## **Curriculum**

<u>Class</u>: Grade 6 <u>Cycle</u>: Upper elementary

Subject: Sciences <u>Textbook</u>: Macmillan/McGraw-Hill

<u>Learning</u> <u>Domains /Units</u>	<u>Objectives</u>	Learning Outcomes/ Competencies  Students should be able to
Unit A/ Diversity of life:	-Classify the different living organisms into Kingdoms.	<ul> <li>List the five life characteristics.</li> <li>List the six kingdoms and give two examples on each.</li> <li>Illustrate how bacteria can be useful and harmful.</li> <li>Illustrate how fungi can be useful and harmful.</li> <li>List safety tips used to avoid harmful microorganisms.</li> </ul>
Classifying Plants and Animals	-Classify plants as vascular and non vascular plants.	<ul> <li>Compare and contrast vascular and non vascular plants.</li> <li>Identify the main functions of each plant part.(roots –stems-leaves)</li> <li>Experiment the effect of light on plants. (use variables- Draw conclusions)</li> <li>Define photosynthesis.</li> <li>Write the equation of photosynthesis.</li> <li>Match the plants that people usually eat to their parts.</li> </ul>

	-Classify animals as vertebrates and invertebrates.	<ul> <li>Compare and contrast vertebrates and invertebrates.</li> <li>Identify the main characteristics of each class of vertebrates.</li> <li>Compare in a table the different classes of vertebrates according to a set of given characteristics.</li> <li>Identify the main characteristics of each class of invertebrates.</li> <li>Match each type of invertebrates to its specific characteristic.</li> </ul>
Classifying Plants and Animals	-Identify the different types of adaptations in plants and animals.	<ul> <li>Compare and contrast structural and behavioral adaptations.</li> <li>Identify the adaptations that help plants survive in various climates and environments.</li> <li>Illustrate structural and behavioral adaptations in plants.</li> <li>Illustrate structural and behavioral adaptations in animals.</li> <li>Compare and contrast camouflage and mimicry.</li> <li>Demonstrate how a waxy coating helps plants retain moisture.</li> </ul>

Unit A /diversity of life:	-Identify the basic types of body cells.	<ul> <li>Define cells .</li> <li>Relate the structure of a cell to its function.</li> <li>Identify the structures of some basic body cells.</li> <li>Identify the functions of some basic body cells.</li> </ul>
		<ul> <li>Define tissues and give examples.</li> <li>Define organs and give examples.</li> <li>Define organ systems and give examples.</li> <li>List the different levels of organization from cells to organism.</li> </ul>
Cells	-Describe the different levels of organization in multicellular organisms.	<ul> <li>Draw and label an animal cell</li> <li>Identify the structure and function of each cell part.</li> <li>Draw and label a plant cell.</li> <li>Compare and contrast an animal cell and a plant cell.</li> </ul>
	-Distinguish between Animal cells and Plant	<ul> <li>Construct through a team a cell model using creative items and labeling the cell parts.</li> <li>Represent the data of a graph in the form of a table.</li> </ul>

cells.		
	-	Define diffusion and give examples. Indicate the direction of diffusion of a certain substance having different concentrations in two different media followed by justification.
	-	Define cell respiration. Write the equation of cell respiration. Write three differences between cell respiration and photosynthesis.
-Describe diffusion in cells and give examples.		
-Distinguish between cell respiration and photosynthesis.		

Unit B / Patterns of life :	-Identify how traits are controlled.	<ul> <li>-Define inherited traits.</li> <li>-Distinguish between dominant and recessive traits.</li> <li>-Distinguish between pure traits and hybrid traits.</li> </ul>
Genetics	-Calculate the results of genetic crosses.  Genetics	
Unit E / Matter:	-Describe the physical properties of matter.	-Define matterDefine mass and identify the instrument used to measure it.
Classifying Matter	-Calculate the volume of a given object.	-Define volume.  -Calculate the volume of a rectangular prism knowing its length, width and height.  -Calculate the volume of an
	-Distinguish between mass and weight.	object using displacement method.  -Define weight.  -Write 3 differences between Mass and weight.

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		-Calculate the mass of an object on the Moon knowing
		Its mass on the Earth.
		-Calculate the weight of an object on the Moon knowing its mass on Earth.
	-Calculate the density of	
	an object	-Calculate the density of an object knowing its mass and
		volume.
	-Distinguish between physical changes and chemical changes.	
		-Compare and contrast physical and chemical changes
		-Identify a given change
	-Identify the three states of matter.	as physical or chemical change.
		-List the 3 states of matter.
Classifying Matter	-Distinguish between elements and compounds.	-Distinguish between the 3 states of matter.
		-Write 2 differences between elements and compounds.
	-Identify the three particles of an atom.	
		-Draw and label an atom.
		-Distinguish between the three particles of an atom