

## EDUCATIONAL CONSTRUCT OF NATURAL AND SOCIAL REALIA IN 2ND GRADE OF ELEMENTARY SCHOOL WITH AN EMPHASIS ON ENVIRONMENTAL EDUCATION: A COMPARISON OF THE SLOVAK AND CZECH MODEL

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**Abstract:** Natural and social realia are in the 2nd grade of elementary schools being taught primarily as a part of the Elementary realia subject. This subject, not only in Slovakia but also in the Czech Republic, has in the last decade undergone several content changes. This research paper shows comparison of educational content of the Elementary realia subject in the two above mentioned countries, which had originally identical content. The authors conducted a research, in which they focused on comparing the current contents of the Elementary realia by utilizing in-depth analysis. In presented research paper, they present partial results of the research with an emphasis on topics, that can enhance pupils' knowledge of forest environment. The core of teaching Elementary realia is the conceptual process. The concepts were discovered by the analysis, and these were related to the topics, which pupils are expected to adopt and understand. Authors were able to convert these concepts from theory into application, more specifically into the education construct, which essentially supports the educational contents of Elementary realia via aesthetic-educational objects. This represents a strategy, of how to stimulate pupils' relationship to the environment and their environmentally responsible behavior, as a part of sustainable development education.

**Keywords:** Elementary realia subject, conceptual process, integration of contents, aesthetic-educational objects.

### Introduction

As a child enters elementary school, a new life chapter of a child begins. This new role of a pupil brings new impulses, which not only stimulate pupils' observation skills, but also make a pupil compare, evaluate, think, experience, and engage imagination. These are necessary cognitive constructs in order to development pupil's active vocabulary. Along with the trivia subjects on elementary schools, the subject of Elementary realia is in the 1st and 2nd grade of elementary school one of the vital subjects, which develop pupil's cognitive functions. A teacher must organize all stimuli and their definitions, that have pupil experienced in social or natural environment, into a meaningful system. For this reason, in the Elementary realia education process the conceptual process is crucial. This is because pupils learn this subject by observation, which subsequently leads to defining the objects and phenomena. They learn to find linkages and mutual relations. This approach helps pupils to create initial understanding of the world as a whole and by targeted activities, pupils are led to responsible behavior in both, natural and social environment.

The Elementary realia teaching content has undergone various changes after the split of Czechoslovakia. These changes, according to teachers and experts (Nagyová, Kollarová, 2021), have not always led to improved quality of the original content. In both countries, only little emphasis, from educational as well as research perspective, is put on teaching Elementary realia, and its curriculum is not properly established. This is supported by the fact that in Slovakia, there is no Elementary realia textbook for 2nd grade of elementary school with an approval clause, only the one with recommendation clause. For this reason, the research paper focuses on content analysis of Elementary realia textbooks and education standards in these two countries, which are essentially rooted in the one same curriculum. The results of the conducted research, which may lead to partial innovation of the Elementary realia curriculum in Slovakia with focus on a balance between natural and social sciences components. In the presented study, we focus on presenting partial results, in which we would like to emphasize the fact, that pupil's social competencies must be stressed even in topics of natural science.

Via natural science topics we can lead students not only to the understanding of elementary realia and their relations, but also to a perception of beauty of natural environment and mutual importance among forest environment and humans, mainly for their well-being. We understand that the aesthetic categories should play crucial role in pupil's experience of environment, in order to activate pupil's experiencing and imagination and subsequently the cognitive thinking and speech. For this reason, by the end of this research paper, we focus on topics of targeted aesthetic-educational activities. Presented themes come from findings of the terms related to the contents. By these terms, we can engage a pupil in learning about forest - the observing and learning about forest environment in a way, in which pupils can better understand, experience, and apply their own imagination. In this educational construct, which is based on integration of various teaching subjects, more specifically aesthetic-educational subjects, we see the potential for effective education. By these aesthetic-educational activities, we can not only lead the pupils to identify aesthetics, but also to be able to protect the beauty and to create it.

