

# Table of Contents

	Unit	Section 1	Section 2	
pages 8–49	 <p><b>1</b></p> <p><b>Energy in the Environment</b></p> <p><b>Education through Values:</b> taking care of the environment</p>	<p>Photosynthesis</p> <ul style="list-style-type: none"> <li>– Everything Needs Energy</li> <li>– Autotrophic and Heterotrophic Organisms</li> <li>– The Contribution of Van Helmont to the Study of Plant Nutrition</li> <li>– Photosynthesis: The Intake of Material and Energy from the Ecosystem</li> <li>– Factors that Affect Photosynthesis</li> <li>– The Effects of Temperature and Light</li> <li>– Respiration and Photosynthesis</li> </ul>	<p>Systems of a Food Chain</p> <ul style="list-style-type: none"> <li>– Understanding Organization in Nature</li> <li>– The Components of an Ecosystem</li> <li>– Organisms and Their Role in an Ecosystem</li> <li>– Energy Flow in an Ecosystem</li> <li>– Not All Energy Is Used</li> <li>– Trophic Levels, Chains and Systems</li> </ul>	pg. 10 pg. 28
pages 50–73	 <p><b>2</b></p> <p><b>Energy</b></p> <p><b>Education through Values:</b> respecting the environment</p>	<p>Energy</p> <ul style="list-style-type: none"> <li>– The Concept of Energy</li> <li>– Forms of Energy</li> <li>– Properties of Energy</li> </ul>	<p>Energy and Changes</p> <ul style="list-style-type: none"> <li>– Energy and Objects</li> <li>– Energy and Living Things</li> </ul>	pg. 52 pg. 60
pages 74–109	 <p><b>3</b></p> <p><b>Matter and Its Transformations</b></p> <p><b>Education through Values:</b> working in groups and respecting the environment</p>	<p>Matter</p> <ul style="list-style-type: none"> <li>– The Structure of Matter</li> <li>– States of Matter</li> </ul>	<p>Temperature and Heat</p> <ul style="list-style-type: none"> <li>– Temperature</li> <li>– Heat</li> <li>– Thermal Equilibrium</li> <li>– The Mechanisms of Heat Transfer</li> </ul>	pg. 76 pg. 82
pages 110–159	 <p><b>4</b></p> <p><b>Earth and Its Resources</b></p> <p><b>Education through Values:</b> respecting the environment</p>	<p>The Layers of the Earth</p> <ul style="list-style-type: none"> <li>– Composition of the Biosphere</li> <li>– Characteristics of the Atmosphere</li> <li>– The Importance of the Atmosphere for Life and Obtaining Natural Resources</li> <li>– Characteristics of the Hydrosphere</li> <li>– The Importance of the Hydrosphere for Life and Obtaining Natural Resources</li> <li>– Characteristics of the Layers of the Earth</li> <li>– The Importance of the Lithosphere for Life and Obtaining Natural Resources</li> </ul>	<p>Changes in the Layers of the Earth</p> <ul style="list-style-type: none"> <li>– Changes in the Atmosphere</li> <li>– How Can We Protect the Atmosphere?</li> <li>– Changes in the Hydrosphere</li> <li>– How Can We Protect the Hydrosphere?</li> <li>– Changes in the Lithosphere</li> <li>– How Can We Protect the Lithosphere?</li> </ul>	pg. 112 pg. 128
Glossary		Cutouts		
pages 160–170		pages 171–181		

	Section 3	Section 4	Science Lab	Evaluations
	The Effect of Human Activity on Food Chains – Can a Food System Be Changed? – Natural Causes That Alter Food Systems – The Harmful Effects of Human Activity pg. 42		The Effect Light Intensity Has on Photosynthesis pg. 24	What Do You Know? Initial Evaluation pg. 9 Let's Check! Intermediate Evaluation pg. 40 What Did You Learn? Final Evaluation pg. 46
			Solar Energy pg. 66	What Do You Know? Initial Evaluation pg. 51 What Did You Learn? Final Evaluation pg. 70
	Changes in State – Changes in State of Matter – Progressive Changes in State – Regressive Changes in State pg. 98	Changes in State of Water – Transformations of Water – The Heating Curve of Water – The Cooling Curve of Water pg. 102	Thermal Equilibrium pg. 92	What Do You Know? Initial Evaluation pg. 75 Let's Check! Intermediate Evaluation pg. 96 What Did You Learn? Final Evaluation pg. 106
	Soil Formation – Soil – Soil Layers – Soil Properties – Types of Soil pg. 142	Erosion – Types of Erosion – Consequences of Erosion pg. 152	The Water Retention Capacity of Different Types of Soil pg. 148	What Do You Know? Initial Evaluation pg. 111 Let's Check! Intermediate Evaluation pg. 140 What Did You Learn? Final Evaluation pg. 156