

Syllabus

Subject: Science/Biology

Grade: 6

Book: Science book Grade 6

Number of lessons per week: 1,5

Number of lessons per year: 54

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*Unit 1**The World of Forests*

Lesson	Content	Aims	Learning objectives	Knowledge
1.	The forest as an ecosystem I.	Proving the connections between the living organism and its environment.	Relationships between living things and their environments in Hungarian forests. Different methods of adaptation. Studying how abiotic factors (air, water, soil, temperature) affect biotic elements in a forest ecosystem.	The location and climate of Hungary. The forest as an ecosystem. Biotic and abiotic factors of the forest. Discussing the typical forests of Hungary. The structure of forests. Deforestation.
2-3.	Trees	Explaining the connections between the environmental conditions and the structure of the communities in Hungarian forests.	Recognising the levels of organisation above the individual organism.	Typical features of deciduous trees. Characteristic features of oak, beech and pine trees. Explaining the term and the symbol for 'monoecious' plants. Explaining the terms angiosperm, gymnosperm and dicotyledon. Features of oak, beech and pine forests.

Lesson	Content	Aims	Learning objectives	Knowledge
4-5.	Shrubs and the undergrowth of the forest	<p>Examining biotic and abiotic factors and their influence on the appearance of forests in a certain place.</p> <p>Explaining how environmental factors influence the development of living organisms.</p>	<p>Grouping and comparing gymnosperms and angiosperms.</p> <p>Adaptations of living things to their environments.</p> <p>Adaptations of plants to different light intensities.</p> <p>Connections between the way of life and the structure of mosses and ferns.</p>	<p>Characteristic features of shrubs. Blackthorn and wild rose, the best-known shrubs in Hungary.</p> <p>Discussing the usefulness of shrubs.</p> <p>Appearance and benefits of mosses and ferns.</p> <p>Explaining the terms rhizoid, rhizome, vascular and non-vascular plant.</p>
Lesson	Content	Aims	Learning objectives	Knowledge
6.	Mushrooms in the forest	<p>Explaining the difference between the feeding of plants and fungi.</p> <p>Comparing edible mushrooms and toadstools.</p> <p>Identifying and describing the structure and function of living things and the ways in which living things interact with each other</p>	<p>Practising observing, questioning and making explanations.</p> <p>Understanding the connection between lifestyle and the structure of the body.</p> <p>Comparing the metabolism and body structure of fungi, plants and animals.</p> <p>Being confident in working with information and ideas gathered in this</p>	<p>Describing traits common to all mushrooms.</p> <p>Explaining the life-cycle of mushrooms.</p> <p>Understanding the structural and functional relationship between fungi and plants.</p> <p>Rules for eating mushrooms.</p> <p>Symptoms of mushroom poisoning.</p> <p>Death cap and champion mushrooms.</p>

		and their environments.	topic. Developing healthy eating habits.	
7-8.	Mammals	Observing the appearance and body structure of mammals in the forest. Identifying adaptations to the environmental conditions. Examining the roles of different species in the life of the forest.	Recognising and understanding the connections between the body structure, ways of living and behaviour of mammals in the forest. Introducing certain traits that prove the adaptation of mammals to the forest environment.	Describing traits common to all ungulates. Explaining the term „vertebrate”. Naming some animals with single toes and some with divided hooves. Describing the differences between horns and antlers. Explaining the terms „camouflage”, „velvet” and „ruminant”. Describing the appearance, eating habits, senses and reproductive systems of boars and foxes.
Lesson	Content	Aims	Learning objectives	Knowledge
9-10.	Birds	Observing the appearance, body structure, life and adaptation of birds in the forest.	Conducting investigations by observing, questioning, predicting, collecting, recording and analysing data and drawing conclusions on a variety of birds. Recognising the connections between the body structure and behaviour of birds in the forest ecosystem.	Describing the appearance and eating habits of woodpeckers and great tits. Identifying the main difference between the leg of the woodpecker and a typical bird’s leg. Explaining the differences between altricial and precocial birds. Naming several characteristics that are found in birds but not in other types of vertebrates. Studying the physical characteristics of