### 1 The school subject of Elementary realia as part of learning about oneself

In both, Slovakia and the Czech Republic, this subject is taught under the name "Prvouka" (Elementary realia). In the past, until 1976, the curriculum content of this subject was taught in schools in the 1st and 2nd grade of elementary schools under the name of *Substantive Learning*. After 1976, its name has not changed, although there was a three-year attempt to change this name to Natural Science in the Slovak Republic, but in 2015, it was renamed again to Elementary realia. However, the content of natural science topics remained in the majority, it is up to 82.20%. Even though the original name has been reverted to in Slovak schools, the subject has remained part of the educational area of *Man and Nature*. However, it must be said that some topics are extended into the educational area of *Man and Society*, *Man and the World of Work*. In the Czech Republic, the subject of Elementary realia is a part of the educational area *Man and his World*. The authors consider it to be a correct theoretical starting point that the subject, which is based on the above-mentioned educational area, prepares the foundations for the educational area *Health Education*. In fact, Elementary realia is not only about learning about the natural environment, but it is also important for the pupil to know and understand the social context. This has also been emphasized by Doušková (2003), Kopáčová (2011), who attribute an important educational function to it. They justify this by the fact that it is by interacting with pupils that we develop their personal and social competences and cultivate their thinking and speech.

Through the content of this subject, pupils are taught to perceive nature, and therefore also man as a part of it, and naturally also the relationships between people. They are taught to notice the essential features of observed phenomena, but also the beauty of natural or human creations, so that they can perceive, observe, understand, and think about them in relation to man today and in the future. In Slovakia, the strategy of teaching by means of exploratory and research methods in all thematic units - *Plants*, *Animals*, *Man*, *Inanimate Nature*, *Society* - is being put at the forefront of this curriculum. The research conducted by Klusák (2002, 2010), Čábalová, Podroužek (2013) pointed out that the content must be balanced, because even then, science topics were predominant. In the Czech Republic, the authors of school legislative documents have managed to do this, in Slovak conditions, unfortunately, the social dimension in the teaching of this subject is rather in the background.

In the subject of Elementary realia, the authors would recommend starting with self-knowledge as a priority. Here it is assumed that if the pupils become aware of themselves - their

needs, their conditions, requirements or interests, only in this way will they be able to understand others and their problems and, gradually, also the environment in which they live. The content of education in the Czech Republic is closer to social studies. It consists of the following areas - *The place where I live, People around us, People and time, Diversity of nature, Man and health*. All thematic units include a natural and social science dimension with an emphasis on the direct social experience of the pupil. It needs to be appreciated that the concepts of tolerance, help, solidarity, rights, and duties are used. It is also positive to note that the topics linked to the *People and time* unit are based on the family, on family events, and gradually, by means of a spiral system of outlining, we move to events in the municipality, the region, and the country. If the teacher leads the pupil by such a strategy from familiarization and orientation in himself and in his immediate environment, it should not then be difficult to lead him to familiarization with the diversity of nature, which he will learn to see as an essential part of his life.

The authors' intention in the presented study is to operate with themes from the natural science domain - themes in which the pupils are taught about the forest. Through these themes and the concepts that relate to each lesson, the authors want to show how they can transfer the themes and the concepts to social contexts. The authors want to emphasize experience and experiencing in their teaching strategy. The authors would like to emphasize that through the content of Elementary realia the pupil's value system should also be shaped. The teacher, through his/her teaching strategy, his/her behavior and actions, teaches the pupils to look for ways in which they themselves can help and improve the environment. The focus in these environments, both natural and social, is the pupil and his safety, health, and his security to function in these environments.

### 1.1 Cross-cutting topics and integration of contents in the subject of Elementary realia

Elementary realia is a subject that creates a large space for integrating contents. It can be implemented through cross-cutting topics, through organizational forms or methods that are used in other subjects.

In both education programs (Slovak and Czech) there are cross-cutting topics - *Personal-Social Education, Environmental Education, Media Education*. It should be noted here that the Czech curriculum is also supported by such cross-cutting topics as *Education of the Democratic Citizen* and *Education for Thinking in European and Global Contexts* (www.nuv.cz, 2021, p. 132-144). The authors consider these topics important in the light of the current socio-cultural conditions that people are confronted with on a daily basis, which require engaged and critical thinking on the part of the pupil. The authors dare to say that such a grasp of the subject of Elementary realia curriculum is absent in Slovakia. In the Slovak model of education, in addition to the common topics mentioned above, the curriculum also focuses on cross-cutting topics - *Multicultural Education, Traffic Education - Road Safety Education, Protection of Life and Health, Regional Education and Traditional Folk Culture, Project Creation and Presentation Skills*.

