

Connecting Classrooms to Communities: Inspiring Place-Based Learning

Ready-to-use lesson plans



WELCOME MESSAGE

This brochure offers a practical introduction to Place-Based Learning (PBL), presenting its core principles, the PBL ladder of complexity, and a curated selection of lesson plans developed by teachers who experimented with PBL in the Czech Republic, Romania, Slovakia, Poland and Finland within the *Community as a Classroom* project.

The lesson plans aim to share teachers' lived experiences, demonstrate concrete ways of connecting learning to local places and communities, and inspire other schools and educators to adopt and adapt place-based approaches in their own contexts. Structured across four levels of complexity aligned with the PBL ladder- from lessons enriched with local examples to integrated service-learning units with strong community partnerships- these examples show that PBL can be implemented progressively, regardless of prior experience.

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Nr.	Country	Title of the lesson	Lesson objectives (K-knowledge, A-abilities, V-values)	Subject(s)	Target group	Level of complexity	Comments
1	Romania	<u>Localiser dans l'espace</u>	(K) - to explain and correctly use key terms related to spatial localization. (A) - to locate and identify objects in space by using appropriate prepositions and by deducing the meaning of new terms through analogy (Romanian-French). (V) - to demonstrate clarity and attentiveness when giving and following directions for locating objects in space.	French Language	11-13 years old	Level 1 of complexity: Lessons designed to incorporate local examples within existing units	
2	Slovakia	<u>Tell me where you live and I will tell you</u>	(K) - to explain the concept of urbanonym and its role in reflecting the historical and present identity of a community. (A) - to investigate and use information about local urbanonyms in practical tasks such as mapping, describing, and presenting findings. (V) - to demonstrate appreciation and responsibility toward local heritage by recognizing the importance of urbanonyms in preserving community memory.	Physical education and sports, geography, Slovak language and literature. Interdisciplinary connections: civics, history, mathematics, computer science.	11-13 years old, 14-16 years old	Level 1 of complexity: Lessons designed to incorporate local examples within existing units	
3	Romania	<u>Useful physical quantities in translational motion</u>	(K) - to describe appropriate methods and tools for collecting, organizing, and interpreting scientific data. (A) - to collect, organize, and interpret experimental or theoretical data, presenting the results in suitable formats. (V) - to demonstrate scientific rigor, responsibility, and intellectual honesty in data analysis and presentation, while collaborating respectfully with peers.	Physics	11-13 years old	Level 1 of complexity: Lessons designed to incorporate local examples within existing units	
4	Romania	<u>Understanding the nature and the biodiversity around our community and their impact on the development of a sustainable community: Education, Environment, Evolution</u>	(K) - to explain how selected biological, mechanical, or thermal processes function. (A) - to calculate time and speed in order to determine the distance covered in practical situations. (V) - to demonstrate respect and awareness toward the natural environment when analyzing real-life phenomena.	Physical Education, Biology, Physics, Chemistry, Romanian Language	8-10 years old, 11-13 years old	Level 2 of complexity: Lessons designed to incorporate local experiences or applications within existing units	
5	Romania	<u>Promoting the Sânpetru Community</u>	(K) - to describe the main tourist attractions, traditions, and natural heritage of the Sânpetru community, explaining their significance. (A) - to design a coherent tourist product (map, route, and guide) by analyzing information, calculating distances, and organizing collected data. (V) - to demonstrate respect, civic responsibility, and teamwork in promoting the local community and its heritage.	Physical Education and Sports, History, and Religion	11-13 years old	Level 2 of complexity: Lessons designed to incorporate local experiences or applications within existing units	
6	Romania	<u>Philosophy of the place</u>	(K) - to explain the key characteristics of a community, with a focus on the classroom as a shared social space. (A) - to apply the concepts of community, common space, and	Philosophy for children	11-13 years old	Level 2 of complexity: Lessons designed to incorporate local experiences or applications within existing units	

Nr.	Country	Title of the lesson	Lesson objectives (K-knowledge, A-abilities, V-values)	Subject(s)	Target group	Level of complexity	Comments
			belonging when describing and designing an ideal classroom environment. (V) - to demonstrate openness, attentiveness, and respect in contributing to a harmonious and inclusive classroom community.				
7	Finland	<u>Food production from global to local and a glimpse on the future</u>	(K) - to explain the environmental impact of food production and how dietary choices influence sustainability. (A) - to analyze their daily nutrition using national dietary recommendations and interpret data through maps or mapping tools. (V) - to demonstrate openness and awareness toward diverse global diets, reflecting critically on their own eating habits.	Biology, Social Sciences, Geography, Arts	14-16 years old	Level 2 of complexity: Lessons designed to incorporate local experiences or applications within existing units	
8	Czech Republic	<u>Local Music Composer Eduard Nápravník (a figure associated with the region)</u>	(K) - to describe the life and musical contribution of Eduard Nápravník and explain his place in Czech music history. (A) - to research relevant information about Eduard Nápravník and synthesize it into a poster presenting his life and work. (V) - to demonstrate appreciation for Eduard Nápravník's cultural significance and his contribution to the regional heritage.	Czech language, music, art, civics, geography, history, citizenship education, IT	8-10 years old, 11-13 years old, 14-16 years old	Level 2 of complexity: Lessons designed to incorporate local experiences or applications within existing units	
9	Czech Republic	<u>Geological excursion in the centre of our town</u>	(K) - to identify common types of rocks and describe their basic characteristics and practical uses. (A) - to locate the origin of selected rocks on a map and connect them to their uses in real-life contexts. (V) - to demonstrate awareness of the importance and limited nature of natural resources by promoting responsible use of rocks in community life.	Natural history, geology, biology, geography, petrology	14-16 years old	Level 2 of complexity: Lessons designed to incorporate local experiences or applications within existing units	
10	Czech Republic	<u>Exploring the Prachov Rocks</u>	(K) - to describe the formation of the Prachov Rocks and identify characteristic plant species that grow in the area. (A) - to interpret information from a short text and use a simple map to orient themselves in the Prachov Rocks area. (V) - to demonstrate responsible behavior in nature by respecting marked trails, protecting the environment, and developing a personal connection to their surroundings.	Czech language, natural sciences, social studies	11-13 years old	Level 2 of complexity: Lessons designed to incorporate local experiences or applications within existing units	
11	Czech Republic	<u>Colorful Spring Around the Bělá River</u>	(K) - to identify protected plant species in the local river area and use plant atlases to gather relevant information. (A) - to use maps and field observation skills to document studied plants and design educational trail panels. (V) - to demonstrate awareness of the uniqueness of the river ecosystem and a responsible attitude toward its protection and preservation.	Natural sciences, Czech language, social studies, art, environmental education	8-10 years old	Level 2 of complexity: Lessons designed to incorporate local experiences or applications within existing units	

Nr.	Country	Title of the lesson	Lesson objectives (K-knowledge, A-abilities, V-values)	Subject(s)	Target group	Level of complexity	Comments
12	Poland	<u>What does water hide?</u>	(K) - to explain the origin of water, identify sources of anthropogenic pollution, and describe the impact of intensive agriculture on surface waters. (A) - to investigate local water quality by collecting samples, conducting chemical and microscopic analyses, interpreting results, and presenting findings on an interactive map. (V) - to demonstrate environmental responsibility by promoting conscious use of household chemicals and formulating informed recommendations for the local community.	Biology, chemistry, geography, science	11-13 years old, 14-16 years old	Level 2 of complexity: Lessons designed to incorporate local experiences or applications within existing units	
13	Poland	<u>The influence of time and nature on the condition of local monuments</u>	(K) - to explain the interconnection between cultural and natural heritage in the local context, including processes such as plant succession, climate impact, and the historical significance of the Mikulczyce manor. (A) - to conduct and document interdisciplinary field research by observing, analyzing, mapping, and presenting the relationships between nature and human activity using collaborative and digital tools. (V) - to demonstrate responsibility, ecological and civic awareness, respect for local history, and openness to cooperation in protecting and promoting natural and cultural heritage.	History (the lesson can also be conducted in geography, history, civics)	11-13 years old	Level 2 of complexity: Lessons designed to incorporate local experiences or applications within existing units	
14	Slovakia	<u>Sliač in the heart, heart in Sliač</u>	(K) - to explain the concept of urbanonym, interpret the meaning of selected street names in Sliač, and describe their significance for the city's history and cultural identity. (A) - to analyze and compare street names according to their origin and create a justified proposal and presentation for a new street name. (V) - to demonstrate respect for cultural heritage and a sense of belonging to their city by expressing informed opinions and collaborating responsibly in group work.	Slovak language and literature (language component)	8-10 years old	Level 3 of complexity: Unit designed to take advantage of place, community partnerships formed	
15	Slovakia	<u>Questing – Secrets of the lake / part 1</u>	(K) - to explain the historical development, ecosystem characteristics, and key ecosystem services of the lake area, highlighting the role of civic responsibility in its protection. (A) - to collect and analyze field data, map a learning route around the lake, and design an interactive educational quest based on local information. (V) - to demonstrate appreciation, civic responsibility, and collaborative spirit in promoting and protecting the local natural environment.	Geography; Biology; Civics education, History and Information and Communication Technology	8-10 years old, 11-13 years old	Level 3 of complexity: Unit designed to take advantage of place, community partnerships formed	
16	Slovakia	<u>Questing – Secrets of the lake / part 2</u>	(K) - to explain the key natural, historical, biological, and civic characteristics of the Jazero lake area in Košice and how they reflect the interaction between environment and community life. (A) - to collect, synthesize, and apply interdisciplinary field data to collaboratively design meaningful tasks for an interactive educational quest.	Geography; Biology; Civics education, History and Information and Communication Technology	11-13 years old, 14-16 years old	Level 3 of complexity: Unit designed to take advantage of place, community partnerships formed	

Nr.	Country	Title of the lesson	Lesson objectives (K-knowledge, A-abilities, V-values)	Subject(s)	Target group	Level of complexity	Comments
			(V) - to demonstrate responsibility, civic engagement, and appreciation for the local environment by actively contributing to a shared place-based learning product.				
17	Slovakia	<u>Discovering the world around us – outdoor mapping of the terrain in the town of Detva</u>	(K) - to describe the key architectural and natural features of a building and its surroundings. (A) - to measure, record, and represent the building through sketches and basic technical drawings (floor plan, side view, elevation). (V) - to demonstrate responsibility and appreciation for the visited place by recognizing its value for the local community.	Geography, biology, environmental education, civics, art education, technical education.	11-13 years old	Level 3 of complexity: Unit designed to take advantage of place, community partnerships formed	
18	Finland	<u>Learning Beyond the Classroom: Multidisciplinary Exploration of Utra's History, Culture, and Environment</u>	(K) - to explain how the history, natural environment, and human activities (e.g., log driving, industry, recycling) have shaped the present identity of the Utra area in Joensuu. (A) - to investigate and synthesize local historical and environmental information through fieldwork, collaboration, creative expression, and the use of digital and observational tools. (V) - to demonstrate appreciation for local heritage and nature, developing a sense of belonging and environmental responsibility toward their living area.	History, social studies, environmental studies, visual arts, Finnish language / expressive skills, physical education	8-10 years old	Level 3 of complexity: Unit designed to take advantage of place, community partnerships formed	
19	Finland	<u>The Local Forest is Home to Birds – Learning About Local Nature, Natural Resources, and 3D Creativity</u>	(K) - to describe local forest birds and vegetation, explain the concepts of natural resources, recycling, reuse, and upcycling, and identify different materials and their origins. (A) - to creatively reuse and combine materials in a 3D product, applying imagination, storytelling, aesthetic skills, and basic English communication. (V) - to demonstrate appreciation for natural resources, material responsibility, and intercultural cooperation while valuing the biodiversity of the local environment.	Environmental Studies, Arts, Mother Tongue, Physical Education, Global education, foreign languages (English)	8-10 years old	Level 3 of complexity: Unit designed to take advantage of place, community partnerships formed	
20	Romania	<u>In the world of plants and animals</u>	(K) - to identify and describe the diversity of flora and fauna in the visited environment and understand basic principles of nature conservation. (A) - to observe and compare natural elements (sounds, colors, shapes, phenomena) and apply appropriate environmental protection rules during field activities. (V) - to demonstrate respect for nature and teamwork by engaging responsibly and cooperatively in outdoor learning experiences.	Living Environments/Mathematics and Environmental Exploration	8-10 years old	Level 4 of complexity: Integrated place-based unit with Service Learning, strong community partnership (high complexity)	
21	Finland	<u>Marjala in Our Hearts – It Takes a Village to Raise a Child</u>	(K) - to explain the natural, historical, cultural, and civic characteristics of their local area, including ecosystems, water systems, local governance, and elements of the Kalevala connected to the environment. (A) - to navigate and analyze their local surroundings from	Environmental studies, physical education, history, social studies, mother tongue, drama/visual arts, religion/ethics	8-10 years old		

Nr.	Country	Title of the lesson	Lesson objectives (K-knowledge, A-abilities, V-values)	Subject(s)	Target group	Level of complexity	Comments
			multiple perspectives, carry out practical and collaborative activities, and apply map-based and experiential learning strategies. (V) - to demonstrate responsibility, appreciation, and civic engagement toward their community, environment, cultural heritage, and shared well-being.				
22	Poland	<u>River Guards. We act locally</u>	(K) - to explain the current condition and history of the river, identify the main sources of pollution (agriculture, industry, climate change), and describe the role of environmental protection institutions. (A) - to gather and analyze information through community interaction, communication with institutions, and the creation of models or multimedia presentations that propose solutions to river pollution. (V) - to demonstrate responsibility and civic agency in protecting water quality by cooperating with community members and local authorities.	Biology, Polish language, IT, art, technology/crafts.	14-16 years old		
23	Poland	<u>In the pond, cold water</u>	(K) - to explain the characteristics of Romanticism, the concept of a film etude, and the basic structure of a film script in relation to the ballad "Świtezianka" and local cultural context. (A) - to analyze and interpret the literary work and its film adaptation, and to create a film script inspired by the ballad and the cultural significance of local water bodies. (V) - to demonstrate sensitivity toward local nature, especially water environments, and responsibility in raising community awareness about their protection.	Polish language (literary studies, film education)	11-13 years old, 14-16 years old		
24	Romania	<u>Journey through the human body</u>	(K) - to explain the structure and functions of major human body systems using appropriate scientific terminology (including Latin and English terms) and to understand the principles of explanatory texts, 3D modeling, and digital presentation. (A) - to collaboratively create functional models, clear explanatory texts, bilingual glossaries, and digital or artistic presentations that accurately represent human body systems. (V) - to demonstrate responsibility for personal health, environmental awareness through reuse of materials, appreciation for scientific language and clear communication, and creativity in interdisciplinary teamwork.	Biology, Technological education, Romanian Language and Literature, Latin, English language, ICT, Art education	14-16 years old		

1. How to Plan a PBL Lesson?

1.1 PBL lesson quick checklist

The lesson plans included in this guide were developed by a group of teachers who played an active role as designers of meaningful Place-Based Learning experiences. Using the PBL Lesson Quick Checklist as a common planning and reflection tool, teachers systematically shaped their lessons by grounding learning in relevant local places, community contexts, and students' lived experiences. The checklist supported teachers in aligning learning objectives with curriculum requirements, designing experiential and collaborative activities, involving community partners, and ensuring inclusive participation for all learners. It was used both as a guide during the planning process and as a self-review instrument, helping teachers refine student-centered learning, meaningful outputs, and opportunities for reflection and community impact.

Planning

- ☐ Have I chosen a meaningful place or local topic relevant to students' lives?
- ☐ Are the learning objectives (Knowledge / Attitudes / Values) clearly defined?
- ☐ Is the lesson connected to the curriculum and learning outcomes?

Learning Design

- ☐ Does the lesson include learning about, in, through, or for the place?
- ☐ Are there experiential or outdoor activities (observation, fieldwork, inquiry)?
- ☐ Are students actively involved in exploring, questioning, and decision-making?

