

UNIT 1: Organisms

Vocabulary:

Word	Parts/meaning of word, if any	Definition	Picture example if any
Biology	Bio means Life OLOGY means "the study of"	The Study of Life	
Organism		A Living Thing	
Taxonomy			
Classification			
Species			
Single Celled (Prokaryotic)			
Multi-Celled (Eukaryotic)			

OLS Lesson 2: Diversity of Life

Essential Questions	Main Concepts										
<ul style="list-style-type: none"> • What is Biology? • What is an Organism? • What is diversity in organisms? • How are organisms unique? • How are all these organisms similar or alike? 	<p><u> Biology </u> is the science or study of Living Things.</p> <p>An Organism is anything that is <u> Living </u>.</p> <p>Diversity means that there are many <u> Different </u> kinds of organisms on earth. They come in all different shapes, sizes, and colors.</p> <table border="1" data-bbox="789 781 1528 1953"> <thead> <tr> <th data-bbox="789 781 1159 856">Organism</th> <th data-bbox="1159 781 1528 856">Unique Characteristics</th> </tr> </thead> <tbody> <tr> <td data-bbox="789 856 1159 1178">Honey Mushroom Fungus</td> <td data-bbox="1159 856 1528 1178"> <p>The Largest Organism- Spreads out underground with this threadlike "roots"</p> <p>Covers the space of about 1665 football fields.</p> </td> </tr> <tr> <td data-bbox="789 1178 1159 1499">Venus Fly Trap</td> <td data-bbox="1159 1178 1528 1499"> <p>A plant with small mouth-like traps that helps it trap and "eat" bugs.</p> <p>It lives in soil with little nutrients and adds to its diet with insects.</p> </td> </tr> <tr> <td data-bbox="789 1499 1159 1793">Giant Kelp</td> <td data-bbox="1159 1499 1528 1793"> <p>The longest water organism- can grow up to 177 feet long. It has small air sacs that help it float to the surface to get sunlight.</p> </td> </tr> <tr> <td data-bbox="789 1793 1159 1953">Black Ghost Knifefish</td> <td data-bbox="1159 1793 1528 1953"> <p>Sends out underwater electrical signals that help it "see" around it.</p> </td> </tr> </tbody> </table>	Organism	Unique Characteristics	Honey Mushroom Fungus	<p>The Largest Organism- Spreads out underground with this threadlike "roots"</p> <p>Covers the space of about 1665 football fields.</p>	Venus Fly Trap	<p>A plant with small mouth-like traps that helps it trap and "eat" bugs.</p> <p>It lives in soil with little nutrients and adds to its diet with insects.</p>	Giant Kelp	<p>The longest water organism- can grow up to 177 feet long. It has small air sacs that help it float to the surface to get sunlight.</p>	Black Ghost Knifefish	<p>Sends out underwater electrical signals that help it "see" around it.</p>
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		It uses the signals to find and hunt prey.
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OLS Lesson 3: Challenges of Life

Essential Questions	Main Concepts								
<ul style="list-style-type: none"> • What are the 3 Challenges of all Life? • How do different organisms obtain energy? • How do different organisms reproduce? 	<ol style="list-style-type: none"> 1. Obtain (getting) Energy 2. Reproducing 3. Maintaining Structure <p>Plants use ___Sunlight___ to make their own food through the process of photosynthesis.</p> <p>Animals may eat plants or other ___animals___ to obtain the energy they need.</p> <p>If plants cannot get the sunlight they need, or animals cannot get enough food they will not ___SURVIVE___.</p> <p>Reproducing means to have _Offspring (children)_. </p> <table border="1" data-bbox="792 1444 1526 1738"> <thead> <tr> <th>Organism</th> <th>How do they reproduce?</th> </tr> </thead> <tbody> <tr> <td>Penguin</td> <td>Birds/Eggs</td> </tr> <tr> <td>Cats/mammals</td> <td>Live Young</td> </tr> <tr> <td>Dandelions (plants)</td> <td>Seeds</td> </tr> </tbody> </table>	Organism	How do they reproduce?	Penguin	Birds/Eggs	Cats/mammals	Live Young	Dandelions (plants)	Seeds
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<ul style="list-style-type: none"> How do organisms maintain structure or keep themselves healthy? 	<p>An organism maintains structure by...</p> <ol style="list-style-type: none"> Keeping from getting too hot or too cold _____. (example: Sweating and Shivering) Fighting illness/disease __ and stay healthy. Healing wounds _____. (Examples: blood clots, scabs, skin replaced)
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OLS Lesson 4: Characteristics of Life