The topics in the subject of Elementary realia which are related to the forest environment are closest to environmental education. Like the other cross-cutting topics, environmental education reflects contemporary human issues. It should be stressed that cross-cutting topics are a compulsory part of education, and it is up to the teacher's teaching strategy to decide through which organizational forms, methods, or didactic means to implement it. In accordance with the *State Educational Program* (2015), environmental education leads pupils to a comprehensive understanding of the interrelationships between humans and the environment. The aim of applying this cross-cutting topic is also that the pupil at elementary school:

- learns the basic rules and skills for behavior in nature with respect to organisms and their environment;

- takes an active part in improving the environment of the school and its surroundings;
- behaves respectfully towards natural resources.

Cross-cutting topics, as stated in the *State Educational Program* (2015) in the Slovak Republic or the *Framework Educational Program* (2021) in the Czech Republic, can be implemented in several forms. One possibility is as an integrated part of the content of education through appropriate school subjects. The educational program in the conditions of the Slovak republic emphasizes that a necessary condition for effectiveness is the use of activating teaching methods. Aesthetic-educational activities can be included among them.

The teacher should be able to appropriately vary the use of different methods. The right choice of methods and their modification and alternation not only guarantees the interestingness of the teaching process, but also creates conditions for a variety of learning strategies. Maňák and Švec (2003, p. 49) set the criterion for the division of teaching methods as the increasing complexity of educational links. Accordingly, they divide them into methods considering *pupil participation, activating* and *complex methods*. It is the *complex methods* that expand the possibilities of teaching methods by elements of organizational forms, didactic means. These include discussion, heuristic, staging, situational and didactic games. The authors also include pupils' independent work or teaching by dramatization in this group of methods. Thus, aesthetic-educational activities can also be included here. The authors list some specific and proven methods that can be used to develop and consolidate knowledge about the forest, while at the same time forming a relationship with the forest and protecting it.

Every teaching method should be seen as part of the educational process. Individual teaching methods can be combined, varied, and creatively adapted to the given conditions. There is neither a good nor a bad teaching method. Its effectiveness depends on many factors, but the decisive element is the methodological mastery of the teacher himself/herself.

### 1.2 Terms systematization of the subject Elementary Realia in curriculum about forests

The research focused on the educational content of the subject Elementary Realia. Reasons for the research were the often changes in the content of the subject Elementary Realia or its name in Slovakia, which did not bring quality to it, that was eventually also confirmed by our research. Conducted research (Nagyová, Kollárová, 2021) mapped the opinion of teachers and professionals, who are also dedicated to the educational content. The subject of Elementary Realia can be considered as another key subject in the educational trivia subjects. It is characterized by the linear plotting system. In other words, one can go about the curriculums for one hour and there is no space for repetition. For these reasons, by analyzing the educational programs and textbooks, the objective was to find out which terms are connected to individual curriculums, so that in the application field it can be clarified, how can these curriculums be supported with other educational subjects. For the need of these studies, the aesthetic-education subjects were chosen, more specifically aesthetic-educational activities.

Solution to our project *Forest pedagogy in the preprimary and primary education and the raising to a consistent kept growth*, which is a part of these studies, we focused on contents related to the forest environment. By means of aesthetic-educational activities, bases of which are emotions, we want to illustrate, how to teach pupils about forest. We suggest this presented educational construct also for the reason, that the studies conducted by Tóthová (2014), Žoldošová (2006) showed, that teacher in the 1<sup>st</sup> grade of elementary schools apply the traditional transmissive form of education on a large scale.