Community & Collaboration

- ☐ Is at least one local community partner involved or referenced?
- ☐ Are students working collaboratively in pairs or groups?
- ☐ Is interdisciplinary learning encouraged?

Student Output

- ☐ Do students create a meaningful product (guide, map, poster, proposal, presentation)?
- ☐ Is the product useful or relevant for the community or real-life context?

Reflection & Impact

- ☐ Are there clear reflection/debriefing moments for students?
- ☐ Do students connect learning to personal experience and community impact?
- ☐ Is there evidence of place attachment or responsibility?

Inclusion & Accessibility

- ☐ Are activities accessible for all learners, including students with SEN?
- ☐ Is learning differentiated through varied tasks and roles?

1.2 Short template for PBL planning

To ensure consistency, clarity, and quality across all contributions, teachers developed their lesson plans using a common lesson plan template. This template guided authors to document essential information such as authorship and school context, lesson title, subject areas, target age groups, and level of complexity within the Place-Based Learning lesson. It supported teachers in clearly formulating learning objectives across knowledge, abilities, and values, defining key concepts, and structuring activities in a detailed and replicable way, including methods, timing, resources, and reflection moments. The template also encouraged teachers to include facilitation notes, debriefing questions, links to PBL principles, recommendations for peers, annexes, and bibliographic references. Teachers used the template both as a planning tool and as a documentation framework, enabling them to translate their classroom practice into well-structured lesson plans that could be tested during the *Community as a Classroom* project and shared, adapted, and promoted by other educators.

Authors: name, school, country. Please mention here the name/ names of the author, the country and the school if this lesson plan was tested/ applied during the Community as a classroom project.

Title of the lesson: Please indicate the title of the lesson or of the activity in a short description.

Subject/ discipline: Please indicate under which subject/ discipline the activity/ the lesson can be used. It can be used in more than one subject/ discipline.

Target group/ age group: Please indicate for what age group the activity can be used. You can choose more age groups if appropriate.

- 8-10 years old
- 11-13 years old
- 14-16 years old
- 17-19 years old

Level of complexity:

- Integrated place-based unit with service learning, strong community partnership (high complexity)

- Unit designed to take advantage of place, community partnerships formed
- Lessons designed to incorporate local experiences or applications within existing units
- Lessons designed to incorporate local examples within existing units.

Learning objectives:

Please describe the learning objective relevant for the activity or lesson plan. Use K - to describe knowledge related objectives, A- for describing abilities related objectives, V- for values or attitudes related objectives. You can see some examples below.

At the end of this activity/ lesson students will be capable to:

- (K) - to list 3 natural phenomena....
- (A) - to calculate the distance from ...
- (V) - to show accountability towards ...

Concepts and definitions

Please describe- if the case- new concepts, definitions, notions necessary for applying this activity thorough bullet points below, for e.g:

o Concept 1/ definition- for e.g. Natural phenomena definition

o Concept 2/ definition- for e.g. accountability

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
1. Activity 1 (name)	Energizer	5 minutes	Not required
2. Activity 2	Group work	10 minutes	Flipchart papers
3. Activity 3	Simulation exercise	40 minutes	String, 2 rocks
4. Closing and reflection		5 minutes	
Total time estimated: 60 minutes			

Teacher or facilitators' note: Please describe here any note that is relevant for other teachers when starting to describe this lesson plan or list of activities.

Description of each activity:

1. Activity 1 name (time allocated in minutes)

Aim of the activity: describe in 1-2 lines what is the aim/ objective of this activity.

Preparation of the activity: describe what it needs to be prepared by the teacher/ facilitator before the activity starts.

Facilitation of the activity: please describe in detail the activity so any teacher will understand the steps, process, tasks, roles, etc.

Debriefing questions: please describe with bullet points what debriefing questions are recommended to for this activity to reach the learning objectives

PBL Principles: please describe in 1-3 lines/ principle how the above activities reach through.

Recommendations for teachers: Please describe any recommendation that would be useful to other teachers.

Annexes: please list by bullet point any annex relevant for this lesson plan for example - if the case.

- Annex 1 (name)
- Annex 2 (name)

Bibliography: please describe bibliography used for designing this lesson plan

- Material 1
- Material 2

2. Place Based Learning Lesson Plans

This brochure brings together a selection of lesson plans based on the Place-Based Learning (PBL) methodology, developed by teachers involved in the Community as a Classroom project. The lesson plans are organized progressively according to their level of complexity and illustrate different ways in which place, community, and real-life experiences can be integrated into the learning process—from simple local examples used in the classroom to complex service-learning units developed in strong partnership with the community.

This structure supports teachers in selecting and adapting activities according to their experience, the school context, and students' needs. Together, these lesson plans offer a coherent, gradual, and practical pathway for implementing Place-Based Learning in schools.





Level 1 of complexity: Lessons designed to incorporate local examples within existing units.

Localiser dans l'espace

LESSON 1



Author: Rodica Arapu, "Liviu Rebreanu" National College, Bistrița, Bistrița-Năsăud County, Romania

Subject/discipline: **French Language**

Target group/age group: **11-13 years old**

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain and correctly use key terms related to spatial localization.
- (A) - to locate and identify objects in space by using appropriate prepositions and by deducing the meaning of new terms through analogy (Romanian-French).
- (V) - to demonstrate clarity and attentiveness when giving and following directions for locating objects in space.

Concepts and definitions

Concept 1 / definition - To locate = to determine the location of an object or person

Activity outline/description of the lesson plan

Activities	Methods used	Duration	Supplies/resources
1. Activity 1: Où est mon livre?	Learning through discovery	20 minutes	A particular book, a table, shelves with books from the library
2. Activity 2: À vous maintenant!	The didactic game	10 minutes	A particular book, a table, a purse
3. Activity 3: Le domino des livres	Team work	15 minutes	27 favorite books, with pictures on the cover 1
4. Closure and reflection		5 minutes	
Estimated total time: 50 minutes			

Teacher or facilitator's notes:

The lesson takes place in a school library room, with shelves full of books, so it is important that the reference book, which you will gradually place in various places, is easy to identify even by students who are seated further away from the space where the location actions will be carried out - a larger than average book / a very thick book / a book with a more brightly colored cover, etc.

Description of each activity:

Activity 1: Où est mon livre? (20 minutes)

Aim of the activity: Learning the main prepositions used to locate in space.

Preparation of the activity: The room is prepared, with the chairs arranged in a semicircle, facing the space where the landmark book will be placed.

Facilitation of the activity: One by one, the teacher places the reference book as follows:

- on a shelf with books (*sur un rayon de livres*);
- under a smaller book (*sous un livre plus petit*);
- between two thick books (*entre deux gros livres*);
- in another book (*dans un autre livre*);
- next to a book of the same color / size (*à côté d'un livre ayant la même couleur / dimension*);
- behind/in front of storybooks (*derrière / devant des livres de contes*);
- on the right / on the left of a dictionary (*à droite / à gauche d'un dictionnaire*);
- below / above a stack of books (*au-dessous de / au-dessus d'un tas de livres*).

Each time, the teacher explains in French where he positioned the book, repeating the term used to situate in space 2-3 times.

Activity 2: À vous maintenant! (10 minute)

Aim of the activity: Students practice formulating directions necessary for location in space using specialized prepositions.

Preparation of the activity: The table that will be the central place for the activity is being prepared. A roomy ladies' bag will also be placed on this table.

Facilitation of the activity: 2-3 volunteer students will be identified who will ask their classmates to place the reference book in relation to the table and the lady's bag. The game facilitators will have the freedom to ask any classmate to position the

reference book according to the instructions given by them. Thus, each time, they will work in tandem: facilitator + executor.

Indications such as:

- Put the book on the table = Mets le livre sur la table / under the table = sous la table / in front of the bag = devant le sac / behind the bag = derrière le sac / in the bag = dans le sac / to the right of the bag = à droite du sac / to the left of the bag = à gauche du sac / etc.

Debriefing questions

- How easy or difficult did you find it to formulate the directions using the correct prepositions?
- What helped you better understand the positioning of objects in space?
- How do you think this activity will help you orient yourself and give directions in real situations?

Activity 3: Le domino des livres (15 minutes)

Aim of the activity: The location of an object in space based on visual landmarks.

Preparation of the activity: Students were notified in advance to bring a favorite book for the current French class, the cover of which must contain images.

You need a free table large enough to fit 27 books on it (corresponding to the number of students in the class).

Facilitation of the activity: Students will have to arrange their favorite books in the shape of a domino, the binder being made up of the common points identified between their book and the previous one in the row based on the images on the cover. The domino will have as the first piece the book of the youngest student in the class. Before placing it on the table, as close to the edge as possible, he will show his classmates his book, the image being the key point that will be taken into account when adding the next piece. One by one, inspired by the illustrations seen, all the students will find a suitable place for their favorite book in the domino assembly. At this stage, the students are asked to say out loud (even in Romanian, if necessary) what the common points identified are.

Debriefing questions

Examples:

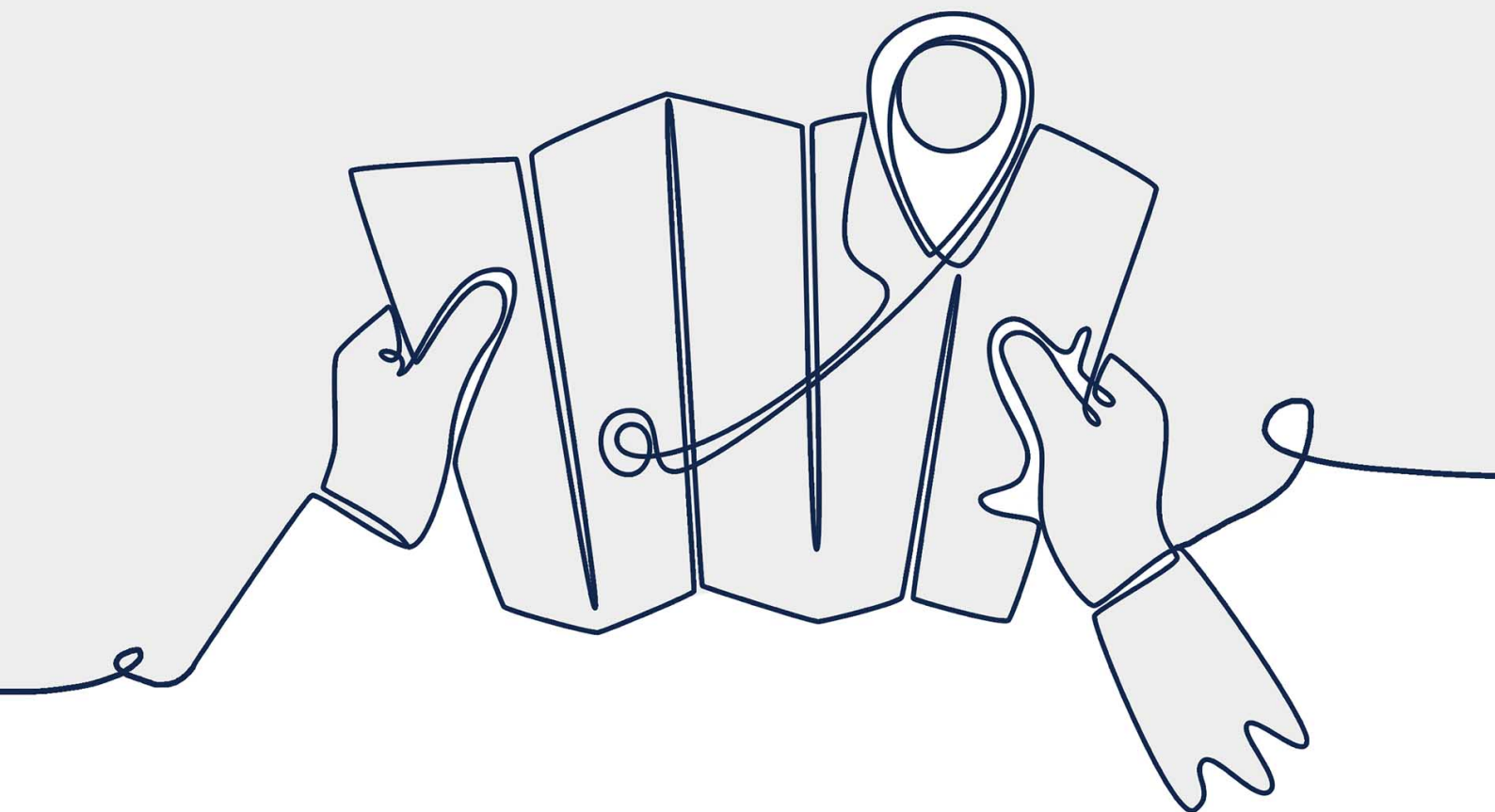
- I'm looking for a yellow book, with a black title = Je cherche un livre jaune, avec un titre en noir.
- I'm looking for a little girl who is next to a big tree. = Je cherche une fillette qui se trouve à côté d'un grand sapin.
- I'm looking for a puppy playing in a yard = Je cherche un petit chien qui joue dans une cour.

Recommendations for teachers: I recommend active involvement in the lesson, especially for students who show little interest in the subject during classical classes, either due to lack of motivation or due to special educational needs. The biggest surprise was given to me by a little girl registered with a SEN (Special Educational Needs) certificate, who, up to now, knows only one lesson completely: Locating in space.



**Tell me where you live and I will
tell you...**

LESSON 2



Authors: Michal Bodnár, Viera Dudáš, Hana Laktičová, Private Gymnasium Dneperská 1, Košice, Slovakia

Subject/ discipline: **Physical education and sports, geography, Slovak language and literature.** Interdisciplinary connections: civics, history, mathematics, computer science.

Target group/ age group: **11-13 years old, 14-16 years old**

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the concept of urbanonym and its role in reflecting the historical and present identity of a community.
- (A) - to investigate and use information about local urbanonyms in practical tasks such as mapping, describing, and presenting findings.
- (V) - to demonstrate appreciation and responsibility toward local heritage by recognizing the importance of urbanonyms in preserving community memory.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
1. Activity 1 (Mapping the streets in our city district)	Group work	150 minutes	notepad, list of streets
2. Activity 2 (How the streets in our city district got their names)	Group work	90 minutes	paper, markers, pictures
3. Closing and reflection		20 minutes	
Total time estimated: 260 minutes			

Teacher or facilitators' note: PBL can be implemented as a full-day program, or as 2-3 teaching hours (1 teaching hour lasting 45 min) in the chosen subject.

Tell me where you live and I will tell you what historical, social, political-legal, cultural, or other aspects of development are associated with the place where you live. All this is hidden in the usually unusual name of a public space, street, square, city district, or housing estate, in a word, urbanonym. We are not aware of its added information value of the past and its orientation value of the present. How did the names of streets or other public spaces in your community come about? Who decides on their designation and how? Is this designation sufficient? What places does your community use most often for orientation in the terrain? Who from your community relies on the names of streets or other public spaces for orientation in the terrain? We tried to find answers to these and similar questions through the activities implemented by our school community as a natural part of the community of the city district in which our school is located.

Despite the fact that it is teaching outside the traditionally established framework, the initial concerns of our teachers were dispelled by the satisfaction of the students stemming from the close connection of the seemingly intangible theory with the familiar tangible practice. After these activities, we can say that communication and cooperation between teachers will improve and, of course, it will also strengthen the team spirit of our school community.

Activity 1: Mapping the streets in our city district (150 minutes)

Aim of the activity: To engage students in exploring and documenting their local streets through physical movement and observation, while collecting real data that connects geography and physical education with practical, place-based learning.

Preparation of the activity: Before the activity, the teacher selects and clearly defines the community area to be explored and prepares a list of streets to be mapped. The class is divided into small teams (around 5 students per team), and each team is assigned a specific zone. The teacher prepares observation guidelines, simple data-recording tables (street name, number of gates, apartments, floors, bells, steps, route length), and ensures students have notepads, pens, and devices for taking photos. Safety rules, walking routes, time limits, and behavior expectations in public spaces are explained in advance.