Essential Questions	Main Concepts																
<p>How do you know if something is ALIVE?</p> <p>What are the 7 Characteristics of Life and what do they mean?</p>	<p>All Living things have these Characteristics</p> <table border="1" data-bbox="789 888 1528 1482"> <thead> <tr> <th>Characteristic of Life</th> <th>Meaning</th> </tr> </thead> <tbody> <tr> <td>Growth</td> <td>All living things grow at some point</td> </tr> <tr> <td>Reproduction</td> <td>Having offspring/babies</td> </tr> <tr> <td>Homeostasis</td> <td>Maintaining stable body conditions</td> </tr> <tr> <td>Respond to Environment</td> <td>Living things react to environmental changes</td> </tr> <tr> <td>Metabolism</td> <td>The chemical processes that take place in an organism</td> </tr> <tr> <td>Cell Organization</td> <td>All living things are made of cells</td> </tr> <tr> <td>Heredity</td> <td>The passing on of genetic information</td> </tr> </tbody> </table>	Characteristic of Life	Meaning	Growth	All living things grow at some point	Reproduction	Having offspring/babies	Homeostasis	Maintaining stable body conditions	Respond to Environment	Living things react to environmental changes	Metabolism	The chemical processes that take place in an organism	Cell Organization	All living things are made of cells	Heredity	The passing on of genetic information
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OLS Lessons 5 and 6: Classification of Living Things and Domains of Life

Essential Questions	Main Concepts
<ul style="list-style-type: none">• What does it mean to classify organisms?	<p>Classify- to organize into _____ with shared _____.</p>
<ul style="list-style-type: none">• What is taxonomy?	<p>_____ is the science of naming and classifying organisms.</p>
<ul style="list-style-type: none">• Who is Carolus Linnaeus?	<p>He developed the modern day system for _____ and _____ living things?</p>
<ul style="list-style-type: none">• What are the 3 Domains?	<p>1. _____ 2. _____ 3. _____</p>
<ul style="list-style-type: none">• What are the 4 Kingdoms of Life?	<p>1. _____ 2. _____ 3. _____ 4. _____</p>
<ul style="list-style-type: none">• What is a species?	<p>A species is a group of organisms that _____ and are able to inter_____ and produce fertile offspring.</p>

Major Classes Lesson (Not in the OLS)

Essential Questions	Main Concepts
<ul style="list-style-type: none"> • What are the 6 major classes of animals? <ul style="list-style-type: none"> ○ Give examples 😊 	<ol style="list-style-type: none"> 1. Example: 2. Example: 3. Example: 4. Example: 5. Example: 6. Example:

Dichotomous Key Lesson (Not in OLS)

Essential Questions	Main Concepts
<ul style="list-style-type: none"> • What is a Dichotomous Key? • Try to figure out what species Birds W-Z are 	<p>A dichotomous key is a modeling method used for categorizing species using logical choices.</p> <div style="text-align: center;">  <p>Bird W Bird X Bird Y Bird Z</p> </div> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p style="text-align: center;">Dichotomous Key to Representative Birds</p> <ol style="list-style-type: none"> 1. a. The beak is relatively long and slender.....<i>Certhidea</i> b. The beak is relatively stout and heavy.....go to 2 2. a. The bottom surface of the lower beak is flat and straight<i>Geospiza</i> b. The bottom surface of the lower beak is curvedgo to 3 3. a. The lower edge of the upper beak has a distinct bend<i>Camarhynchus</i> b. The lower edge of the upper beak is mostly flat<i>Platyspiza</i> </div>

OLS Lesson 10: Single-Celled Organisms

Essential Questions	Main Concepts
<ul style="list-style-type: none"> • What is a single-celled organism? • Where can single celled organisms be found? • How do single celled organisms Get Energy, Maintain Structure, and Reproduce? 	<p>Any organism that is made of only _____ (Unicellular).</p> <p>Single-celled organism can be found _____ on earth.</p> <p>List 3 types of places they can live</p> <ol style="list-style-type: none"> 1. In the _____ 2. On or in our _____ 3. In _____ <p>Get energy by:</p> <p>Maintain structure by:</p> <p>Reproduce by:</p>

OLS Lesson 11: Multi-Celled Organisms

Essential Question	Main Concepts
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- What is a multi-celled organism?

Any organism that is made of multiple _____

- What are the advantages of being multicellular?

Being multicellular _____ the capabilities of an organism, making a more complex living thing.