For the subject Elementary Realia which is a conceptual process, teachers should have a systematization of terms to each individual subject. In the past it was a part of the methodical

guidelines. In the present, teachers do not have terms for the subjects. By analyzing the educational standards in Slovak and Czech educational program and textbooks, the terms were summarized, and a file of these terms was created for the curriculums. Until 2008 school reform, it was common to work with workbooks and methodic guides, where teachers had an exact schedule of terms, with which they can describe the educational content. If we want to attempt to develop the pupil's relationship to the nature, particularly forest environment, we should know the contents potential and the terms related to it. Via these terms, the pupil's knowledge system can evolve, and pupil's awareness about the importance of forest environment for human as well as human for the forest environment, is formed. That is why our goal was to find out, which terms should a pupil acquire in the educational process of the subject Elementary Realia in the 2<sup>nd</sup> year. We analyzed seven textbooks of the subject Elementary Realia for the 2<sup>nd</sup> year, four of them were Slovak and three were Czech textbooks. From the Czech textbooks in our research, we present the results from only one textbook. This decision was made because this textbook acquired a European prize for its quality. As stated at the beginning, the reason this research file was chosen, is that these countries come from a collective content foundation and its differences started to occur before the school reform in 2008. As mentioned earlier, in the Slovak educational contents of the subject Elementary Realia, the natural-scientific topics are prevailing. For this reason, it needs to be determined, which educational topics and their content from Czech educational programs could serve as an inspiration to update Slovak educational content.

In this study, only partial results of the research are presented, in which the answer is provided for the question - *Which terms in the subject of Elementary Realia in the 2<sup>nd</sup> year represent the topics related to the environmental education?* When evaluating the qualitative content analysis of the text, while the texts were the textbooks and educational standards from both countries, we selected the method of encoding the text through analytical units – categories, so with the open text encoding we found relations between created categories. In the following tables we present the terms, which relate to the learning about forest and a pupil of the 2<sup>nd</sup> year should acquire them, understand them and know how to apply them in context.

Table 1: Terms for the educational content of the subject Elementary Realia in Slovakia

TF	Curriculum	Terms
Plants	<i>Plant environment</i>	By the water, in the water, on the rock, in the forest, pine, spruce, mold, water lilly, blackberry, mountain, rock rose, bulrush, willow
	<i>Adapting to the environment</i>	Plant shape, root, root length, drought, moisture, heat, cold, light, shadow, leaf thickness
	<i>Life manifestations of plants</i>	Water intake, growth, development, respiration, reproduction, nutrient intake, cuttings, alarms, movement
	<i>Seed spreading</i>	Mother plant, seeds, spread by water, wind, animals, spread separately, fruit, hook, berry cone, spines parachutes
	<i>Seed germination</i>	Germination, germ, seedlings, sprout, decomposition of seeds, seeds, stem base, root base
Animals	<i>Plant living conditions</i>	Water, soil, air, heat and sunlight, wilting
	<i>Plant as a food</i>	Useful plant
	<i>Life manifestations of animals</i>	Growth, respiration, food intake, water intake, reproduction, movement, development

Lifeless nature	<i>Animal community</i>	Couple, family, beehive, colony, herd clamp, fock social insect,
	<i>Bee community</i>	Mother, worker, trunks, swarm, tree caity, combs, hive, honey, royal jelly, propolis, beeswax, bee venom, pollen, laying eggs, beekeeper, bee product, beehive, queen, sting, larva, honeycomb, nectar, wedding bee dance, soldiers
	<i>Ant community</i>	Queen, anthill with corridors, chamber, winged female, winged male, northside, corridors, worker, odor trail
	<i>Lifespan</i>	Young, adult, individual, height, weight, color, body surface, body parts, dexterity, age, growth, development, adolescence, aging
	<i>Animals as food</i>	Utility, breeding, hunting
	<i>Components of inanimate nature</i>	Soil, water, air
	<i>Soil</i>	Layer, earth's surface, living, inanimate and dead soil components, water, air, pebbles, sand, clay, dirt, fertility – water intake, retain water, permeability, color, stickiness, water content, soil pollution, roots, mole, earthworm, ant, caterpillar, settling, scent
	<i>Elements of the landscape</i>	Landscape, mountains, fields, meadows, forests, orchards, plain, lakes, hills, rivers, damns, human creations, houses, roads, buildings, naturals

The stated terms for the curriculum come from the comparison of all current textbooks of the subject Elementary Realia for the 2<sup>nd</sup> grade of elementary schools, because for the 2<sup>nd</sup> grade, we do not have a textbook that would have an approval clause, only a recommendation clause. In the following table we will present the curriculum and its terms that are based on the Czech textbook. Here we decided to analyze the textbook by Dvořáková and Stará (2008). We did so, because this textbook won the first place in the Best European Schoolbook Awards (BESA) competition in 2011.