Facilitation of the activity: The teacher begins by explaining the purpose of the activity and what types of information students will observe and record during the walk. Each team receives its assigned streets and recording tools. Students walk

through their area together, observing and documenting street name signs, counting building details (gates, floors, apartments, bells), and taking photos as evidence. One student may record data, another take photos, and others count or track steps and route length. The teacher supervises the groups, supports data collection, and ensures safety. At the end of the walk, teams organize their findings into tables and sketch or mark the route they walked on a map, preparing the data for later use and analysis in class.

Activity 2: How the streets in our city district got their names (90 minutes)

Aim of the activity: The aim of this activity is to help students understand how street names are created, their linguistic structure and meaning, and how they reflect local history, geography, and culture, while developing language analysis, critical thinking, and collaboration skills.

Preparation of the activity: Before the lesson, the teacher selects and prepares a list of streets from the Košice city district of Nad jazerom. The teacher also prepares materials such as paper, markers, images, and visual examples of street names. Journalistic and informational texts about the creation of street names are selected and adapted for didactic purposes, including the following sources:

- <https://www.bratiskavenoviny.sk/samosprava/43126-vedeli-ste-ako-dostavaju-ulice-nove-nazvyhttps://www.vssr.sk/clanok-z-titulky/vytvaranie-nazvov-ulic-v-obciach-a-mestach-2.htm>
- <https://myhornanitra.sme.sk/c/20169547/ulice-nesu-aj-mena-po-osobnostiach-niektore-vyvolili-diskusie.htmlhttps://www.teraz.sk/magazin/slovenske-ulice-nesmu-niest-komercne-han/322787-clanok.html>
- <https://jazykovaporadna.sme.sk/q/8302/>

The teacher plans the group organization (teams of 5-6 students), prepares clear instructions for each task, and defines the final product: a collaborative "picture street map" of the selected district.

Facilitation of the activity: The teacher begins by introducing the concept of street names (urbanonyms) and explaining their linguistic, cultural, and social importance. Students are divided into teams of 5-6 members. Each team receives instructions outlining their focus areas: creating a language-based map of streets in the Košice city district of Nad jazerom, analyzing how street names are formed, and identifying spelling and word-formation rules.

Students research the lexical meaning of the original words from which street names are derived (e.g. mountain ranges, rivers, historical personalities) and present this information visually, making connections with geography and history. They identify the word-forming processes used in naming streets (derivation, compounding, etc.) and analyze spelling rules for proper names. Using the provided journalistic texts (links above), students select and synthesize key information about how street names are created in Slovak cities and municipalities.

Each group formulates spelling rules and proposes general principles that should apply when creating street names. Finally, all teams collaborate to create a common class "picture street map" that visually represents selected streets, their meanings, and naming principles. The teacher supports group work, facilitates discussion, and ensures coherence between linguistic analysis and the final visual output.

Debriefing questions

- What types of meanings and themes are most common in the street names of your district?
- How do linguistic rules (word formation and spelling) influence the way street names are created?
- What new connections did you discover between language, history, and geography?
- Why is it important to have clear rules and criteria when naming streets?
- How did teamwork contribute to the quality of the final "picture street map"?

Activity 3: Closing and Reflection (20 minutes)

Aim of the activity: The aim of this activity is to consolidate students' learning by reflecting on the collected data, the meaning of urbanonyms, and the connection between place, identity, and community, while encouraging critical thinking and personal engagement.

Preparation of the activity: Before the activity, the teacher prepares a space for discussion (classroom seating in a circle or semicircle), ensures that students have

access to their outputs from Activities 1 and 2 (tables, maps, photos, picture street map), and prepares guiding reflection questions. Optional materials include sticky notes or a flipchart for recording key ideas.

Facilitation of the activity: The teacher initiates a guided reflection session, inviting students to share their experiences from mapping streets and analyzing street names. Students discuss what they discovered about their neighborhood, how theory connected with practice, and how working outside the classroom influenced their learning. Groups briefly present key insights or surprising findings from their work. The teacher helps synthesize ideas, highlighting links between geography, language, history, and civic identity, and encourages students to reflect on the value of urbanonyms as carriers of local memory and meaning.

Debriefing questions

- What did you learn about your community that you did not know before this lesson?
- How did working in the field help you understand the concept of urbanonyms better?
- Which street name or story impressed you the most, and why?
- How do street names help preserve local history and identity?
- What skills did you use or develop during these activities (e.g. teamwork, observation, analysis)?

PBL Principles:

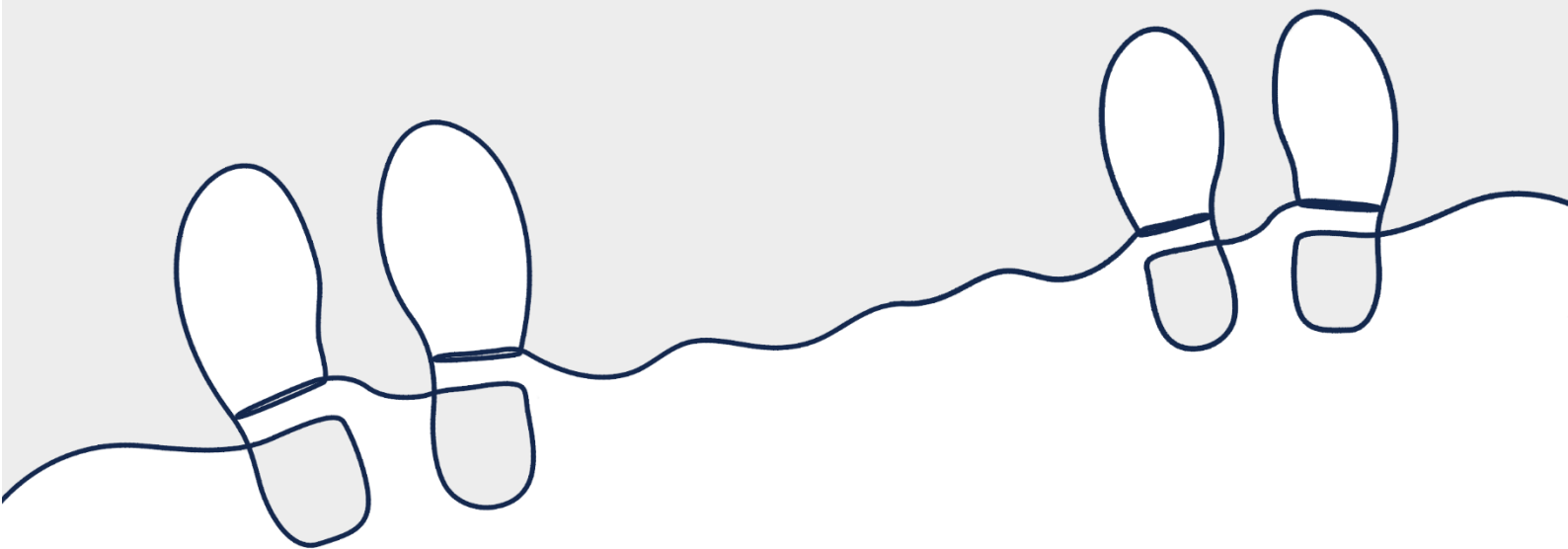
- **On-site learning:** The first part of the lesson takes place outdoors, with students exploring the school surroundings from different perspectives.
- **Learning about the place:** Students discover and learn about the city district surrounding their school.
- **Learning through the place:** By analyzing street names, students learn about the geographical, historical, natural, and cultural phenomena that streets are named after.
- **Place attachment:** Through direct contact with the place, students strengthen their sense of local identity.

- **Personal relevance:** Students form an emotional connection to the place where they live and realize how geographical and historical knowledge relates to their own lives and local development. They express their views on the city's future.
- **Community partnership:** Local history enthusiasts from Mikulczyce, representatives of nature conservation associations, or employees of the municipal monument conservation office can take part in the activities. Their knowledge enriches the learning process, and working with them teaches students about dialogue between academic knowledge and social practice.
- **Interdisciplinarity:** The project combines elements of geography, biology, history, and language arts. Students use tools from various fields: they analyze vegetation (biology), document and interpret space (art, IT), describe their observations (language arts), and research the historical and social context (history, civics).
- **Cooperation:** The work is done in teams-students divide roles (photographers, naturalists, historians, documentarians). They develop conclusions together and present the results in a class or school forum. Collaboration teaches communication, planning, and responsibility for a shared outcome.



Useful physical quantities in translational motion

LESSON 3



Author: Marti Georgiana, "Liviu Rebreanu" National College, Bistrița, Bistrița Năsăud County, Romania

Subject/discipline: **Physics**

Target group/age group: **11-13 years old**

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to describe appropriate methods and tools for collecting, organizing, and interpreting scientific data.
- (A) - to collect, organize, and interpret experimental or theoretical data, presenting the results in suitable formats.
- (V) - to demonstrate scientific rigor, responsibility, and intellectual honesty in data analysis and presentation, while collaborating respectfully with peers.

Concepts and definitions

The concepts of the previous lesson are recapitulated:

- Definition of translational motion and examples are given
- Definition of average speed, formula and unit of measurement
- Calculating errors (grade 6)

Activity outline/description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
1. Activity 1: Calibration one's own pace	Learning through experimentation in small group	20 minutes	Tape measure, chalk and worksheet
2. Activity 2: Determining the length and width of the football field	Individual experimental investigation	10 minutes	Computer

3. Activity 3: Calculating the average speed of travel	conversation	10 minutes	Stopwatch, calculator and solved worksheet
4. Closure and reflection	conversation	5 minutes	
Estimated total time: 50 minutes			

Teacher or facilitator's notes:

It is very important to ensure that the space chosen is the most suitable, that the instruments are in perfect working order, that the students already know how to use the tape measure in the desired measurements, and that the atmospheric conditions are favorable for the lesson.

Description of each activity:

Activity 1: Calibrating your own pace (20 minutes)

Aim of the activity: How do we build a measurement standard?

Preparing the activity: students are divided into groups of two, are equipped with the necessary tools, and choose their horizontal work surface (in the school yard).

Facilitation of the activity:

What needs to be done is briefly explained, and students follow the steps described in the worksheet exactly.

- Find a horizontal surface in the schoolyard that you can move on in a straight line;
- On a previously measured/established distance d (a running track with markings can be used), the steps n necessary to cover this $>$ distance are counted;
- The step length will be $L = d/n$;
- Complete the table below; (rounded to 2 decimal places)

No. of details	d(m)	n	L(m)	Itaverage (m)	$\Delta L(m)$	$\Delta laverage (m)$

The length of your stride will be: $L = L_{\text{mean}} \pm \Delta L_{\text{mean}} = \text{_____}(m)$

Teacher or facilitators' note: It is very important that the distance chosen by each person is greater than 10 m in order to be able to count the steps necessary to cover this distance, so that this number is a whole number.

Activity 2: Determining the length and width of the football field (10 minutes)

Aim of the activity: To use the length of one's own stride in determining the length and width of the soccer field.

Preparing the activity: No additional preparation required.

Facilitation of the activity:

- The area of the sports field where each student will carry out their activity is chosen so that students do not disturb each other.
- The steps needed to cover the length and width of the football field are counted.
- Use the length of your stride determined in the previous activity and by multiplying it by the number of steps obtained, determine the length and width of the football field.
- Finally, students compare the results obtained with each other and discuss possible sources of error due to which the results differ.

Activity 3: Calculating average travel speed (10 minutes)

Aim of the activity: Application of the results obtained in determining a very important physical quantity (average velocity) for translational motion.

Preparing the activity: It does not require prior preparation.

Facilitation of the activity: Before starting activity 2, students are told to use a stopwatch to measure the time it takes to walk the length and width of the football field. Then, they follow the steps below, also explained in the worksheet:

- Time the time it takes to cover the length of the field Δt (try to walk at the same pace); $\Delta t = \underline{\hspace{2cm}}$ (s)
- Calculate the distance traveled $l_1 = n \cdot L$; $l_1 = \underline{\hspace{2cm}}$ (m)
- Calculate the average speed $v_m = l_1 / \Delta t$ (m/s); $v_m = \underline{\hspace{2cm}}$ (m/s)

Teacher or facilitators' note: It is very possible to exceed the allotted time, for various reasons, so students will do the above calculations as homework.

Debriefing questions

- What did I learn today?
- How important is teamwork and accurate understanding of the instructions given by the teacher?
- How do we organize ourselves so that our work is as efficient as possible?
- How do we choose the most suitable space for our experiment?
- Are there differences between teamwork in the lab and outdoors? What challenges might we face outdoors?

Recommendations for teachers: I recommend active involvement in the lesson, especially for students who show little interest in the subject during regular classes, either due to lack of motivation or due to special educational needs.

Annex: Worksheet used: Useful physical quantities in translational motion - experimental session



Level 2 of complexity: Lessons designed to incorporate local experiences or applications within existing units

Understanding the nature and the biodiversity around our community and their impact on the development of a sustainable community: Education, Environment, Evolution

LESSON 4



Authors: Alexandra Tieanu-Koppandi, Anița Milea, Liana Berengea, Raluca Erhu Roșiută, Bogdan Foloba, „Sava Popovici Barcianu" Secondary School, Rășinari, Sibiu County, Romania

Subjects/ disciplines: **Physical Education, Biology, Physics, Chemistry, Romanian Language**

Target group/ age group: **8-10 years old, 11-13 years old**

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain how selected biological, mechanical, or thermal processes function.
- (A) - to calculate time and speed in order to determine the distance covered in practical situations.
- (V) - to demonstrate respect and awareness toward the natural environment when analyzing real-life phenomena.

Concepts and definitions

Respiration in plants: a process through which the plants take in oxygen in order to use the sugars made and turn them into energy, by means of photosynthesis, needed for growing, reproduction, and other processes.

Speed: the rate at which someone or something moves or operates or is able to move or operate.

Duration: the length of time that something lasts

Temperature: a physical quantity that expresses the attribute of hotness or coldness.

Orientation in space: the action of orienting someone or something relative to the points of a compass or other specified positions.

Activity outline/ description of the lesson plan

Activities	Methods used	Du ration	Supplies/ resources
1. Activity 1: hiking outdoors for a healthy lifestyle	Team work	30 minutes	Own water bottle, own hiking shoes
2. Activity 2: the Living Nature around us	Group work	20 minutes	Magnifiers, paper cups, phone app (PlantNet), worksheets
3. Activity 3: Mechanical Processes around us	Group work, experiment	20 minutes	Timer, measuring roulettes
4. Activity 4: The Impact of Temperature on the Environment	Group work, Experiment, Brainstorming	20 minutes	Thermometers, measuring roulettes, compasses
5. Activity 5: Orienteering	Group work	20 minutes	Compasses, mobile phones, Journal, pencils
6. Activity 6: Connecting yourself to Nature	Brainstorming, creative writing	20 minutes	Journal
7. Closing and reflection	Feedback sheet	10 minutes	Journal, worksheet
Total time estimated: 140 minutes			

Teacher or facilitators' note: The activities will take place outdoors and will involve the students working in groups (3-4 students in each group). Each group will be given the resources needed for all activities at the beginning.

Description of each activity:

Activity 1: Hiking outdoors for a healthy lifestyle (30 minutes)

Aim of the activity: This activity is aimed at raising awareness among students about the benefits of sports and physical movement for their wellbeing. The students will learn about how sports outdoors (in the form of a hike) can improve their health and help them assess their own fitness by measuring the time needed for the hike and the effort they considered they have made during the hike.

Preparation of the activity: At the beginning of the activity, you must ensure that students are equipped for a hike with water bottles, hiking clothes and shoes, head and sun protection, etc. You must also clarify the rules for outdoor trips, i.e. the need to respect the marked pathways, to hydrate properly, to respect the environment around, and to stay with the group.

Facilitation of the activity: At the beginning of the activity, you will split the students into groups and you will explain the task of the activity. In each group, the students will have to write the start time for each member. While the students are hiking, you monitor and reinforce that they should stay with their group.

At the end, each group will write the arrival time for each member and they will assess their own effort during the hike.

Debriefing questions

- How can sports improve our health?
- Are there differences between sports indoors and sports outdoors?
- How long did it take for each member of the group to cover this distance?
- How much effort do you consider it took you?

