Es)</i>	<i>Resources/Technology</i>	<i>Formative Assessments</i>	<i>Benchmark Assessment</i>
LS1.B: Growth and Development of Organisms: Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles.	Developing and Using Models: Develop models to describe phenomena.	Patterns: Patterns of change can be used to make predictions. 3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.	Students will discuss the characteristics of all living things and will categorize objects as living or nonliving.	Engage (Session 1): Watch the video "Is It Alive?" and have students distinguish if things are living or nonliving in the video; complete a reading of the characteristics of living things (including have a life cycle); rewatch the video and correct answers	Is It Alive? Video	-Activity Student Sheets of Responses (see links in Resources/Technology for each lesson) -Class discussion -Science journal entries -Predictions -Questions -Observations -Group collaboration -Exit Slips (paper-based, Google Forms, Google Classroom post, etc.)	
			Students will identify living and non-living things by constructing an explanation of evidence.	Engage (Session 2): Students will go outside and identify living and non-living things by constructing an explanation of their reasoning (including having a life cycle).	Sample Unit Plan of Lesson Ideas Focus on a Life Cycle for Lima Bean		
			Students will examine and dissect a lima bean seed using magnifying glasses and tools to record the physical properties in their notebooks. They will make predictions as to what they think the seed will look like in 30 days, create a list of things the seed will need to grow, and as a class we will develop a plan as to how we plan to take care of the lima bean.	Explore (Multiple 3 & 4): Over the next week or so, students will be growing plants from lima bean seeds to examine the life cycle of a plant. As an introduction, students will examine and dissect a lima bean seed using magnifying glasses and tools to record the physical properties in their notebooks. They will make predictions as to what they think the seed will look like in 30 days, create a list of things the seed will need to grow, and as a class we will develop a plan as to how we plan to take care of the lima bean. Students should revisit the lima bean every few days to record and draw observations	Growing a Lima Bean in a Bag Investigation		
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			Students will explore a variety of life cycle vocabulary words to develop understanding of the phenomena.	Explore (Session 6): Vocabulary chart (Discovery Education) or Frayer models of vocabulary terms: cone conifer decay decompose fern fertilize germination life cycle mature moss plant seed seedling spore sprout			
			Students will investigate pictures and videos of plants at different stages of the life cycles to identify patterns of change that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.	Explore (Session 7): Investigate pictures and videos of plants at different stages of the life cycle; facilitate discussion of 'patterns' that can be found in the life cycle of plants	Time-lapse video		
			Students will construct an explanation of the life cycle of a seed by writing a story from the perspective of the seed as it goes through the life cycle using our vocabulary terms	Explain (Session 8 & 9): Construct an explanation of the life cycle of a seed by writing a story from the perspective of the seed as it goes through the life cycle using our vocabulary terms			
LS1.B: Growth and Development of Organisms: Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles.	Developing and Using Models: Develop models to describe phenomena.	Patterns: Patterns of change can be used to make predictions. 3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.	Students will describe how organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.	Engage (Session 1): Discuss if all living things have the same life cycle; compare humans to plants; watch the Study Jams Animal Life Cycles video and discuss	Study Jams Animal Life Cycles		
			Students will be able to define and describe scientific terms of life cycles of animals.	Explore (Session 2): Jigsaw Frayer Model, vocabulary chart, or Google Slides of vocabulary terms: egg fertilize generation growth larva life cycle mature metamorphosis organism pupa reproduce	Glossary of Vocabulary Terms		
			Students will dissect and explore the inside of an egg to identify and label the parts of the egg. Students will develop a model of the egg to describe the life cycle.	Explore (Session 3): Dissect and explore the inside of an egg to identify and label the parts of the egg and their functions	Egg Lab		
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			Students will raise butterflies in the classroom to observe the life cycle to	Explore (Session 5 - end): Raise butterflies in the classroom to observe the life cycle:			

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		life cycles but all have in common birth, growth, reproduction, and death.	discuss of life cycles can be different from one another (compare to lima bean investigation). Students will explore the different ways animals can reproduce to explain that reproduction is essential to the continued existence of every kind of organism.	discuss how life cycles can be different from one another (Discovery Education video: Insects and Metamorphosis) Explore (Session 6): Explore the different ways animals can reproduce by completing the Animal Reproduction Investigation	Animal Reproduction Investigation		
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