Table 2: Terms for the educational content of the subject Elementary Realia in the Czech Republic

TF	Curriculum	Terms
Autumn in te	<i>Autumn in nature</i>	Deciduous and coniferous forest, trees – maple, oak, beech, birch, spruce, pine, fir, larch, mushrooms edible, inedible, poisonous, deciduous trees – oak, maple, birch, linden, horse chestnut, rowan
	<i>Trees and bushes</i>	Woody plants, leaves, crown, fruits, branches, trunk, roots, shrub, tree, above and below ground part
	<i>Animals in autumn A walk in nature</i>	Wildlife – bear, fox, squirrel, pig, birds
	<i>Autumn in the forest</i>	Tree, parts of the tree – crown, trunk, branches, leaves, roots, fruits, flowers
	<i>Winter in nature</i>	Winter months (December, January, February), winter

		solstice, animal feeding, feeder, animal tracks Animals in winter, the way of wintering, moving to warm landscapes, animal care, feeder, hunter, animal tracks, hibernation, partridge, tit, hare, roe deer, deer, fox, pheasant, crow, raven, sparrow, blackbird
Spring	<i>Spring in nature</i>	Melting, frosting, sprouting, flowers, pollination, animal reproduction, sowing grain, planting, April
	<i>Herbs</i>	Ornamental plants, agricultural crops, poisonous and medicinal herbs, protected, carnivorous, underground part – rhizome, onion, leaves, stem, flower
	<i>Animals</i>	Mammals, birds, zoo animals, male, female, cub
	<i>The body and life of animals</i>	Mammal (head, neck, torso, front and back limbs, tail), suckling milk, fur, bird (head, neck, torso, wings, limbs, tail), feathers, eggs, fish (head, body, fins) gills, skin with scales
Summer	<i>Animals in the zoo</i>	Wildlife, cage, terrarium, aviary, paddock, aquarium
	<i>Nature around us</i>	Protected area and behavior in it, nature protection, national park
	<i>The meadow</i>	Beetles, butterflies, small animals (fox, snail, wild boar, owl, bee, deer, hedgehog, lizard, hare, earthworm, cuckoo), plants (poppy, bell flower, nettle, chamomile, Daisy, blueberry, moss, lily of the valley, strawberry)
	<i>Waters</i>	Raindrop, drinking water, polluted water, stagnant water (pond, sea), running water (river, stream)
	<i>Lifeless nature</i>	Inanimate nature (soil, rocks, water, air), Soil (living and inanimate nature, water cycle)
	<i>Soil</i>	Remains of plants and animal bodies, soil, fertilization, loosening
	<i>Air</i>	Air/oxygen, plants with green leaves

In the Czech program, we positively evaluate the inclusion within the topic *Our family* such curriculums, in which *the duties of family members* or *the choice of profession* are emphasized. In connection with the forest, we consider this to be inspiring because, after every-day duties, the family also needs to spend time and rest together, which can be also applied for a forest tourism. When choosing a profession, we do not encounter the profession of *forester* in any textbook. We neither have a *career choice* topic in the curriculum of the subject of Elementary Realia in the Slovak educational program. It also needs to be reminded that the topic *We want to be healthy*, is again included in the Czech program curriculum. Here, too, can be found overlaps with the curriculum about *family* – the mentioned family tourism, specifically clothing in the forest, possible injuries in the forest, or the dangers of inappropriate behavior in the forest (scaring animals, picking and eating unknown berries), but also observing the cleanliness of the forest, or perception of black dumps. In the Czech Republic, they follow the seasons and pupils gain knowledge about the forest through the plant and animal kingdoms. It should be reminded that they also pay more attention to protected areas, which is absent in Slovak textbooks.

We already mentioned that in Slovak education system conditions, there is rather an emphasis on research activities. To a lesser extent, we also see them in Czech textbooks, however they are more focused on experiments, such as removing impurities from water, so that pupils understand where we get water from and what is the process of water treatment until it comes from natural source to human, and subsequently back to the nature. But they are also learning about the lack of water and about helping others. This way, pupils can be led to the sense of companionship and become aware of this rare resource. We find it helpful that in this textbook each topic is structured in a meaningful arc starting from the nature itself through the human and its role in the nature, to another form of human intervention in nature. This not only educates pupils about the surrounding environment, but through specific activities they can realize its importance as well as learn how to develop a relationship with the natural environment. There is a fundamental difference because, this element is absent in the Slovak textbooks. In Slovakia, the focus is more on the knowledge system with an emphasis on research aspects of teaching. Researching, creating, and verifying assumptions undoubtedly develops pupils' personality and provides them with experience, but forgets the global context. The pupil should realize that it is part of this process that the researched objects or reality are closely related to him/her, his/her classmates, family.