Activity 2: The living nature around us (20 minutes)

Aim of the activity: The aim of this activity is to identify different types of plants and animals from the local ecosystem, as well as parts of plant/animal body used in the process of respiration.

Preparation of the activity: You will give each group (using the same groups from the previous activity) a set of resources that they will need for this activity and the following ones. You will also hand the students a worksheet that they will have to

work on in order to discover and study different plants and animals. You will also check that each group has a working phone with the app for identifying plants installed.

Facilitation of the activity: The students will work in groups in order to identify plants and animals in their local ecosystem, using the magnifiers and the paper cups they have. The students will have a list of items to find and study (see the worksheet in Annexes), using the magnifier and taking photos in order to show their progress. They can also use a paper cup to collect vegetal items in order to study them up close.

Then, the students will have to study the respiration in plants by choosing a certain plant or tree around them and detailing how the process functions.

Afterwards, the students can study an insect (e.g. ants) by using the magnifier: they can collect the insect in the paper cup and study it using the magnifier in order to then calculate the scales in real life and enlarged.

At the end, the students will write in their journals a way through which the natural environment can help the human communities.

Debriefing questions

- Can you name any plants and animals from around us?
- Can you find the items on this list? You can use the magnifier and the phone app to help you.
- How do plants breathe?
- Can you describe how a plant breathes?
- Can you find an insect and calculate how big/small it is in real life and how big it looks through a magnifier?
- How are the plants and animals around us important for us?

Activity 3: Mechanical Processes around us (20 minutes)

Aim of the activity: The aim of this activity is to study how certain mechanical processes work, using their own bodies and their physical movement in space. The students will calculate their own speed and the speed needed to cover certain distances in a certain time by conducting experiments in their groups.

Preparation of the activity: The students will use resources handed in in the previous activities, as well as information collected during the hike. They will also

need to use formulas learnt in physics so you will have to remind them the correct ones by either telling them, or writing them down on large cards for them to refer to during the activity. Also, they will also need to know the distance they covered and you could provide them with this by using the GPS app on your phone or Google Maps.

Facilitation of the activity: First, the students will use the information collected during the hike in order to calculate the speed each member of their group had. They will use the start time and the arrival time they wrote down in their journals at the beginning and end of the hike in order to calculate the time they needed to cover the distance. Then, in their groups, they will calculate the speed each member had by using the duration in time and the distance you have previously provided them with.

Second, each group will have the task to calculate distances between different natural landmarks around them (trees, rocks, streams, etc.) and the time each member needs to cover them. Then they will calculate each member's speed when covering the same distance. In order to make it more competitive, you can ask each group to change the duration in covering the same distance in order to see how the speed fluctuates. In order to keep the activity under control and to avoid the groups disturbing each other, each group can be set a certain natural landmark in order for the students to be monitored easily.

At the end, the students will write in their journals their predictions about how long the return hike will take and what their speed will be. They will check all these when they arrive back at school in order to see if they were correct.

Debriefing questions

- How long did it take you to cover the distance?
- What was your speed during the hike?
- What is the distance between ... and ...? How long does it take you to cover this distance? What was your speed?
- What is your speed when the duration is ...? How about ...? What does that mean?
- How long do you think it will take you to get back to school?

Activity 4: The Impact of Temperature on the Environment (20 minutes)

Aim of the activity: The aim of this activity is to study how temperatures can influence the natural environment around them.

Preparation of the activity: The students will use resources handed in in the previous activities, as well as information collected during the hike. They will also need to know the temperature at the beginning of the hike, when leaving the school, and, therefore, you should check the outdoor temperature using a thermometer.

Facilitation of the activity: First, the students will use the information you give them about the temperature outdoors at the beginning of the hike. Then they will work in their groups to measure the temperature using the thermometer in order to calculate if it has gone up or down in the time it has passed. They will have to discuss in their groups 2-3 reasons why the temperature has changed.

Second, each group will have the task to calculate the length of the shade produced by a certain person or a natural landmark (tree, plant, rock, etc.) They can also use the compass to check to which cardinal point the shade points at that time of day. In order to keep the activity under control and to avoid the groups disturbing each other, each group can set a certain natural landmark in order for the students to be monitored easily.

At the end, the students will write in their journals their reflections and they will draw in their journals the shade the sun produces for a certain natural landmark, by respecting the proportions they measured.

Debriefing questions

- What is the temperature now?
- How much did the temperature rise or drop?
- Why do you think the temperature changed?
- How long/big is the shade produced by the sun in the case of ...?
- Can you draw a natural landmark and its shade?
- How does temperature affect climate change locally and globally?
- How do people affect the environment and climate change?

Activity 5: Orienteering (20 minutes)

Aim of the activity: The aim of this activity is to help the students develop skills of orienteering using the nature around them to identify cardinal points and using the compass to identify their spatial position and that of their village.

Preparation of the activity: The students will use resources handed in in the previous activities, as well as knowledge about their own village and its surroundings.

Facilitation of the activity: First, the students will use the compass to identify the four cardinal points and then in their group they will brainstorm other methods to determine spatial awareness by using the nature around them (e.g. the sun, the moss on trees, etc.). They will then share their ideas with everyone and discuss the possibilities.

Second, the groups will have to solve certain tasks by discussing and working together: identifying where the village is in relation to their current position (e.g. West of them), identifying where the closest villages are in relation to their current position (e.g. the ski resort), identifying certain local landmarks are in relation to their current position (e.g. the school, the town hall, etc.).

At the end, the students will draw in their journals or on paper a basic map of the place and the landmarks they identified in the previous stage.

Debriefing questions

- Where is North/South/East/West?
- Can we use other ways to find the North if we don't have a compass?
- Can you identify where ... is in relation to where we are now?
- Can you draw a map of this place with all the landmarks you identified?

Activity 6: Connecting yourself to nature (20 minutes)

Aim of the activity: The aim of this activity is to help the students connect to the nature around them and to use their senses in order to take in the things they see, feel, smell, or experience around them.

Preparation of the activity: The students will need encouragement from you in order to be creative and express their own ideas and feelings without fear of what their peers might think.

Facilitation of the activity: First, ask your students to sit down (if possible) and to close their eyes in order to take in the nature around them. Then, ask them to open their eyes and to look around them and then to make a list in their journals of 10 things they can see, smell, or feel around them. Ask your students to read aloud their lists. Then ask your students to write down 2-3 feelings they experience at the moment or have experienced during the activities, but without sharing them with the rest this time.

Second, ask your students to work alone and to create a poem or a short description using the words and feelings they wrote down previously.

At the end, they can read what they wrote and they can give each other feedback.

Debriefing questions

- What can you see/smell/feel around you?
- How do you feel now? Or how have you felt during the activities?
- Can you be creative and use all these words to write something personal?
- Why is it important to connect yourself with nature? Can you imagine a world where this is not possible?

Activity 7. Closing and reflection (10 minutes)

Debriefing questions

- How would you describe your overall experience in this project, and which moment felt the most valuable to you?
- In what ways do you think your effort and involvement contributed to the final outcome of the team?
- What did you learn about teamwork and sharing responsibilities throughout the activities?

- Which of the activities was the most relevant to your personal interests and why?
- If you were to repeat this project, what would you do differently to be more effective or to improve collaboration within the team?

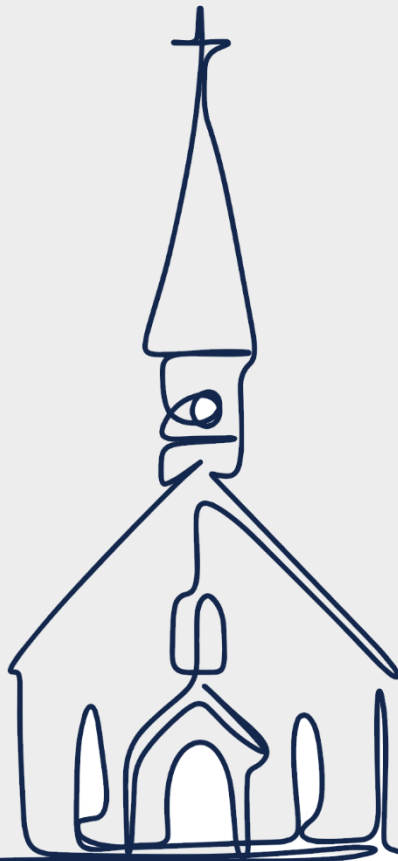
Recommendations for teachers: Teachers should plan in advance the route taken in order not to have delays or encounter obstacles on the hike. The weather forecast should also be checked in advance in order for the activity to run as planned.

The activities can be adapted if students notice things on the way (man-made or caused by weather) in order to explain how they were created and how they can influence nature and the human community.



Promoting the Sânpetru Community

LESSON 5



Authors: Hampu Raluca Georgiana, Pirneci Ion-David, Toadere Daniel Mihail, Sânpetru Secondary School, Sânpetru Commune, Braşov County, Romania.

Subject/ discipline: **Physical Education and Sports, History, and Religion.**

Target group/ age group: **11-13 years old**

Learning objectives:

At the end of these lessons, students will be able to:

- (K) - to describe the main tourist attractions, traditions, and natural heritage of the Sânpetru community, explaining their significance.
- (A) - to design a coherent tourist product (map, route, and guide) by analyzing information, calculating distances, and organizing collected data.
- (V) - to demonstrate respect, civic responsibility, and teamwork in promoting the local community and its heritage.

Concepts and definitions:

Tourist Attraction - a natural, historical, cultural, or constructed site that holds public interest value and is visited by people for recreational, educational, or research purposes, contributing to the development of local identity and boosting the community's economy (examples: Lempeş Hill, the three churches, Heroes' Monument, etc.);

Local Tradition - a set of customs, practices, beliefs, and cultural expressions passed down from generation to generation within a community, forming a defining element of its socio-cultural identity;

Folk Custom - a collective, ritual, or festive manifestation specific to a community, reflecting values, beliefs, and norms passed on through repetitive practices, playing a role in strengthening social cohesion and cultural continuity (examples: weddings, the Lole Run, etc.);

Nature Reserve - a geographically defined area protected by specific legal acts, aimed at conserving biodiversity, natural ecosystems, as well as natural landscape elements with scientific, educational, and recreational value;

Interview - a qualitative research technique involving a planned and structured dialogue between an interviewer and a respondent, with the aim of obtaining data, opinions, or relevant accounts for analyzing a subject of interest, in an educational, journalistic, or scientific context;

Tourist Guide - an informative material, printed or digital, created to provide visitors with structured information about tourist attractions, routes, services, and rules of conduct, contributing to their orientation, education, and responsibility regarding the visited destination;

Tourist Map - a specialized cartographic tool that graphically represents, in an accessible form, the placement of tourist attractions, routes, and logistical support points, facilitating visit planning and efficient navigation in the studied geographical area;

Local Identity - a complex socio-cultural concept that refers to the set of values, traditions, symbols, and practices that distinguish a community from other groups, defining its members' sense of belonging and contributing to its cohesion and recognition in a regional or national context.

Activity outline/ description of the lesson plan - First Lesson

Activities	Methods used	Duration	Supplies/ resources
1. Energizing exercises	Physical exercises	10 minutes	-
2. Visiting tourist attractions	Conversation, discovery learning, interview, and teamwork	40 minutes	Flip-chart, pens, mobile phones
3. Ending the activity	Reflective questions and concept map	20 minutes	Flip-chart, pens, mobile phones
Total time estimated: 70 minutes			

Description of each activity:

Activity 1 Energizing Exercises (10 minutes)

Aim of the activity: The aim of the activity is to energize students physically and mentally while introducing key local landmarks and fostering curiosity and attachment to their community through simulated movement and exploration.

Preparation of the activity: You prepare an open and safe space for movement, either in the classroom or outdoors. You plan a simple symbolic tourist route in Sânpetru, selecting several local landmarks to be included as "stations" during the activity and preparing short guiding questions for each stop.

Facilitation of the activity: You begin by explaining that students will take part in an energizing activity that simulates a tourist route through their community. Students line up in a column and start moving through light jogging or brisk walking, following the imaginary route from one landmark to another (for example, from the school to the Fortified Church, then to the Heroes' Monument). At each symbolic station, you stop the group and ask brief questions related to the place, encouraging students to share what they already know and what they would like to discover. You keep the pace dynamic and motivating, ensuring all students are actively involved throughout the exercise.

Debriefing questions

- How did moving through the "tourist route" help you think differently about the places in our community?
- Which landmark are you most curious to learn more about and why?
- How did this activity make you feel about being part of this place?

Activity 2 Visiting the Tourist Attractions (40 minutes)

Aim of the activity: The aim of the activity is to help students explore and understand local tourist attractions through direct observation, teamwork, and interaction with community institutions, while developing a sense of responsibility and attachment to their local heritage.

Preparation of the activity: You divide the class into teams of eight students and assign a coordinating teacher to each team. You prepare the learning tasks in the ActionBound app, plan the visiting routes for each team, and ensure permission and scheduling for visits to the churches, the Heroes' Monument, and the Town Hall. You also prepare observation guidelines and discussion prompts to support data collection during the visits.

Facilitation of the activity: You explain the tasks and roles to students before the visit, emphasizing teamwork and active participation. Each team follows its assigned route using the ActionBound app and completes the learning tasks at each tourist attraction. Students observe the sites, discuss their observations with

teammates and the coordinating teacher, and take notes on important aspects such as construction dates, architectural styles, inscriptions, symbols, and local stories. One team conducts an interview with the deputy mayor at the Town Hall. After completing the routes, all teams meet at the second Orthodox church, where students compare the three churches and identify similarities and differences. Throughout the activity, you encourage discussion about the condition of the sites, their historical significance, and the needs of the community, guiding students to propose ideas for preservation and promotion.

Debriefing questions

- What did you discover about the tourist attractions in our community that you did not know before?
- Which place impressed you the most and why?
- What problems or needs did you identify, and how do you think the community could address them?

Activity 3 Closing the activity (20 minutes)

Aim of the activity: The aim of the activity is to guide students in reflecting on their field experience, analyzing discoveries and community needs, and planning concrete actions for creating and promoting a local tourist guide through collaborative and transdisciplinary work.

Preparation of the activity: You plan a suitable outdoor space on Lempeş Hill for the reflective discussion and ensure that observation sheets and ActionBound tasks are completed beforehand. You prepare guiding questions for reflection, feedback criteria (three positive aspects and one aspect for improvement), and outline the next steps needed for developing the tourist guide.

Facilitation of the activity: You gather all students and teachers on Lempeş Hill and initiate a guided reflective discussion about the activities carried out during the visit. One teacher checks the observation sheets and the completion of digital tasks and organizes peer feedback within and between teams. Another teacher leads reflective questioning to help students identify the most impressive attractions, new information learned, community needs, and possible improvements. Students share ideas for promoting the community, such as creating a guide, a tourist map, or a presentation video. A third teacher supports planning future activities by asking students to outline the tasks required for

developing the guide and to take responsibility for coordinating them. The activity concludes with light physical exercises led on the way back to school to maintain engagement and group cohesion.

Debriefing questions

- What did you discover about the community and its tourist attractions during today's activities?
- What do you think is the greatest need of the community and how can we contribute to it?
- How can the information we collected be transformed into useful products for promoting our community?

PBL Principles:

- **On-site learning:** Students learn directly in the real context of the community by simulating routes, visiting churches, monuments, the Town Hall, and reflecting outdoors on Lemeș Hill. Direct presence turns abstract information into concrete, lived experiences.
- **Learning about the place:** Through guided discussions, observation sheets, interviews, and comparison tasks, students discover historical facts, architectural features, local stories, and community needs related to Sânpetru's tourist attractions.
- **Learning through the place:** The visited locations become learning resources: students identify real problems (such as the deteriorated condition of the Heroes' Monument), discuss responsibility toward heritage, and transform observations into ideas for action and promotion.
- **Learning for the place:** The collected information, interviews, and students' proposals are used to create concrete products (tourist guide, map, presentation video) that actively contribute to promoting and preserving the local community.
- **Place attachment:** By exploring, discussing, and proposing improvements for local landmarks, students develop an emotional connection to the community and express a desire to protect and promote its heritage.
- **Personal relevance:** Students relate learning to their own lives through interviews with locals and families, reflection questions, and decision-

making about future activities, realizing that their involvement matters for the community.

