

2009-2010  
**Under the Sea**  
 First Nine Weeks

5 <sup>th</sup> Grade (2001)	5 <sup>th</sup> grade (2010)	4 <sup>th</sup> grade (2001)	4 <sup>th</sup> grade (2010)
<p><b>1. Identify and describe structures and functions in living systems. (L, E)</b></p> <p>a. Investigate levels of organization in organisms including cells, tissues, organs, organ systems, whole organisms, and ecosystems.</p> <p>b. Explore ecosystems and biomes.</p> <p><b>2. Identify and describe reproduction and heredity of organisms. (L, P)</b></p> <p>a. Define and recognize examples of sexual and asexual reproduction.</p> <p>b. Explore how traits are used to classify individual inheritance patterns.</p> <p><b>3. Determine the factors that influence the regulation and behavior of organisms. (L,E)</b></p> <p>a. Identify and describe resources needed to grow, reproduce, maintain, and survive in a changing environment.</p> <p>b. Investigate ways</p>	<p><b>3. Predict characteristics, structures, life cycles, environments, evolution, and diversity of organisms.</b></p> <p>a. Compare and contrast the diversity of organisms due to adaptations to show how organisms have evolved as a result of environmental changes. (DOK 2)</p> <p>* Diversity based on kingdoms, phyla, and classes (e.g., internal/external structure, body temperature, size, shape)</p> <p>* Adaptations that increase an organism's chances to survive and reproduce in a particular habitat (e.g., cacti needles/leaves, fur/scales)</p> <p>* Evidence of fossils as indicators of how life and environmental conditions have changed</p> <p>b. Research and classify the organization of living things. (DOK 2)</p> <p>* Differences between plant and animal cells</p> <p>* Examples of organisms as single-celled or multi-celled</p> <p>d. Distinguish between</p>	<p><b>1. Investigate the ability of living things to adapt to their environment. (L)</b></p> <p>a. Compare food chains and food webs.</p> <p>b. Compare and contrast adaptations necessary for animals and plants to survive in different habitats.</p> <p><b>2. Explore the interactions of components in living systems. (L)</b></p> <p>c. Group animals as invertebrates or vertebrates.</p> <p>d. Explore the four requirements necessary for photosynthesis.</p> <p>e. Compare and contrast flowering and non-flowering plants.</p>	<p><b>3. Develop and demonstrate an understanding of the characteristics, structures, life cycles, and environments of organisms.</b></p> <p>c. Compare characteristics of organisms, including growth and development, reproduction, acquisition and use of energy, and response to the environment. (DOK 2)</p> <p>* Life cycles of various animals to include complete and incomplete metamorphosis</p> <p>* Plant or animal structures that serve different functions in growth, adaptation, and survival</p> <p>* Photosynthesis</p> <p>d. Distinguish the parts of plants as they relate to sexual reproduction and explain the effects of various actions on the pollination process (e.g., wind, water, insects, adaptations of flowering plants, negative impacts of pesticides). (DOK 2)</p> <p>e. Analyze food webs to interpret how energy flows from the sun. (DOK2)</p> <p>f. Describe the structural</p>

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<p>organisms adapt to their environment.</p> <p><b>4. Examine the physical factors of populations as they relate to the formation of an ecosystem. (L, E)</b></p> <p>a. Identify, describe, and illustrate the roles among producers, consumers, and decomposers in a food web.</p> <p>b. Investigate resources and other factors (living and nonliving) that promote and limit growth of populations in an ecosystem.</p> <p><b>5. Explore the diversity and adaptations of organisms. (L, E)</b></p> <p>a. Classify organisms by their similarities.</p> <p>b. Explore and explain biological adaptations in a particular environment.</p> <p>c. Research and investigate environmental changes and the inability of a species to adapt.</p>	<p>asexual and sexual reproduction. (DOK 1)</p> <p>* Asexual reproduction processes in plants and fungi (e.g., vegetative propagation in stems, roots, and leaves of plants, budding in yeasts, fruiting bodies in fungi)</p> <p>* Asexual cell division (mushroom spores produced/dispersed)</p> <p>* Sexual reproduction (e.g., eggs, seeds, fruit)</p> <p>e. Give examples of how consumers and producers (carnivores, herbivores, omnivores, and decomposers) are related in food chains and food webs. (DOK 1)</p>		<p>and functional relationships among the cells of an organism. (DOK 2)</p> <p>* Benefit from cooperating</p> <p>* Vary greatly in appearance</p> <p>* Perform very different roles</p>
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