## 2 Teaching strategies in Prvouka and its interdisciplinary approach

In the previous section, we mentioned that the teaching of the First Classes is a conceptual process. With his individual teaching concept, the teacher should include such tasks and targeted educational activities that stimulate the cognitive activity of the pupil. One of the strategies for approaching students' understanding of concepts in order to know their connection with reality is to support the curriculum through aesthetic-educational activities. These activities are accompanied by the experience and expression of the pupil's ideas. Imagination is a cognitive process, and it is through the expression of the pupil's ideas - movement, sound, color, line that the teacher can find out how the pupil thinks.

By integrating aesthetic-educational activities into the teaching of „Prvouka“, specifically in topics about the forest, we can not only verify the pupil's knowledge, but we can also use them to stimulate his interest in the forest environment. We do this by reading or singing about nature together, observing trees, animals, their singing or coloring their bodies. In the past, „Prvouka“ was part of the subject *Mother Tongue*, specifically it was supported by literary texts and also by the subject *Teaching through work* by means of work with natural material. Both subjects are close to aesthetic-educational activities.

The application of interdisciplinary relationships in the educational process helps to eliminate the pupils understanding of knowledge as a subject of isolated facts. Průcha, Walterová and Mareš (2009) characterize interdisciplinary relationships as reciprocal connections between individual subjects, which represent a broader subject framework. Ficová et al. (2013) refer to the interdisciplinary approach as a didactic principle. Lenoir, Hasni (2016), Vass and Perjes (2009) also talk about interdisciplinary relationships not as a goal, but as a way of education. Velmovská (2012) points out that these are links that are based on the content matches of the curriculum of individual subjects, content links, method links, or time links. The authors agree that these links contribute to the effectiveness of education. Here we would like to mention the research Denem and Ada (2012), the results of which confirmed that such an educational approach has a positive effect on the pupils learning with an emphasis on the application of knowledge in real life. That integration can be in a narrower or broader way. In our case, it is a narrower way. These are subjects that are different in content. This also includes aesthetic and educational subjects - music education, literary education.

Our latest research, Nagyová, Kollárová (2021), showed that teachers in primary education consider it necessary to use interdisciplinary relationships in „Prvouka“. This opinion is held by up to 81.75% of 126 teachers. They find it so important, because they see the interconnectedness of knowledge in it and its application in real life, and they also justify it by the fact that the subject „Prvouka“ has a low time allowance. They most often use literary texts; it is up to 94.90% of teachers. If we asked about the connection with aesthetic-educational subjects, art and music education were most often represented, followed by ethical education.

### 3 Aesthetic education in Prvouka

Aesthetic education can be considered a pedagogical approach in which we focus on highlighting the beauty all around us. The natural environment, especially the forest environment, is no exception. That we can discover unique creations of nature in the forest. Many trees are original works of art. The sight and perception of such peculiar natural phenomena are connected with experience, with emotions, but also with imagination, memory and thinking. These perceptions, which are part of cognitive processes, stimulate the pupil not only to seek beauty, but also to be able to protect and complete beauty.

Mistrík (2007) considers aesthetic education as a pedagogical and deliberate influence on aesthetic value orientation as well. Such an educational effect is important in order for students to be able to value and appreciate aesthetic values, including the relationship of a man to objects and phenomena that he creates through aesthetic experience. Through aesthetic education, we also develop the ability to evaluate the surrounding reality and stimulate critical attitudes. It is this ability that is necessary in the perception and evaluation of the surrounding reality, including the natural environment. With the above stimuli, we can lay the foundations of both aesthetic and environmental education in the pupil. Both disciplines have a pedagogical dimension. It is education, as a part of pedagogy, that helps them to find suitable methods and means of educational work.