- **Active student involvement/participation:** Students work in teams, ask questions, collect data, complete digital tasks, give peer feedback, reflect, and plan future actions, acting as active contributors rather than passive learners.
- **Community partnership:** The activity involves collaboration with local authorities (deputy mayor), community institutions, merchants, and families, strengthening the link between school and community life.
- **Interdisciplinarity:** The lesson integrates geography, history, civic education, communication skills, physical education, and digital competence into a single coherent project focused on the local context.
- **Full-fledged teaching tool:** The activities combine movement, observation, discussion, reflection, digital tools, and creative planning, offering a complete learning experience across multiple curriculum areas.
- **Cooperation:** Teachers collaborate across subjects, and students cooperate within and between teams, sharing feedback, responsibilities, and roles to achieve a common goal.

Recommendations for teachers:

- Encourage students to ask open-ended questions adapted to each interviewee; when necessary, prepare guiding questions in advance.
- Ensure active participation of all students by assigning clear roles (note-taking, photographing, interviewing, presenting).
- Guide discussions so students observe not only what exists, but also what is missing or could be improved in the community.
- Value and use students' ideas related to restoration, commemoration, and preservation of local heritage by discussing them with community institutions.
- Integrate the results of field activities into concrete products such as worksheets, posters, sections of a tourist guide, or digital materials.
- Combine the use of digital tools (e.g., ActionBound) with written reflections and classroom discussions to strengthen reflective thinking and decision-making skills.

- Allocate structured time for feedback, using clear rules (e.g., three positive aspects and one aspect for improvement).
- Clearly plan follow-up activities with specific tasks, responsibilities, and deadlines.
- Use physical movement and outdoor activities to maintain students' attention, motivation, and group cohesion.

Activity outline/ description of the lesson plan - Second Lesson

Activities	Methods used	Duration	Supplies/ resources
1. Energizing exercises	Physical exercises	10 minutes	-
2. Creating the guide and describing the main tourist attractions	Discovery learning, practical application exercise, and conversation	60 minutes	Laptops
3. Ending the activity	Reflective questions, self and peer assessment	20 minutes	Smartboard, laptops, whiteboard, markers
Total time estimated: 90 minutes			

Description of each activity:

Activity 1: Energizing Exercises - "Becoming Local Guides" (10 minutes)

Aim of the activity: The aim of the activity is to energize students and help them step into the role of local tourist guides through movement, role-play, and symbolic representation of community landmarks.

Preparation of the activity: You prepare an open space suitable for movement and briefly recall the tourist attractions previously visited. You plan a set of symbolic movements connected to local sites (church, pheasantry, monuments) and clarify the purpose of the activity to students.

Facilitation of the activity: You guide students through themed physical exercises that combine movement and role-play. Students stretch their arms as if presenting attractions, move in circles to simulate groups of tourists, and imitate pheasant sounds and movements as an introduction to the Pheasantry. Through these actions, students rehearse how a guide moves, speaks, and interacts with visitors, reinforcing their knowledge of local sites in an active and engaging way.

Debriefing questions

- How did acting like a local guide help you remember the places we studied?
- Which movement best helped you recall a tourist attraction?
- How did this activity prepare you for promoting Sânpetru?

Activity 2: Visiting the Tourist Attractions (40 minutes)

Aim of the activity: The aim of the activity is for students to collect real data, stories, and images about the cultural, natural, and social heritage of Sânpetru in order to contribute to the creation of a tourist guide.

Preparation of the activity: You plan the visiting route and ensure access to the Fortified Church, Mesenndorfer Street, the Pheasantry, and the Biemann Guesthouse. You prepare observation guidelines, cameras or phones for documentation, and discussion prompts for interviews with locals.

Facilitation of the activity: Students visit the four key sites and actively gather information. At the Fortified Church, they document history, architecture, and traditions, including the local "Wedding Soup." On Mesenndorfer Street, they record stories about houses and community life. At the Pheasantry, they discuss biodiversity and its importance. At the Biemann Guesthouse, they interview owners about responsible tourism and sustainability practices. Throughout the visit, students take photos, notes, ask questions, and propose ideas for promoting local traditions and sustainable tourism.

Debriefing questions

- What did you learn about Sânpetru that you did not know before?
- Which site do you think should be highlighted most in the guide and

why?

- How can traditions, nature, and tourism be promoted responsibly?

Activity 3: Closing the Activity - Reflection and Planning (20 minutes)

Aim of the activity: The aim of the activity is to reflect on the field experience, synthesize collected information, and organize responsibilities for creating the tourist guide.

Preparation of the activity: You prepare reflection questions, divide students into groups, and plan the use of the board for a concept map. You ensure all notes, photos, and observations from the visit are available.

Facilitation of the activity: Back at school, students reflect on their experience through guided questions. They work in groups on selected questions, then share their ideas, which are organized into a concept map covering tourist attractions, natural heritage, interview insights, recommendations for tourists, and personal reflections. Finally, students set clear responsibilities for writing, illustrating, and editing the future tourist guide, while teachers support coordination and clarity.

Debriefing questions

- Which attraction impressed you the most and why should it appear in the guide?
- What important information from interviews should be included?
- How can our guide help protect and promote Sânpetru?

PBL Principles:

- **On-site learning:** Students learn directly in the community by visiting real locations and collecting authentic data that form the basis of the guide.
- **Learning about the place:** Through observation, interviews, and reflection, students deepen their understanding of Sânpetru's history, traditions, biodiversity, and community life.
- **Learning through the place:** Real issues such as responsible tourism, biodiversity, and climate impact are analyzed and transformed into concrete ideas and messages for the guide.

- **Learning for the place:** The final product-the tourist guide-serves as a useful tool for promoting and protecting the community.
- **Place attachment:** Students develop pride and emotional connection to their village by documenting and promoting its heritage.
- **Personal relevance:** Students see themselves as guides and promoters, understanding their personal role in shaping how their community is perceived.
- **Active student involvement/participation:** Students observe, interview, document, discuss, reflect, and plan, actively contributing ideas and content.
- **Community partnership:** The activity involves interaction with locals, guesthouse owners, and community representatives.
- **Interdisciplinarity:** The lesson integrates physical education, history, geography, biology, civic education, communication, and ICT.
- **Full-fledged teaching tool:** The sequence combines movement, fieldwork, reflection, collaboration, and production of a real outcome.
- **Cooperation:** Students work collaboratively in groups, while teachers coordinate across disciplines.

Recommendations for teachers:

- Structure time clearly for group discussions, synthesis, and planning.
- Encourage participation from all students, including quieter ones.
- Guide students toward clear, concrete formulations suitable for a tourist guide.
- Digitize or photograph concept maps for future reference.
- Help students set realistic and clearly defined responsibilities for follow-up tasks.

Activity outline/ description of the lesson plan - Third Lesson

Activities	Methods used	Duration	Supplies/ resources
1. Energizing exercises	Physical exercises	10 minutes	-

2. Creating the guide and describing the main tourist attractions	Discovery learning, practical application exercise, and conversation	60 minutes	Laptops
3. Ending the activity	Reflective questions, self and peer assessment	20 minutes	Smartboard, laptops, whiteboard, markers
Total time estimated: 90 minutes			

Description of each activity:

Activity 1: Energizing Exercises - Recalling the Tourist Route (10 minutes)

Aim of the activity: The aim of the activity is to activate students physically and emotionally, helping them recall the tourist attractions visited and strengthen their connection with the places to be described in the guide.

Preparation of the activity: You arrange the classroom so students can form a circle and ensure enough space for movement. You prepare a short sequence of symbolic movements connected to the tourist route and landmarks previously visited.

Facilitation of the activity: You guide students through a symbolic recreation of the tourist route. Students move in a circle as if walking along Mesenndorfer Street, raise their hands to "present" the Fortified Church towers, imitate gentle steps and pheasant sounds when "visiting" the Pheasantry, and finally stop at the Biemann Guesthouse, greeting classmates as tourists. During the exercise, you ask students which place they liked most and why, reinforcing recall, attention, and emotional engagement.

Debriefing questions

- Which place was easiest for you to recall during the activity?
- How did movement help you remember details about the attractions?
- Which site are you most excited to describe in the guide?

Activity 2: Creating the Tourist Guide (60 minutes)

Aim of the activity: The aim of the activity is to collaboratively create a complete tourist guide of the Sânpetru community using authentic data collected on site and promoting responsible tourism.

Preparation of the activity: You prepare access to laptops or tablets, ensure internet connection, and introduce the Canva app. You clearly explain the structure of the guide and prepare task descriptions for each team.

Facilitation of the activity: You explain the structure of the guide: a cover image of Sânpetru, a community map with a bicycle route, a student letter promoting the area, and pages dedicated to the main tourist attractions. Students are divided into teams, each responsible for specific sections (general description, churches, Town Hall and Heroes' Monument, activities, Lempeș Hill). Students upload and select photos, write texts based on interviews and observations, and include tips for tourists and examples of responsible behavior. Together with the teacher, students review the content, give feedback, and finalize the guide for coherence and accuracy.

Debriefing questions

- How did working in a team help you complete your section of the guide?
- Which information do you think is most useful for tourists?
- How does the guide encourage visitors to behave responsibly?

Activity 3: Closing the Activity - Final Reflection (20 minutes)

Aim of the activity: The aim of the activity is to reflect on the learning process, evaluate the impact of the guide on the community, and encourage personal commitment to promoting local values.

Preparation of the activity: You arrange the classroom so students can sit in a semicircle and prepare reflective questions on the board or flipchart.

Facilitation of the activity: You invite students to reflect in small groups on the usefulness of the guide, what they discovered about their community, and how they can personally support the guide's messages. The most relevant ideas are

written on a flipchart. Each student completes the sentence: "I want Sânpetru to be known for...". You conclude by discussing future improvements and products that could be created if more time were available.

Debriefing questions

- Which part of the guide do you think will help tourists the most?
- What new things did you discover about Sânpetru?
- How can you personally help promote and protect your community?

PBL Principles:

- **On-site learning:** Although the final work takes place in the classroom, all content is based on direct field observations, interviews, and photos collected in the community.
- **Learning about the place:** Students organize and clarify knowledge about local heritage, traditions, infrastructure, and natural landmarks through structured guide sections.
- **Learning through the place:** Students transform real observations into practical content, recommendations, and messages connected to responsible tourism and climate awareness.
- **Learning for the place:** The tourist guide is a real product with direct value for the community, supporting promotion, education, and heritage protection.
- **Place attachment:** By selecting images, writing texts, and expressing personal preferences, students show pride and emotional connection to Sânpetru.
- **Personal relevance:** Each student contributes directly to the final product, understanding the value of their work for the community and their role as promoters.
- **Active student involvement/participation:** Students write, select images, discuss, argue choices, give feedback, and participate in final editing.
- **Community partnership:** The guide integrates information from locals, guesthouse owners, and local institutions, reflecting a shared school-community effort.

- **Interdisciplinarity:** The activity integrates language and communication, ICT, history, geography, civic education, and visual arts.
- **Full-fledged teaching tool:** The lesson combines movement, digital work, collaboration, reflection, and real-world application.
- **Cooperation:** Students work collaboratively in teams, while teachers guide, coordinate, and support the process.

Recommendations for teachers:

- Clearly explain the structure and expectations for each section of the guide.
- Ensure accuracy by checking facts, local stories, and practical tips.
- Support students in using digital tools creatively and efficiently.
- Encourage critical thinking when selecting images and writing texts.
- Organize peer-feedback sessions to improve quality and coherence.
- Allow sufficient time for creation, editing, and reflection.
- Share the final product with the community (Town Hall, guesthouses, school website).



Philosophy of the place

LESSON 6



Author: Zbîncea Loredana Anca, "Liviu Rebreanu" National College Bistrița, Bistrița Năsăud County, Romania

Subject/discipline: **Philosophy for children**

Target group/age group: **11-13 years old**

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the key characteristics of a community, with a focus on the classroom as a shared social space.
- (A) - to apply the concepts of community, common space, and belonging when describing and designing an ideal classroom environment.
- (V) - to demonstrate openness, attentiveness, and respect in contributing to a harmonious and inclusive classroom community.

Activity outline/description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
Activity 1: What makes a community to be a community?	Initiation game	10 minutes	Post-its, paper colorful, flashcards, marker
Activity 2: The Box Story invisible	Reading and reflection	15 minutes	Sheet: The Invisible Box Story, pens, colored pencils
Activity 3: Classroom ideal	Debate directed	15 minutes	Interactive whiteboard
Activity 4: A word for my class		10 minutes	
Estimated total time: 50 minutes			

Description of each activity:

Activity 1: What Makes a Community a Community? (10 minutes)

Aim of the activity: The aim of this activity is to help students identify and understand the essential elements of a community and to reflect on their own class as a community.

Preparation of the activity: The teacher prepares one card or post-it for each student, a symbolic container ("The Community Basket"), and a marker. The classroom is arranged so students can later sit in a circle.

Facilitation of the activity: The teacher introduces the topic by asking: "We are a classroom. But are we also a community?" and launches the central question: "What makes a group of people a community, not just a group?"

Each student writes one word or a short sentence answering what they think is important for a community (eg. friendship, respect, trust). Students then sit in a circle and, one by one, read their idea aloud and place the card into the Community Basket. The teacher randomly selects several cards and leads a guided discussion based on them, encouraging students to explain meanings and reflect on ideas such as respect, rules, and belonging.

Debriefing questions

- What does "respect" mean to you in a community?
- Can a community exist without rules or without friendship?
- Who decides whether someone belongs to a community?
- Which value seems most important for our class and why?

Activity 2: The Story "The Invisible Box" (15 minutes)

Aim of the activity: The aim of this activity is to help students reflect on belonging, visibility, and emotional safety within a community, while encouraging emotional expression and active listening.

Preparation of the activity: The teacher prepares the text "The Invisible Box" (printed or digital), a real or symbolic box, post-its, and writing tools. The box can be decorated together with the class.

Facilitation of the activity: The teacher reads the story aloud and invites students to pay attention to the emotions described in the text. After reading, a guided

philosophical discussion follows, focusing on why the children used the box, what it means to feel "invisible," and how a simple space can become one where everyone feels seen and heard. Students then take part in a short practical activity: each writes an unspoken thought, an emotion, or a positive message for the class community on a note. These notes are placed in the box, which can remain in the classroom as a safe space for silent expression.

Debriefing questions

- Why do you think the children started putting notes in the box?
- What does it mean to feel "invisible" in a classroom?
- How did you feel while writing your note?
- What can we do daily so no one in our class feels invisible?

Activity 3: The Ideal Classroom (15 minutes)

Aim of the activity: The aim of this activity is to encourage reflection on classroom relationships, strengthen the sense of belonging and responsibility, and stimulate ethical thinking and creativity.

Preparation of the activity: The teacher prepares large sheets of paper or flipchart paper, markers, colored pencils, and post-it notes.

Facilitation of the activity: The teacher introduces the task by asking students to imagine building an ideal classroom not in terms of furniture, but in terms of atmosphere and relationships. Students work individually or in small groups. They can either create a collective drawing representing a symbolic map of the ideal classroom (friendship circles, calm corners, trust walls), or write personal messages on post-its starting with "The ideal classroom for me is a place where...". Ideas are displayed on a common board, and students present and discuss them, asking questions and building on each other's contributions.

Debriefing questions

- Which ideas from the ideal classroom can we apply starting today?
- What responsibility does each of us have in creating this kind of classroom?
- What values appear most often in our ideas?

Activity 4: One Word for My Class (10 minutes)

Aim of the activity: The aim of this activity is to encourage authentic self-expression, personal reflection, and to reinforce the idea that every voice matters in the classroom community.

Preparation of the activity: No special materials are required beyond a board or a large sheet of paper to note key words.