				the Eagle owl. Explaining the term "pellet".
Lesson	Content	Aims	Learning objectives	Knowledge
11.	Insects I.	Comparing arachnids, insects, butterflies and beetles.	Identifying and describing the structure and function of living things and the ways in which living things interact with each other and their environment. Connecting and practising observation and description. Recognising the connection between arthropods and their environment. Comparing and grouping animals. Understanding the types and processes of development.	Describing the traits common to all arthropods, insects and beetles. Describing the appearance and eating habits of stag beetles and the gipsy moth. Naming the main body parts of the stag beetle. Listing the main differences between arthropods, insects and beetles. Identifying the main steps in the development of the stag beetle. Explaining the term „Complete metamorphosis”.
Lesson	Content	Aims	Learning objectives	Knowledge
12.	Insects II.	Comparing arachnids, insects, butterflies and beetles.	Identifying and describing the structure and function of living things and the ways in which living things interact with each other and their environment. Connecting and practising observation	Identifying the typical features of ants and the Garden spider. Listing the body parts of the Garden spider. Describing the eating habit and the reproductive cycle of the Garden spider. Listing the main differences between

			and description. Recognising the connection between arthropods and their environment. Comparing and grouping animals. Understanding the types and processes of development.	insects and spiders.
13.	The forest as an ecosystem II.	Describing forest ecosystems.	Developing the terminology of systems. Recognising the complexity of different systems. Discussing the types of interactions between organisms in communities. Explaining the relationship between living organisms and their environment. Interdependence of living organisms.	Explaining the terms "community" and "ecosystem". Defining the term "photosynthesis". Recalling what food chains and food webs are. Identifying the relative positions of producers and consumers in food chains. Identifying herbivores, carnivores and omnivores in forest habitats. Identifying predator-prey relationships in forest habitats. Explaining the terms mutualism, commensalism, parasitism and competition.
Lesson	Content	Aims	Learning objectives	Knowledge
14.	Bükk National Park	Developing a healthy lifestyle. Encouraging students to go hiking and protect natural	Analysing and reporting on different aspects of the local environment. Clear and detailed description of the	Limestone, karst forms and karst water. The flora and fauna of the Bükk. Szilvásvár and teh Szalajka Valley.

		values.	area. Observing and measuring some of the biotic and abiotic parameters of the area.	The trout farm and the Hungarian Lipica stud. The economy of the area. Henrik Fazola and the modern iron foundries.
15-16.	Revision	Classifying knowledge, recognising connections and relationships between different topics. Applying knowledge.		
17.	Test			
18.	Correction of the test			

Unit 4

Living Fields

Lesson	Content	Aims	Learning objectives	Knowledge
19.	Plants in the fields	Recognising that living organisms are interdependent and describing their adaptation to their environment. Introducing the adaptation of field plants.	Recognising the connection between the body structure and ways of living in the case of field plants. Presenting the traits of living organisms (grasses) that prove their adaptation to their environment.	Identifying the main features of grasses. Describing the appearance of Perennial ryegrass, Feather grass, Meadow sage and Camomile. Comparing monocots and dicots.

			<p>Observing and recognising the effects of weather and climate on living organisms.</p> <p>Collecting and analysing information about our environment.</p> <p>Drawing conclusions.</p>	
20.	Animals in the fields	Introducing the connections between their environment, their body structure and their ways of living.	<p>Recognising the connection between the body structure, ways of life and behaviour of mammals and birds in the fields.</p> <p>Classification of living things.</p> <p>Comparison of animals.</p> <p>Presenting the traits that prove the adaptation of living things to their environment.</p>	Vertebrate, mammal, hare, rodent, field vole, birds, common pheasant, strong beak, precocial birds, common buzzard, curved beak, sharp claws to grip
Lesson	Content	Aims	Learning objectives	Knowledge
21-22.	Reptiles and insects in fields	Introducing the connection between their environment and their way of living	<p>Food webs.</p> <p>Recognising the connections between the body structure, ways of living and behaviour of reptiles and arthropods in fields.</p> <p>Classifying animals by using distinctive features.</p> <p>Discussing the harmful effects of insects.</p>	<p>Classifying animals as insects, arthropods and beetles.</p> <p>Stating the characteristics of insects, arthropods and beetles.</p> <p>Describing the life-cycle of the gypsy-moth.</p> <p>Comparing the life-cycle of the stag-beetle and the garden spider.</p>