Činčera (2007) mentions that the philosophy of environmental education is based on environmental ethics. For this reason, we should address the topic of the human's need for nature, perception of beauty of natural phenomena with pupils in several educational areas, but also talk about human interventions in natural environment, or the need to protect the environment for ourselves and future generations. We agree with Kelcova (2015) that understanding is a basic condition for a pupil's active approach. We will emphasize only two important goals of environmental education, which the author states:

- communicate with students about the state of the environment, strengthen their sense of responsibility and the protection of all living things,
- lead them to a healthy lifestyle and perception of the aesthetic qualities of the environment, lead them to a perception and sensitive approach to natural and cultural heritage (www.statpedu.sk, 2015).

As mentioned in the introduction, in this research paper we narrow the natural environment to the forest environment. We dare to say that just by discovering the beauties of the forest environment, through its colors, sounds, shadows, movement, unexpected natural still lives of the plant or animal kingdom, we can also discover natural and artistic means in the forest environment with pupils. These can become the basis for the expressive level of aesthetic activities in education. At the receptive level, we can stimulate pupils with illustrative teaching aids. They can be fairy tales with a forest theme or poems, illustrations, photographs, or recordings of animal sounds that depict the environment of the forest.

Our accredited Forest Learning program for teachers as part of their in-service training shows that if we provide pupils with life in the forest through artistic means, then they perceive the specific stimuli more sensitively, once they enter the real forest

environment. Here it can be assumed that the pupils will form a relationship with the forest and want to return to it and get to know it better. With its spaciousness, the forest provides many opportunities for its perception, getting to know each other, as well as for building mutual relationships and attitudes, but also for developing the pupil's motor skills. The topics, in which we teach pupils about the forest environment – *in wildlife, deciduous and coniferous trees, animals in winter, anthill, the shape of the landscape, water in the landscape*, must be based on the idea that the forest is one of the most valuable assets that humanity has, also for its self-renewable capabilities. In addition to trees, which are characteristic for the forest and are perceived positively by humans, in learning about forest, we also work with pupils on the importance of the forest for air, water and soil.

The forest therefore also brings aesthetic stimuli. Čaboun et al. (2011) reminds that the forest also has specific psycho-aesthetic effects on humans, created by a combination of light and shadow, colors, shapes, scents, microclimate, sounds, etc. The feeling of peace, silence and the impression of loneliness is significant. On the contrary, factors such as excessive noise, electromagnetic smog, fast pace of life, or lack of exercise on the fresh air leads to an increase in modern diseases among humans. From practice we can confirm that pupils feel relaxed after visiting the forest. Therefore, we involve as many senses as possible in learning and build on the principle of learning through our own experience. We do not only provide pupils with knowledge, but we also develop the psychomotor and socio-emotional side of their personality. In the topics of the forest environment, we lead pupils to understanding of the importance of protecting forests for humans, not from humans.

#### 3.1 Forming the child's relationship to the forest environment through aesthetic-educational activities

Learning about the forest extends its content to the educational field of Arts and Culture. Just as a child performs his observed real-world situations in his thematic games, he is interested in completing his immediate surroundings with various substitute objects. By perceiving the natural unique phenomena in the forest (coloring of tree leaves, singing of birds, flight of animals, structure or color of the bark of the tree), these are all stimuli for aesthetic games in teaching process. Pupils can express themselves by lines, tones, or movement (flight of bees, tree needles), colors (colorful still lifes of trees, or animal fur), graphics (make a stamp from natural material, or wax bark prints). We can transfer these natural themes with the pupils to such activities as designs of patterns for fabrics, or we can decorate clothes (earrings, necklaces, brooches) or the interior with them. Examples are dance and movement activities, in which students create the wind, or let the leaves fall, or a wedding dance of bees. Motivation for dance variations can also be through fairy-tale themes - *the dance of forest fairies, imitated walking of forest animals*. You can add dramatic expressions to your dance or movements to develop your ability to be effective. Knowing that ability is important, for example, for responsible environmental action. Every aesthetic-educational activity significantly contributes to the emotional development of the student.