Facilitation of the activity: Students sit in a circle or remain seated with shared attention. The teacher invites them to reflect on how they feel in their class and what they would like to contribute to the community. One by one, students share a single word or a short sentence answering questions such as: "How do I feel in my class?", "What would I like to bring to our community?", or "What word is essential for a class where everyone matters?". The teacher writes recurring keywords on the board, creating a symbolic map of the class's emotional and relational state, and closes with a reflective message about shared responsibility.

Debriefing questions

- Which words were repeated and what do they tell us about our class?
- How can we turn these words into actions?
- What personal commitment can you make to improve our class community?

Recommendations for teachers: I recommend the use of Place-Based Learning in all subjects, not just social and human sciences, as students can easily explore and reflect on the classroom space as a living place of relationships, identity and belonging, transforming it into an active resource for learning and co-creation of community. This methodology develops students' critical thinking and self-awareness in relation to the surrounding spaces.



Food production from global to local and a glimpse on the future

LESSON 7



Author: Ulla Pötsönen, teachers Jaana Räisänen, Johanna Tanskanen, Joensuun normaalikoulu, Finland

Subject/ discipline: **Biology, Social Sciences, Geography, Arts**

Target group/ age group: **14-16 years old**

Key topics: Global food production environmental effects, global food production chain, nutritional recommendations, global variety of nutrition, future of food production

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the environmental impact of food production and how dietary choices influence sustainability.
- (A) - to analyze their daily nutrition using national dietary recommendations and interpret data through maps or mapping tools.
- (V) - to demonstrate openness and awareness toward diverse global diets, reflecting critically on their own eating habits.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
Lesson 1 Activity 1: Warm up	Value scale	5 minutes	Not required
Lesson 1 Activity 2: Looking at food from global to local: environmental effects of food production, nutritional recommendations	Theoretical background, teacher presentation	25 minutes	Slides about food production environmental effects, national nutrition recommendations (if applicable)
Lesson 1 Activity 3: What the World Eats	Group discussion	30 minutes	Pictures from the book "What the World eats", discussion in

			groups (nutrition, environmental effects, comparison)
Lesson 1 Activity 4: Closing of lesson 1 and the group work	Group work assignment	30 minutes	Presenting the group tasks, dividing the groups, starting the work
Lesson 2 Activity 1: Group work continues	Finishing the group work	60 minutes	
Lesson 2 Activity 2: Group work presentation and closing	Presentations of group work, reflection of the task and results	30 minutes	
Total time estimated: 2x90 minutes			

Description of each activity:

Lesson 1 Activity 1: Value and opinion line (5 minutes)

Aim of the activity: warm up to the topic.

Preparation of the activity: not needed.

Facilitation of the activity: Explain the method: the other end of line (near class window wall) means "completely agree", the opposite end (opposite wall) means "completely disagree". Ask the student to move along the line according to how strongly they agree or disagree on the statements.

The teachers read out statements around values and opinions on the topic. The students move along the line according to their opinion. Discussion after each statement.

The statements can be directed more to the values and opinions of the students (food should be as cheap as possible, I am not worried about the decline of pollinators, I feel sadness when witnessing winter without snow) or actual facts.

Lesson 1 Activity 2 Teacher presentation (25 minutes)

Aim of the activity: brief recap on the food production chain, concentrating on the primary sector (farming, agriculture, fishing), presenting national nutrition recommendations (if applicable).

Preparation of the activity: slides/material for presenting.

Facilitation of the activity: teacher-led activity.

Lesson 1 Activity 3 Group discussion (30 minutes)

Aim of the activity: introduce students to different types of daily nutrition globally, making comparisons and analysis about environmental effects and nutritional value.

Preparation of the activity: either the book "What the world eats" by Peter Menzel and Faith D'Aluisio 2008 or images from the book (available online)

Facilitation of the activity: go through images of weekly nutrition of families in different countries around the world. The students are divided in smaller groups with different points of view/questions (see below) to follow and they analyze the images first in groups and then share them to the whole class.

Debriefing questions

- What kind of environmental effects do the ingredients seen in the image have? Either according to previous lessons or common knowledge. Compare the effects to your local/national typical nutrition. What are the similarities and differences?
- How do the ingredients fulfill nutritional recommendations, the intake of nutrition, energy etc.? Similarities and differences to your diet?
- Other points of view: broader perspective of environmental effects outside primary production: transport, distribution, packaging, food waste.

Lesson 1 Activity 4 Group work on food topics (90 minutes)

Aim of the activity: students concentrate on a specific food related question in small groups: history of local food production and farming, future of local food production, nutritional value of school food dish etc. (see recommendations of topics below). They make a short presentation of the topic and present it to the class.

Preparation of the activity: students are divided in small groups (2-4 students) and they choose a topic. The level of difficulty of tasks varies, so the teacher can assist with choosing an appropriate topic.

Prepare links to historical and aerial maps (topic 1,2), online articles about the future of food production and nutrition (topic 2, 7)

Facilitation of the activity:

Topics:

1. Local food production in the past: How did the vicinity of the school look like 50-70-100 years ago? What was cultivated, farmed and produced in the area? Use aerial maps and historical images plus knowledge of most common farmed plants, animals and products in the area.
2. Local food production in the future: get acquainted with online articles about food production innovations in the future (urban gardening, vertical gardening, hydroponics etc.) and create an innovative map of possible agriculture areas in the school vicinity in the future. What would/could the students cultivate?
3. The food production chain of favorite dishes: choose your favorite dish from the school canteen menu. Describe the journey of ingredients from the primary production spot to your plate: where were ingredients cultivated and by whom? How might they have been transported to your country? Which environmental effects do the ingredients have? How could the dish be more environmentally sustainable?
4. School food nutritional value today: analyze dishes from the school canteen according to the national nutritional recommendations (when applicable)
5. School food nutritional value in the past: find and analyze dishes from (your) school food menu 15-30-50 years ago according to the national nutritional recommendations (when applicable)
6. A sensory and artistic approach to school food: write a text describing the school canteen using all senses, write a food review of the school food in the style

of restaurant review (introduction to the style by reading some restaurant reviews).

7. School food in the future: get acquainted with online articles about food production in the future. Use these and the nutrition recommendation (plus imagination) and plan a school food menu (for several days) for the future 30-50 years ahead. What will be eaten in the future?

8. Local ingredients in the school food: find out (interview relevant people) which ingredients of school food are produced locally. Make a list and post it on the bulletin board/wall/info screen nearby school canteen. Send feedback (email etc.) to the local producers about your work. Make another list of ingredients that could easily be local.



Bibliography:

Material 1: What does the World Eat (2008) Peter Menzel (photos), Faith D'Aluisio (text)



Local Music Composer Eduard Nápravník (a figure associated with the region)

LESSON 8



Authors: Eva Kučerová, Šárka Sattlerová, Dana Slivková, Eduard Nápravník
Primary School, Pardubice District, Czech Republic

Subject/field: **Czech language, music, art, civics, geography, history, citizenship education, IT**

Target group/age group: **8-10 years old, 11-13 years old, 14-16 years old**

Key topics (words): personality, region, biography, work

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to describe the life and musical contribution of Eduard Nápravník and explain his place in Czech music history.
- (A) - to research relevant information about Eduard Nápravník and synthesize it into a poster presenting his life and work.
- (V) - to demonstrate appreciation for Eduard Nápravník's cultural significance and his contribution to the regional heritage.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Materials/ resources
1. Evocation	Brainstorming	5 minutes	Flipcharts, blackboard
2. Searching for information about Eduard Nápravník	Group work, searching for and working with information, working with text	25 minutes	Paper for writing down information, tablets connected to the internet
3. Joint analysis of the information found	Conversation, discussion	15 minutes	Not required

4. Listening to music and painting based on feelings	Listening, painting, discussion	45 minutes	Recordings of songs, paper, paints (crayons, watercolours and tempera paints)
5. Creating posters	Group work, writing, drawing, poster creation	45 minutes	A3 paper, writing materials, photographs
6. Poster presentation	Presentation, self-assessment, feedback, discussion	15 minutes	Not required
7. Reflection on the topic	Critical thinking, group work	10 minutes	Fishbone diagram, writing materials
8. Completing the mind map	Discussion	10 minutes	Flipcharts, blackboards
9. Evaluation of the project day	Interview, discussion	15 minutes	Not required
Estimated total time: 90 minutes			

Teacher or facilitator's note: The lesson is on a music composer. Some of the pupils' activities focus on his musical work. If a celebrity from another field is chosen for the lesson, some activities will need to be modified.

Description of each activity:

Activity 1. Brainstorming - creating a mind map (5 minutes)

Aim of the activity: to find out what pupils know about Eduard Nápravník.

Facilitation of the activity: The teacher (pupil) writes down what the pupils know about Eduard Nápravník on a flipchart (blackboard) in the form of a mind map.

Activity 2. Searching for information about Eduard Nápravník (25 minutes)

Aim of the activity: to search for and write down information about the life and work of Eduard Nápravník.

Preparation of the activity: The teacher prepares (or can prepare) an outline according to which the pupils search for information.

Facilitation of the activity: Pupils form groups (of 3-4), divide up the roles, search for information about EN in groups (at least 10 pieces of information), and write everything down on paper.

Activity 3. Joint analysis of the information found (15 minutes)

Aim of the activity: to present the information found to classmates.

Facilitation of the activity: Individual groups of pupils gradually present the information they have found. One group can present its findings and the other groups can add information that has not yet been mentioned.

Debriefing questions

- What new things did you learn?
- On which websites did you find the information?
- What surprised you?
- How did you organize your work in the group?
- Was anything difficult for you?

Activity 4. Listening to music and painting your feelings (45 minutes)

Aim of the activity: Listen to music samples from the local composer, record your feelings while listening through painting, learn about musical instruments.

Preparation of the activity: Select music samples of works by composer Eduard Nápravník, prepare paper and art supplies.

Facilitation of the activity: The teacher presents several musical samples. The pupils prepare paper and art supplies. They listen to the individual compositions. While

listening, they record their feelings using abstract painting, which they label with the name of the composition. After each sample, the teacher asks what musical instruments were played and how they feel about the composition.

Activity 5. Poster creation (45 minutes)

Aim of the activity: In groups, create a poster about Eduard Nápravník.

Preparation of the activity: The teacher prepares A3 paper and prints out pictures and photographs that the pupils have found about the personality.

Facilitation of the activity: In groups, the pupils create posters about the personality using the information they have found and the printed pictures. The pupils can divide the roles among themselves (poster designer, writer, painter, information searcher, etc.). The teacher assists the pupils.

Activity 6. Presentation of posters (15 minutes)

Aim of the activity: To present their poster to the group in front of their classmates.

Facilitation of the activity: Pupils in groups gradually present their posters.

Activity 7. Reflection on the topic (10 minutes)

Aim of the activity: To reflect on the knowledge gained.

Preparation of the activity: The teacher prepares fishbone diagram templates.

Facilitation of the activity: Pupils in the given groups create five open questions, which they gradually write down on the fishbone diagram. They then exchange templates and answer the questions of another group.

Activity 8. Completing the mind map (10 minutes)

Aim of the activity: Complete the mind map from the evocation, or correct any errors

Preparation of the activity: Prepare the flipchart from the introductory activity.

Facilitation of the activity: The teacher returns to the mind map, reads what has been written together with the pupils, adds new information and corrects any errors.

Activity 9. Evaluation of the project day (15 minutes)

Aim of the activity: To summarize the activities from the entire project lesson.

Facilitation of the activity: The teacher asks the pupils to summarize the activities they have been through, what they have learned and what interested them.

Recommendations for teachers:

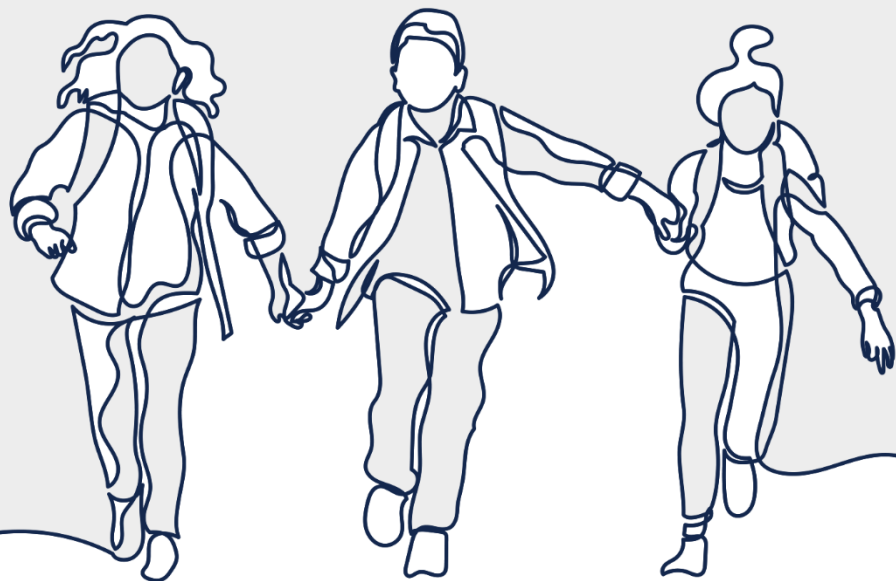
The given personality can be covered in various subjects:

- National language: creating a story about the personality, writing a letter to the personality, describing their appearance, writing a biography;
- Foreign language - writing a biography in a foreign language;
- Art - portrait (drawing, painting), expressive painting while listening to music;
- Physics - journey from hometown to St. Petersburg - searching for means of transport, calculating distance, speed and travel time using period means of transport;
- Natural history and chemistry - essay, presentation of peers who are personalities in the field of science;
- IT - creating a quiz, e.g. Kahoot



Geological excursion in the centre of our town

LESSON 9



Authors: Jiří Krupka, Železnická Primary School, Jičín, Czech Republic

Subject/field: **Natural history, geology, biology, geography, petrology**

Target group/age group: **14-16 years old**

Key topics (words): Rocks, minerals, rock mining

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to identify common types of rocks and describe their basic characteristics and practical uses.
- (A) - to locate the origin of selected rocks on a map and connect them to their uses in real-life contexts.
- (V) - to demonstrate awareness of the importance and limited nature of natural resources by promoting responsible use of rocks in community life.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Materials/resources
1. Activity 1 What do we know about rocks?	Short energizer/ discussion	10 minutes	Not required
2. Activity 2 Observing rocks in the city	Group work, guided walk	40 minutes	Worksheets, writing materials, map of the town
3. Activity 3 Mapping the origin of rocks	Group work with sources	20 minutes	maps of the country, worksheets, markers
4. Conclusion and reflection	Joint discussion	10 minutes	Not required

Estimated total time: 90 minutes (including walking time)

Teacher or facilitators' note: The walk should be done in dry weather so that students can safely observe and take notes outside. If the group is divided into smaller teams, it is important to clearly define the tasks and ensure that everyone has space to observe and take notes.

Description of each activity:

Activity 1. What do we know about rocks? (10 minutes)

Aim of the activity: To engage students and find out what they already know about rocks and their uses.

Preparation of the activity: The teacher prepares short questions (e.g. "What rocks do you know? Where are they used in construction?").

Facilitation of the activity:

- The teacher asks the class several introductory questions.
- The students respond spontaneously.
- The teacher writes the answers on the board or flipchart.

Debriefing questions

- What do you already know about the rocks around us?
- What are the three basic groups of rocks?
- Where have you noticed them in our town?

Activity 2. Observing rocks in the city (40 minutes)

Aim of the activity: Students learn about typical rocks used in Jičín and write down their characteristics and uses.

Preparation of the activity: Prepare worksheets with a list of places to stop (school - granite steps, Tylovo náměstí - granite cobblestones, rock samples - sandstone, porcellanite, basalt, melaphyre, sandstone house foundations, limestone and marble pavements, travertine, basalt cobblestones).

Facilitation of the activity:

- The teacher leads the group along a predetermined route.
- At each stop, the pupils observe the rocks, noting their color, structure, hardness and purpose.
- There is a brief discussion about the origin of the rock.