			Discussing the interdependence of plants and animals.	
23.	Cereal crops	Comparing natural and artificial cultural landscapes.	Practising observing, questioning and drawing conclusions. Raising and answering questions based on observations. Recognising and identifying cereal crops.	Cereal crops, grasses, incomplete flower, grain crop, wheat kernel, rye, oat, barley, corn, supporting roots, tassel, corn ear, sunflower, composite inflorescence.
			Our agricultural plants. Recognising the effects of weather and climate on living organisms using direct observations.	
Lesson	Content	Aims	Learning objectives	Knowledge
24.	Hortobágy National Park	Presenting the features of one of the national parks in Hungary. Using the internet.	Gathering, recording and presenting data in a variety of ways. Establishing the communicative skills students need to gather information. Presenting the living organisms of a Hungarian national park by carrying out project work. Recognising and defining changes brought about by people.	Hortobágy National Park, salt plain, flood control, water regulation, fishponds, breeding habitats,
25.	Kiskunság National Park	Presenting the features of one of the national parks in Hungary. Using the internet.	Reporting on findings from enquiries, including oral and written explanations of results and conclusions.	Kiskunság National Park, wind-formed landscape, bog, marsh, flora and fauna of Bugac.

			Establishing the communicative skills students need to gather information. Presenting the living organisms of a Hungarian national park by carrying out project work.	
Lesson	Content	Aims	Learning objectives	Knowledge
26-27.	Revision	Classifying knowledge, recognising connections and relationships between different topics. Applying knowledge.	Practising cooperative work.	
28. 29.	Test Correction			
Unit 6				
<i>Waters, Wetlands and Aquatic Habitats</i>				
30.	The world under the water	Observing and comparing Single-celled organisms	Observing protists under microscope. Discussing how living organisms are adapted to survive in aquatic habitats. Recognising and naming body parts and vital signs in protists. Recognising the connections between	Plankton, phytoplankton, zooplankton, protists, flagellates, euglena, ciliates, paramecium, bacteria

Lesson	Content	Aims	Learning objectives	Knowledge
			the biotic and abiotic environmental conditions of water communities.	
31-32.	Aquatic plants	Observing and comparing the differences between terrestrial and aquatic habitats.	Improving the methods of sorting and classifying things according to their traits. Students should describe how they decided where to place things. Gathering and recording data in aquatic environments around where we live. Observing natural habitats, recording	hydrophytes, emergent plants, wet meadow, floodplain forest, filamentous green algae, floating aquatic plants, submerged aquatic plants, small duckweed, water lily, white willow algae, broadleaf cattail, common reed, dioecious plant
			and discussing changes. Identifying that plants and animals living in aquatic habitats are dependent on each other.	
33-34.	Aquatic invertebrates	Recognising and naming the body parts of invertebrates living in and around water. Showing examples of how invertebrates are adapted to survive in aquatic habitats.	Recognising the connections between the body structure, ways of living and behaviour of arthropods living in and around water. Recognising the connections between living organisms and their environment. Comparing and classifying animals. Types and methods of development of animals.	swan mussel, gill, leech, segmented worm, suction cup, parasite, arthropods, crayfish, insects, dragonflies, incomplete metamorphosis, mosquitoes, complete metamorphosis
Lesson	Content	Aims	Learning objectives	Knowledge

35-36.	Aquatic vertebrates I.	Recognising and naming the body parts of vertebrates living in water.	Recognising the connections between the body structure, ways of living and the behaviour of fish, amphibians and reptiles. Recognising the connections between living organisms and their environment. Classifying and comparing animals.	vertebrates, fish, paired and unpaired fins, swim bladder, lateral line, gill, carp, freshwater bream, catfish, amphibians, edible frog, reptiles, snakes, grass snake, hibernation
37.	Aquatic vertebrates II.	Recognising and naming the body parts of vertebrates living in water.	Constructing food chains and food webs. Recognising the connections between	birds, wild duck, webbed foot, lamellated beak, marsh harrier, strong and curved beak, sharp claws or talons,
			body structure, the ways of living and the behaviour of water birds. Recognising the connections between living organisms and their environment. Presenting the traits that prove The adaptation of water birds to their environment.	white stork, long legs(wading feet), migratory bird, food chains, food webs, water bloom
Lesson	Content	Aims	Learning objectives	Knowledge
38-39.	Revision	Classifying knowledge, recognising connections and relationships between different topics. applying knowledge.	Practising cooperative work.	
40. 41	Test Correction			

