

## Natural Science

Year 5

(70 hrs, 2 hrs per week)

<p><b>INTRODUCTION</b>  <b>Sciences on nature. Methods of studying the nature. Equipment for studying the nature.</b>  <b>Meaning of natural and scientific knowledge for human</b></p>	
1.	<p><b>BODIES, SUBSTANCES, AND PHENOMENA AROUND US</b>                  Bodies around us. Features of a body, and measuring them.                  Substances. Physical features of substances.                  Features of solid bodies, liquids, and gases.                  Atoms and molecules.                  Diffusion.                  Diversity of substances. Non-organic and organic substances in the closest environment of people.                  Clean substances and mixtures. Ways of dividing the mixtures.                  Natural phenomena. Physical phenomena, and their diversity.                  Chemical phenomena, and their features. Burning. Rotting.                  Repeated phenomena. Relation of phenomena in nature</p>
2.	<p><b>UNIVERSE</b>                  Sky and celestial sphere. Celestial bodies. Visible movements of these bodies.                  Concept of a constellation. Meaning of a starry sky in the history of mankind.                  Celestial bodies.                  A star as a self-luminous celestial body. Differences between the stars. Interstellar space.                  Planets. Solar system. Differences between the planets.                  Star systems – galaxies.                  Universe and its components.                  A human and the Universe. Astronomy, a science of the Universe. Methods and means of astronomic studies.</p>
3.	<p><b>EARTH AS A PLANET OF THE SOLAR SYSTEM</b>                  Form and sizes of the Earth. Internal structure of the Earth. The movements of the Earth. Seasons.                   Moon, the Earth's natural satellite. Sun and moon eclipses. Means of depicting the Earth.</p>



Soil, its importance and features.  
Taking care of soil.

Air, the mixture of gases. The importance of air.  
Features of air.

Water on Earth. Features of water. Three states of water. Water circulation. Water as a solvent. Soluble and insoluble substances. Solutions in nature. Importance of water in nature. Using water by a human  
Organism and its features. Cell structure of the organisms. Diversity of organisms: Plants, Animals, Mushrooms, and Bacteria.

Life conditions of the Planet Earth. Life media. Media factors. Impact of inanimate nature on human organism. Organism's adaptation to periodic change of the environmental conditions. Diversity of life media and adaptation of organisms to life in each of them. Land and air media. Water life media. Soil life media.

Impact of animate nature on human organism. Relations between the organisms. Coexistence of the organisms. Groups of organisms. Ecosystems.

Flora and fauna of the homeland.

Human as a part of nature. Connection of human to nature. Changes in nature due to natural factors and life of a human.

Environmental problems and solving them (maintaining biological diversity, fight for forests and against desertification, and planet protection against the pollutions of different kinds). Environmental protection.

Red Book of Ukraine. Reserves, natural parks and their meaning in keeping the life of Earth.

## Expected results

- cognitive interest to the scope of Natural Science;
- a comprehensive natural and scientific picture of the world, knowledge of patterns in nature and the role of a human in it;

## Educational programs in use for teaching Ukrainian children



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- the skill of observation, experiments, measurements, and describing the results;
- use of knowledge on nature in everyday life to keep the environment and ensure socially responsible behavior in it, adaptation to the living conditions at the territory, and independent assessment of the level of safety of the environment as a vital sphere.