Debriefing questions

How do rocks differ in appearance?

What are they used for in the city?

Which rock do you think weathers the fastest and why?

Activity 3. Mapping the origin of rocks (20 minutes)

Aim of the activity: Pupils will connect their knowledge of rocks with their place of origin and geographical context.

Preparation of the activity: Prepare maps of your country and the region, highlight unique geological locations (In Czechia: Českomoravská vrchovina - granite, Český ráj/Úbislavice - sandstone, Čeřovka - porcellanite, Bradlec - basalt, Doubravice - melaphyre, Slivenec/Lochkov - limestone, foreign source of travertine).

Facilitation of the activity:

- Students in groups will mark the origin of rocks on the map.
- Each group briefly presents one rock and its location.

Debriefing questions

- How far were the rocks transported?
- Why were these particular rocks used?
- What do you think their cost was (in terms of time, effort, transport)?

Activity 4. Conclusion and reflection (10 minutes)

Aim of the activity: To realize the importance of rocks for the local environment and the lives of the inhabitants of the town.

Preparation of the activity: Not required.

Facilitation of the activity:

- Brief summary of the main findings.
- Discussion about what surprised the students.

Debriefing questions

- Which rock interested you the most and why?
- What would a city look like without the use of rocks?
- How can we approach the protection of these resources?

Recommendations for teachers:

- It is advisable to divide students into smaller groups so that everyone has a chance to observe.
- Have a backup plan (photographs of rocks) ready in case the weather prevents the walk.
- In the reflection, emphasize the connection between rocks and everyday life and culture in the city.



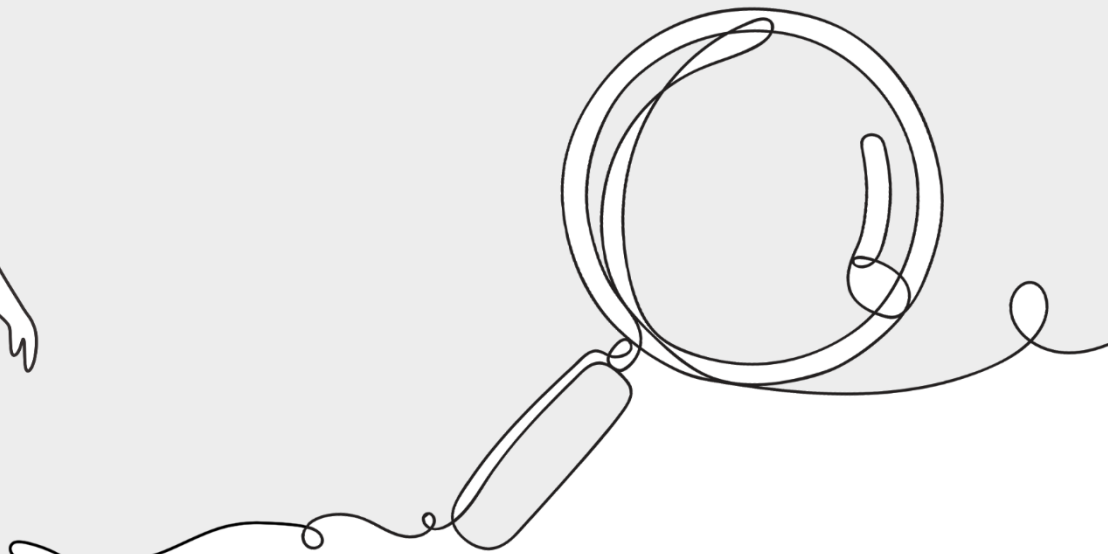
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Exploring the Prachov Rocks

LESSON 10



Authors: Veronika Blažková, Tatána Provazníková, Masaryk Elementary School, Železnice, Czech Republic

Subject/field: **Czech language, natural sciences, social studies**

Target group/age group: **11-13 years old**

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to describe the formation of the Prachov Rocks and identify characteristic plant species that grow in the area.
- (A) - to interpret information from a short text and use a simple map to orient themselves in the Prachov Rocks area.
- (V) - to demonstrate responsible behavior in nature by respecting marked trails, protecting the environment, and developing a personal connection to their surroundings.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/resources
1. Text interpretation	Energizer	20 minutes	Prepared text about the Prachov Rocks
2. Journey according to the map	Independent work	Throughout the entire trip	Printed maps
3. Collecting natural specimens	Independent work	Throughout the entire walk	Phones for taking photos or bags for collecting natural objects
4. Write a poem	Work in pairs	30 minutes	Blank cards, pads, pencils
5. Conclusion and reflection	Discussion in a circle	45 minutes	Emotional cards
Total time estimated: 95 minutes + walking time			

Teacher or facilitator's note

This lesson consists of two parts: the first is a field trip, which took the whole morning, and the second is reflection and processing the next day at school. Here we offer a detailed description of the first part, which can also work well on its own.

Description of individual activities:

Activity 1. Text interpretation (20 minutes):

Aim of the activity: to develop reading comprehension using a text about the history of the Prachov Rocks, their fauna, and flora.

Preparation of the activity: printing out texts containing a simple description of the history of the rock town, dividing the pupils into groups (max. 4 children per group)

Facilitation of the activity: The assigned text has four paragraphs, each group received one paragraph, read it and prepared its interpretation for the others. The preparation was followed by interpretation. One member of the group summarized the content of the paragraph in their own words.

Debriefing questions

- What information in the text was new to you?
- What interested you the most?
- Can you figure out how many soccer fields would fit in the area of the Prachov Rocks?
- What plants and animals used to live here?
- Why did people settle here in prehistoric times?
- What or who is the symbol of the Prachov Rocks?

Activity 2. Journey according to the map (throughout the walk)

Aim of the activity: Students learn to navigate a simple tourist map, follow a route using trail markers, and understand what SOS points are.

Preparation of the activity: print out a map for each student/pair of students, map taken from <https://prachovskeskaly.com/cs/turistika>

Facilitation of the activity: First, the students are tasked with finding out where we are on the map. Then we tell them where we want to go. The students use the

map to determine which way to go and which signs to follow. It is up to them to follow the correct route.

Debriefing questions

- How did you figure out where we are?
- What shows us the way in nature?
- What are SOS points and where can we find them?
- Why is our route accompanied by a picture of a stroller?

Activity 3. Collecting natural objects (throughout the walk)

Aim of the activity: Students collect/photograph plants and tree leaves, which encourages them to look around and observe the landscape. The next day at school, we identified the plants/trees, found additional information, and created a large poster entitled "Flora of the Prachov Rocks."

Preparation of the activity: No preparation is necessary for this activity; most children "hunted" natural objects with their phone cameras.

Facilitating the activity: The teacher assigns the task. Everyone must "hunt" at least ten different plants. We hunt by physically collecting part of the plant or taking a photo with our phone. The part of the plant we hunt must be representative so that we can identify the whole plant.

Debriefing questions

- How can we identify what kind of plant or tree it is?
- Where can we find more information?
- What trees predominate here?
- How many different plant samples did we "catch" together?

Activity 4. Write a poem (30 min)

Aim of the activity: Students allow themselves to be influenced by the place. They must look around, think, perceive the place and the feelings it evokes in them, thus deepening their interest in the location.

Preparation of the activity: Prepare a sufficient number of small pieces of paper, clipboards, and blank sheets of paper in advance. Someone will lend you a hat, and the students will bring their own pencils.

Facilitating the activity: Each student receives five pieces of paper. They write one word on each piece of paper (what they see, how they feel, their impression of the place, etc.). The pieces of paper are then collected and placed in the hat. Each student draws five pieces of paper (other than their own) and writes a poem that must contain the five words. We worked on the poems and their reflection the following day.

Activity 5. Conclusion and reflection (45 min)

Aim of the activity: Students are able to formulate and communicate their feelings and evaluations. They share their impressions with others. They learn to listen to others. They express their feelings not only with words, but also with pictures.

Preparation of the activity: reflection cards, picture smileys.

Facilitation of the activity: Choose a space where everyone can sit/stand in a circle; a relatively quiet, undisturbed environment is necessary. Each student draws one reflection card and responds to it. After responding, they point to the smiley face that best expresses their feelings about the activities.

Recommendations for teachers: For the poetry writing activity, it is a good idea to provide pads for the pupils to write on. We were disappointed with the results of this activity, as only a few pairs managed to write a poem, while the others wrote sentences or one or two rhymes. However, when reflecting on the activity the next day at school, the pupils mentioned it as the most interesting, which surprised us. Other activities include reading a legend together and dramatizing it, or a simple but very nice activity involving a memory game with natural objects.

Annexes:

Annex 1. Copied text Prachovské skály (Jaroslava Velartová: Deset zastavení v Českém ráji, p. 31)

PRACHOVSKÉ SKÁLY

Jedno z nejznámějších skalních měst Českého ráje jsou Prachovské skály. Dlouhý geologický vývoj se podílel na vzniku množství bizarních skalních útvarů. Působením moře, které se tu kdysi rozlévalo, vlivem větru, mrazu i slunce vznikly vysoké, štíhlé skalní věže i masivní pískovcové bloky s povrchem jednou rozbrázděným, jindy hladkým, porostlým často lišejníky a mechy různých barev. Tajemné rokle a hluboké kaňony, úzké chodby a průlezy, stromy, které se derou svými kořeny do skalních štěrbin, a půvabná zákoutí zarostlá hustým kapradím, to vše je Prachov.

Prachovské skály jsou přírodní rezervací o rozloze 243 ha, kterou pokrývají jehličnaté a smíšené lesy. Roste zde pestrá směsice různých rostlin a neméně pestrá je i živočišná říše, i když obojí je i zde značně poznamenáno působením člověka. Tak zmizela například ma-

sožravá rosnatka okrouhlolistá nebo sokol stěhovavý a tetřev hlušec.

Nepřístupnost a přirozená hradba Prachovských skal skýtala odjakživa útočiště člověku. Ten zde žil již ve starší době kamenné, bylo zde i mohutné slovanské hradiště Starý hrádek a také ve středověku byl ještě využit ochranný význam skalních útvarů. Důkazem toho je hrad Pařez. V místě, kde stojí hotel Skalní město, stávala vesnice českomoravských bratří Moravsko, kterou smetly hrůzy třicetileté války.

Uvnitř skalního města je pěkné koupaliště U Pelíška. Dřevěná plastika akademického malíře architekta Ladislava Horáka zpodobňuje symbol Prachovských skal, skřítku Pelíška z lidových pověstí, zasazených již do dob staroslovanského osídlení Prachova téměř před tisíci lety. Plastika stojí v místě, kde balvan ze zříceně Svantovítovy věže, Pelíškov domova, přehradil potůček tekoucí od Javorového dolu. Na památku Pelíška, tohoto dobrého ducha Prachovských skal, dostal balvan jméno Pelíškův most.



Bibliography:

- Jaroslava Velartová: Ten Stops in Bohemian Paradise, published by Libor Velart
- <https://prachovskeskaly.com/cs/turistika>



Colorful Spring Around the Bělá River

LESSON 11



Authors: Jana Rejzková, Iva Šmejdoval, Jasněna Procházková, Černíkovice Elementary School and Kindergarten, Rychnov nad Kněžnou District, Czech Republic

Subject/field: **Natural sciences, Czech language, social studies, art, environmental education**

Target group/age group: **8-10 years old**

Key topics (words): River ecosystem, spring and protected plants, observation of plant species, deepening knowledge of the surrounding natural environment, informing the community by creating an educational trail.

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to identify protected plant species in the local river area and use plant atlases to gather relevant information.
- (A) - to use maps and field observation skills to document studied plants and design educational trail panels.
- (V) - to demonstrate awareness of the uniqueness of the river ecosystem and a responsible attitude toward its protection and preservation.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/resources
1. Riddles	Energizer	5 minutes	Not required
2. How well do we know the spring flowers around the river?	Group work	10 minutes	Printed pictures of plants and cards with partially completed names, plant atlases, identification keys
3. Working with a map	Group work	20 minutes	Parts of the map of the municipality with locations of observed plants

4. Conclusion and reflection	Circle	10 minutes	Cards for joint reflection
Total time estimated: 45 minutes			

Teacher or facilitators' note: The activities in this lesson are based on previous walks and observations of plants in the area.

Description of individual activities:

Activity 1. Riddles (5 minutes)

Aim of the activity: To familiarize students with the course and objective of the lesson, motivate them for the following activities, and utilize their knowledge.

Preparation of the activity: One to three riddles in the style of the game "Who am I" (children ask questions, teacher answers yes/no).

Facilitating the activity: At the beginning of the lesson, describe the goal and program of the lesson (during spring walks, we observed flowering plants around the river, we will repeat their names, we will think about how to prepare a nature trail so that everyone who goes for a walk in the area knows how interesting and diverse nature is here).

We will start with a riddle. You will recognize which plant I am if you ask me what I look like. Depending on the children's reactions and their ability to ask questions, you can include more riddles.

Debriefing questions

- What plants do you remember?
- Can you give one or two pieces of information about each one besides its name?

Activity 2. How well do we know the spring flowers around the river (10 minutes)

Aim of the activity: To verify and supplement knowledge of spring flowers around the river. To work together in a group. To verify information from various sources.

Preparation of the activity: a set of printed black-and-white pictures of plants and their names with missing letters for each group of pupils, plant identification keys, encyclopedias.

Facilitation of the activity: Students divide into groups, in which they add the genus and species names to the pictures of plants and color the flowers and leaves according to the information they find. They work with encyclopedias and keys. If there is time, they can add additional information (e.g., flowering time, whether the plant is medicinal or poisonous, whether they remember where they observed it, etc.). They will paste the processed information onto a large sheet of paper. At the end, each group will present and evaluate their results.

Debriefing questions

- Can you identify the genus and species of a plant?
- Can you recognize a plant from a picture?
- What interesting facts did you learn about plants during the activity?
- Did the information from different sources differ?
- How would you evaluate the work in your group?

Activity 3. Working with a map (20 minutes)

Aim of the activity: Map orientation, designing a nature trail route, and placing signs with pictures of plants and information.

Preparation of the activity: appropriately prepared printed maps of the observed locations, colored markers, tables with a key for color coding plants.

Facilitation of the activity: After an introductory discussion, the students will work in groups to design the trail route and draw it on the map, mark the occurrence of the six observed plant species with colored circles, and propose the placement of educational signs. The group will also work on initial designs for the educational signs. Support and consultation with teachers is necessary during this activity. At the end, the individual proposals can be projected onto a screen and presented by each group. After each presentation, it is advisable to give the other pupils a chance to express their opinions.

Debriefing questions

- How did your group manage to work with the map and find their way around it?
- How did you choose suitable locations for the information boards?
- Did you all agree?

Activity 4. Conclusion and reflection (10 minutes)

Aim of the activity: To summarize the lesson and plan the follow-up activities needed to implement the nature trail.

Preparation of the activity: cards for joint reflection (e.g., Journey Through Life by L. Ernestová).

Facilitation of the activity: Individual students evaluate their group's outputs and their current feelings about the lesson. We return together to the reasons for creating the nature trail and look for others that we had not thought of before. We plan the next steps that will be necessary for the actual implementation, including deadlines (when and by whom the specific content of the boards will be addressed, text processing, graphic design, use of classmates' drawings and photographs, etc.).

Debriefing questions

- How do you feel? How high is your current energy level?
- What are you taking away from this?
- What new things did you learn today?

Recommendations for teachers: We recommend involving pupils as actively as possible, giving them space for their own ideas and initiative, and also thoroughly mapping the terrain in advance and having an overview of what students can discover in the area (also from a safety perspective).



Bibliography:

HÁJKOVÁ, Eliška; HUŠKOVÁ, Blažena and KULICH, Jiří. We teach (and learn) through the place. [Horní Maršov]: SEVER Environmental Education Center Horní Maršov, 2022. ISBN 978-

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What does water hide?