Through art, i.e., also through aesthetic games, the pupil sensitively learns about the world around him/her. These are often fairy tales whose story takes place in a forest environment. The student must find out that through various activities, which are also with natural materials, the pupil can discover the secrets and beauties of the forest. Every creative adventure can bring him joy and a positive powerful experience. For example, we can also draw the leaves of trees with the pupils on the wax table and compare or sort them according to their shape. The color or structure of the bark can be also interesting for color display. For example, there is a plane tree that sheds bark of various shapes. His bark can become our basic motive in the artistic completion of aesthetic work. The fur of animals or the color of birds' feathers, or their singing, is also inspiring. For example, a woodpecker can type (spell out) a verse. Tree flowers can also be an inspiration. We can make animals from beech trees with

pupils. We can also play circular music-movement games (Miracle Wheel) to convey to students how a tree grows and increases its trunk circumference. A sawn tree can serve as a motive for artistic activities.

When perceiving forest trees, we can find out that some trees have cavities in the trunk. Each has a different shape. By drawing or modeling, pupils can complete what it could be. They can take pictures and talk in a group, which develops students' imagination and the ability to present their opinion in front of the group. Some trees have exposed roots. It is a beautiful inspirational element for the development of not only motor skills and overcoming natural obstacles, but also fantasies for expressing artistic ideas. However, pupils need to be told that root wounds are dangerous to the tree.

In the spring, animal families can be seen in the forest. These can be a subject for artistic, literary or musical activities, but also for movement expression when cultivating movement - an adult and a young, or motivated walking, such as sneaking in the woods, so as not to scare the animal family. Trees or forest animals can be the subject of literary games - various rhetoric, reproaches, riddles. They can contain a natural theme - willow, poplar, birch, fox, wolf, etc. Even static activities focused on attention and perception can be inspiring - standing like an observed tree (directly, crookedly).

As mentioned earlier, literary-drama or musical-drama activities are attractive for pupils. They can play a dialogue between a wolf and a hunter, a wolf with a fox, or with a bear, or with a snake. Many chicks, such as birds, are blind. In dramatic activities, we use blind exercises to build trust in the group. Through movement exercises or pantomime, pupils can also express butterflies of the family, beetles, flies, while the movement is accompanied by a sound expression. Bird singing is more of an inspiration for music education, because birds emit tones, often in rhythmic sections. They are attentive and sing when they feel another bird's singing pause. Some trilling of birds is excellent as a voice warm-up, also tongue twisters.

Through all these activities, we can bring life and attractions in the forest closer to children through an aesthetic game. In order to be curious, but especially perceptive, and to be able to realize through these activities that we can find many beautiful color, sound and movement stimuli in the forest, which we can perceive intensely by perception and observation and progress through the forest through these means and want to understand it. The core should be the accentuated beauty of nature.

#### 4 Conclusion

We should look for and find ways in which we can lead pupils to a responsible, humane and rational approach to the natural environment. One of such strategies is the opportunity to get to know and form a relationship with the natural environment, i.e. the forest environment through aesthetic and educational activities. We can protect the forest only if we understand its value to humans. It is a continuous process by which we reveal to pupils not only the beauty and values of the living, but also current and future environmental problems. Our task is to show them how can we improve these relationships not only with nature but also with people.

In both educational contents of the subject „Prvouka“, in Czech and Slovak, we can find topics related to a man - to his family, to society, to nature, to culture, or to health. The differences are shown in the proportion of these topics in curricula, but mainly by the approach to these topics. In the Czech program, the topics are approached not only from the current perspective, but they capture the historical point of view in an appropriate way, which we find beneficial. Similarly, in the curricula of nature they do not only remain with knowledge, but they emphasize the social dimension for practical life. These are the attributes that absent in the Slovak content of „Prvouka“ education. Also for this reason, we wanted to clarify how we can lead students to discover and get to know the forest environment through science

topics. Pupils can perceive it as part of their lives - physical and mental health. Through aesthetic-educational activities, we can not only develop pupils' emotions, but these are also the basis for thinking and speech abilities. By these activities, we can also lead students to aesthetics, but also to think about the need to protect all living things, and thus be more sensitive in perception.

The pupil's curiosity to learn about the closest environment as much as possible depends on the stimuli of the family surrounding. In addition to the family environment, the teacher's personality and his individual educational concept also plays a significant role here. It is quite probable that a teacher who has the respect and feels responsibility for the protection of the environment will, by this approach, instill these values in children. This can be done not by explanation of facts, but rather by one's own role model behavior and by experiential teaching.

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