Unit 7**Human body and Health**

42.	Cells, organs and organ systems	<p>Recognising the risk factors for human health.</p> <p>Identifying the features of a healthy lifestyle.</p> <p>Recognising our personal responsibility for our health.</p> <p>Recognising the connections between the environment, the Body, our way of living and our health.</p> <p>Identifying the functions of various systems in humans.</p>	<p>Getting to know the levels of organisation of the human body.</p> <p>Recognising that body systems are made up of different organs that perform specific functions.</p> <p>The locations of different body parts.</p>	<p>cell, tissue, organ, organ system, body, listing the main organs and the organ systems, functions of organs and organ systems</p>
Lesson	Content	Aims	Learning objectives	Knowledge
43.	Keep moving	<p>Analysing data about teenagers' health . (incorrect posture, flat foot ...etc.)</p> <p>Analysing reasons and drawing conclusion.</p> <p>Proving the connection between diet and physical activity or diet and mental health using examples.</p>	<p>Naming the main parts of the skeletal and muscular systems.</p> <p>Getting to know healthy daily habits. (daily routine, free time)</p>	<p>bone, muscle, joint, ligaments and tendons, vertebral column, ribs, limbs, poor posture, flat foot</p>
44.	Nutrition	Describing the way in which	Presenting the connection between	alimentary canal, small and large intestine,

		nutrients and water are transported within the human body.	nutrition and a healthy lifestyle. Identifying organs that contribute to the digestion of food substances. The position and function of digestive organs in the human body.	mouth, saliva, different types of teeth, milk teeth, permanent teeth, dental cavities, orthodontist, esophagus, stomach, digestion, absorption
Lesson	Content	Aims	Learning objectives	Knowledge
45.	Healthy diet	Making a food pyramid. Exploring nutrition and balanced diets.	Identify being overweight and vitamin deficiency diseases. Listing the nutrients found in foods.	balanced diet, nutrients, carbohydrates, fats, proteins, vitamins, minerals
46.	Respiration and excretion	Presenting the connection between nutrition, respiration and moving.	Naming the main organs of the respiratory and the excretory system. The position and function of the organs of the respiratory and the excretory system.	pharynx, larynx, vocal cord, trachea, epiglottis, lungs, the effects of smoking, excretion, kidney, ureter, bladder, urethra
47.	Circulation	Understanding the job of the heart and the circulatory system.	Identifying the position and the function of the organs of the circulatory system.	heart, blood vessels, blood, blood pressure, pulse
48.	Senses	Recognising the five senses.	Getting to know the function of the different sense organs.	eye, common eye problems, touch, hearing, smell, taste.
49.	The skin	Recognising the main layers of the skin. Identifying dangers and treatments. Learning how to keep the skin healthy.	Understanding the main jobs of the skin. How to treat skin problems. Avoiding sunburn.	epidermis, dermis, subcutaneous layer, acne, blister, pigment, sebaceous gland, sunburn

Lesson	Content	Aims	Learning objectives	Knowledge
50.	Reproduction	Understanding the changes in the male and female reproductive system during puberty.	Getting to know about the main reproductive organs, their location and function in the body.	egg cell, sperm cell, fallopian tube, ovary, vagina, menstruation period, scrotum, vas deferens, penis, semen
Lesson	Content	Aims	Learning objectives	Knowledge
51.	Growth and aging	Introducing students to the different stages of physical growth and development in human beings from birth to 18 years of age. Presenting the most important traits of each stage. Describing the typical	Comparing the main stages of human development. Differences between boys and girls. To introduce students to the stages of human growth and development that take place during infancy and early childhood.	stages of human development, infancy, toddlerschildhood, adolescence, adulthood, old age
		characteristic features of the adolescent stage.		
52-53.	Revision	Classifying knowledge, recognising connections and relationships between different topics. applying knowledge.	Practising cooperative work.	
54. 55.	Test Correction			