LESSON 12



Authors: Anna Foltyn-Simka, Beata Woźniak-Suchanek, Justyna Żak-Kubiczek,
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Subject/ discipline: **Biology, chemistry, geography, science**

Target group/ age group: **11-13 years old, 14-16 years old**

Key topics: water composition, water pollution, river ecosystem, algal bloom, reduced water transparency, pollution from streets and lawns, eutrophication, death of underwater plants, municipal sewage, agricultural fertilizers

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the origin of water, identify sources of anthropogenic pollution, and describe the impact of intensive agriculture on surface waters.
- (A) - to investigate local water quality by collecting samples, conducting chemical and microscopic analyses, interpreting results, and presenting findings on an interactive map.
- (V) - to demonstrate environmental responsibility by promoting conscious use of household chemicals and formulating informed recommendations for the local community.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
1. Activity 1: Where does the water in my home come from?	Brainstorming	10 minutes	Access to a computer and screen to display the map
2. Activity 2: Where in Polish rivers is the water cleanest, and where is it most polluted? Analysis	Practical exercises	10 minutes	Geographical atlases, access to a computer and screen to display the map

based on river purity classification.			
3. Activity 3: What pollutes our rivers?	Practical exercises, active methods	25 minutes	Sentence scramble with an attached graphic showing the sources of nitrogen and phosphorus pollution in nature
4. Activity 4: Testing water samples and creating an interactive map	Practical exercises, active methods	45-90 minutes	Collected water samples, experiment worksheets, reagents, microscope, dropper, slides, link to an interactive map (e.g., Google Maps), markers, computer or laptop for the group, flip charts
Total time estimated: 90-135 minutes			

Teacher or facilitators' note: What secrets does the water in your area hold? Where does it come from in your home? Have you ever wondered if the changing seasons and rainfall alter its chemical composition?

Students work in the field around their school or home to find out what is hidden in the water in their immediate surroundings. For several weeks, they collect water to see if changing weather conditions affect the water's composition. The main goal of the activities is to examine the quality of water in local reservoirs

(ponds, streams, watercourses), to realize the importance of water, and to gain knowledge about its origin and the problems of anthropogenic pollution.

As part of the project, students collect water samples from their area over a period of 3 months (every two weeks or once a month). Simultaneously, the students observe the changing natural conditions, the state of the waters, the speed of the current, the color, the smell, and the vegetation around the water bodies. They learn about the water purity classification of rivers in Poland and in their area, identifying the most and least polluted ones. Collecting water can also be a part of homeroom lessons focused on promoting positive mental health and developing civic responsibility.

The key result of the activities is the creation of an interactive map on which students mark the water collection points and present the results of their chemical and biological tests. This map is intended to indicate the cleanest as well as the most polluted places. By the end, the students should prepare recommendations for the residents.

During the series of lessons, students learn through experience, go beyond the classroom, and shape their social and environmental awareness.

It is best if you undertake the activities related to observing the place in the spring, when the most variables can be observed (water from fields before fertilization, the period of planting and fertilizing, the development of plants and biological life). You can also introduce checking the water purity after rainfall into the project. If collecting samples over a longer period is not possible, you can plan the lesson based on a single sample taken from one place.

Your students can collect water in their places of residence, but they can also choose places around the school. You can plan the observation and research for a period of one month or even several months if it were to be a long-term research project.

Your students can also give a summary of the project during a walk with residents or organize workshops for them, during which they would present the methods and results of their research.

Description of each activity:

Activity 1. Where does the water in my home come from? (10 minutes)

Aim of the activity: The aim is to gather information about the sources of water at school and at home, and then work with a map of local waterworks to locate water intakes.

Preparation of the activity: prepare the classroom so that students have free access to a computer.

Facilitation of the activity: Let the students exchange information about where they think the water in their homes comes from. Ask if they can imagine a situation where there is a water shortage in our countries. What would be the consequences of such a situation? Ask if they know what the water resources are in Poland. Ask them to answer the question of which Polish rivers are the cleanest and which ones are the most polluted based on the Internet.

Activity 2. Where in Polish rivers is the water cleanest, and where is it worst? Analysis based on river purity classification (10 minutes)

Aim of the activity: The aim is to scale the problem of river pollution. Thanks to the collected information and work with a geographical atlas, students learn about the condition of their local rivers and how they compare to rivers in Poland.

Preparation of the activity: Prepare geographical atlases.

Facilitation of the activity: Students analyze the map on their own. Based on the attached legend, they explain what the maps represent. Ask them to indicate the cleanest and most polluted rivers in Poland on the map. Spend more time checking how the rivers in the vicinity compare.

Activity 3. What pollutes our rivers? (25 minutes)

Aim of the activity: The aim is to equip students with knowledge about the causes and effects of surface water pollution.

Preparation of the activity: Prepare a sentence scramble with an attached graphic showing the sources of nitrogen and phosphorus pollution in nature.

Facilitation of the activity: Begin this stage of the lesson with a brainstorm on the main sources of surface water pollution. Then divide the class into teams of 4 and distribute sets of the word scramble with the graphic to each group. The students' task is to arrange the sentences describing the process. As a summary, one of the groups reads the sentences, and the other groups check the correctness of the task. During the task, concepts such as the following will appear: algal bloom, reduced water transparency, pollution from streets and lawns, eutrophication, death of underwater plants, municipal sewage, agricultural fertilizers.

At the end, ask the students if they can suggest ways to protect rivers from pollution. You can raise the topic of recognizing the Oder river as a legal entity. Is this an important initiative and why?

Explain to the students what the draft law contains:

- the Oder River is to be clean,
- fish, snails, mussels, and other river creatures will be able to live freely,
- in case of damage to the river, it will be possible to go to court on its behalf,
- there will be a ban on uncontrolled pollution of the river by companies, mines, and private individuals,
- the quality of the Baltic Sea waters and the creatures living in it will improve,
- tourism along the Oder will increase - Poland will gain on the international stage,
- we will fulfill our obligations to the EU: Nature Restoration Law,
- we will ensure sources of drinking water for us and future generations.

Activity 4. Testing water samples and creating an interactive map (45 minutes)

Aim of the activity: The aim is to examine the chemical composition of the water.

Preparation of the activity: Prepare the collected water samples, experiment worksheets, reagents, microscope, dropper, slides, a link to an interactive map (e.g., Google Maps), markers, a computer or laptop for the group, and flip charts. Before starting the task, remind students of the safety rules for work.

Facilitation of the activity: Students, using the interactive link, mark the points from which the water was collected. It is better to focus on 3-5 water collection points here, as it is then easier to observe all the changing conditions.

Discuss the prepared worksheets (Annex 1). Divide the students into 5 groups in which they will work and detect: nitrates (III), phosphates (V), test electrical conductivity, pH levels, and observe microorganisms under a microscope. After the laboratory activities are completed, each group presents its research to the class. The students jointly look for relationships between their results:

- is the presence of nitrates also related to the presence of phosphates?
- is high conductivity related to the presence of nitrates and phosphates?
- does rainfall cause an increased amount of the tested substances, or does rain "improve" the water?
- are the color, smell, and transparency the worst where the highest concentrations of the tested substances were detected?

- do the seasons have an impact on the biological life in the water?

Each group enters its results into the shared map (<https://maps.app.goo.gl/LUqt8pTxfZMziCin8>). The map becomes a visual summary of the state of the waters in the area. At the end, students discuss which places turned out to be the cleanest and which the most polluted, and what the reasons for this state are. Ask if they have an idea for introducing their own scale of purity for the tested waters. After the discussion, the students formulate and write down recommendations for residents regarding the protection of the tested waters, which they will post on the district's information pages.

Recommendations for teachers:

To prepare the water testing kits, you can use the "Walizka ekobadacza do obserwacji oraz badania wód i gleb" (eng. Eco-researcher's suitcase for observing and testing water and soil) kit from the company Jangar or a kit for testing water in aquariums. We also used a TDS meter to measure the amount of dissolved substances.

Annexes:

- Annex 1. (Worksheets)
- Annex 2.



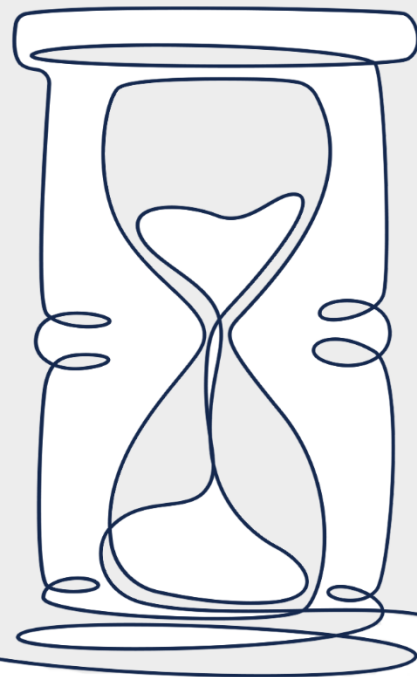
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- <https://www.rmfm24.pl/news-dramatyczna-sytuacja-w-turystycznym-raju-woda-pitna-moze-sie,nld,8016971>
- <https://ustawa.osobaodra.pl/>



The influence of time and nature on the condition of local monuments

LESSON 13



Authors: Maciej Klonowski 26th Primary School named after Rodło in Zabrze, Poland

Subject/ discipline: **History (the lesson can also be conducted in geography, history, civics)**

Target group/ age group: **11-13 years old**

Key topics: cultural heritage, monument, history of a place, local identity, tangible and intangible heritage, memory of a place, heritage protection

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the interconnection between cultural and natural heritage in the local context, including processes such as plant succession, climate impact, and the historical significance of the Mikulczyce manor.
- (A) - to conduct and document interdisciplinary field research by observing, analyzing, mapping, and presenting the relationships between nature and human activity using collaborative and digital tools.
- (V) - to demonstrate responsibility, ecological and civic awareness, respect for local history, and openness to cooperation in protecting and promoting natural and cultural heritage.

Concepts and definitions:

Ecosystem - an interconnected system of organisms and the environment, e.g., a pond ecosystem;

Plant succession - the natural process of gradual colonization of an area by plants;

Invasive/native species - organisms entering or belonging to the local flora and fauna;

Anthropopressure - the impact of human activity on the environment;

Ecological balance - a state of stable relationships in nature;

Natural-cultural landscape - a space where elements of nature and human activity coexist.

Cultural heritage - tangible and intangible assets passed down through generations;

Monument - an object of historical, artistic, or scientific value, protected by law;

Conservation/revitalization - actions aimed at preserving or renewing monuments.

Activity outline / description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
1. Activity 1 Visit to the ponds in Mikulczyce (sketching an old map of the pond area)	Group work, field activities, practical exercises, field recordings	30 minutes	A brochure which is the physical result of our project (Annex 1), paper, writing materials (pencils, pens, crayons), cameras (mobile phones), sound recording equipment (voice recorder, mobile phone)
2. Activity 2 Visit to the old Mikulczyce manor	Mini-lecture, field activities, group work, work with iconographic material (old postcards), field recordings	20 minutes	A postcard showing the old manor and illustrations presenting similar objects, paper, writing materials, cameras (mobile phones), sound recording equipment (voice recorder, mobile phone)
3. Activity 3 Visit to the area of the old train station in Mikulczyce	Mini-lecture, field activities, group work, work with iconographic material, field recordings	20 minutes	Ideographic material showing the area of the old manor, paper, writing materials, cameras (mobile phones), sound recording equipment (voice recorder, mobile phone)

4. Activity 4 Discussion. Recommendations for the residents and authorities of Mikulczyce	Discussion	20 minutes	Materials created during previous activities, brown paper, markers
Total time estimated: 90 minutes			

Teachers or facilitators' note: Are you aware of the influence nature has on the space around us and the objects within it? Caring for our surrounding cultural assets and nature is not only a duty but the greatest manifestation of local patriotism. Visiting local historical monuments can lead to a meaningful conclusion: time can integrate human creation with the work of nature. It is this mutual interpenetration of these worlds that is the main theme of the proposed lesson. The scenario concerns one of the districts of Zabrze - Mikulczyce, which originally functioned as a separate locality. The progressing industrialization of Silesia in the 19th century, once an industrial region of Germany, today of Poland, led to the incorporation of this locality into Zabrze, a typically industrial town. To this day, Mikulczyce is full of objects testifying to its history - not only industrial but also related to the medieval and modern periods.

Before starting the class, make sure that the students have read the brochure: STAWiając na Mikulczyce - głos lokalnej młodzieży w obronie przyrody (Betting on Mikulczyce - the voice of local youth in defense of nature) and have all the necessary materials. The lesson plan requires familiarity with the history and location of the objects of interest, information about which (in addition to the aforementioned brochure) can be obtained in the book: Z dawnych dziejów Mikulczyc (From the Old History of Mikulczyce) by Rudolf Kostorz from 1999 (available at the local library). If the proposed scenario is adapted by teachers from outside Zabrze or Poland, it is recommended to gather literature concerning the place where the lesson will take place.

The lesson can be repeated when visiting other objects, and the photo gallery and field recordings can be retaken in different places and used in other educational contexts.

Description of each activity:

Activity 1: Visit to the ponds in Mikulczyce (sketching an old map of the pond area) (30 minutes)

Aim of the activity: To create a map of the area based on collected information and exploration of the site. To collect photographic and audio material.

Preparation of the activity: prepare the route of the walk, in advance, design stops, prepare the brochure that you created with students and teachers during the project (Annex 1), prepare paper, writing materials (e.g., pencils, pens, crayons).

Facilitation of the activity: Divide the students into groups of 4. First, the students in groups will familiarize themselves with the information about the ponds that has been collected in the brochure. Ask the students to find the objects that were in the immediate vicinity of the ponds and to sketch a map containing all these objects. Each of the included elements should be thoroughly described (name, function, approximate date of creation). The results of these activities will allow for the creation of an illustrative picture of the former area around the water bodies. Suggest that after making the map, the students photograph selected places and record their sounds.

Activity 2: Visit to the old Mikulczyce manor (20 minutes)

Aim of the activity: A comparative analysis of an object that has changed over the years under the influence of nature. Creation of an audiovisual landscape of the place.

Preparation of the activity: prepare ideographic material showing the old manor (postcard), paper, writing materials, photographic equipment (mobile phones), sound recording equipment (voice recorder or mobile phone).

Facilitation of the activity: Conduct a mini-lecture on the history of the object and its functions over the years. Divide the students into three teams: recorders, archivists, documentalists. Each of them will perform one task:

- **Recorders Team:** Describe the current state of the building (facade, roof, windows, doors). Students take photographic documentation.
- **Archivists Team:** Compare the state of the object with archival photos. Students indicate the state of the building in the past and present in a table format.
- **Documentalists Team:** Indicate the influence of nature on the changes in the appearance of the building and its surroundings (new plants in the area,

lack of plants in the area, lichens on the building, sounds of nature-culture, etc.). Students take photographic and sound documentation.

Activity 3: Visit to the area of the old train station in Mikulczyce (20 minutes)

Aim of the activity: A comparative analysis of an object that has changed over the years under the influence of nature. Creation of a visual and soundscape of the place.

Preparation of the activity: prepare ideographic material showing the selected place (postcard), paper, writing materials, photographic equipment (mobile phones), sound recording equipment (voice recorder or mobile phone), brown paper on which students will write recommendations for the protection of cultural and natural heritage addressed to residents and local authorities.

Facilitation of the activity: Conduct a mini-lecture on the history of the object and its functions over the years. Divide the students into two teams. Each of them will perform one task:

- Describe the current state of the place and its function for contemporary residents (presence or absence of people). Students take photographic documentation of: 1) remnants of buildings and other anthropogenic changes, 2) plants, 3) animals, 4) inanimate nature.
- Record sounds that will create a soundscape of the place.

Activity 4: Discussion. Recommendations for residents and authorities (20 minutes)

Aim of the activity: To gather materials and formulate conclusions on the ways nature and culture intertwine and on the protection of memorial sites in harmony with the natural environment.

Preparation of the activity: prepare computer equipment that allows for the presentation of the taken photographs and recorded sounds.

Facilitation of the activity: After viewing the photographs and listening to the sounds recorded in the field, start a discussion during which the students will speak on the following topics:

- How does time affect our surrounding environment?
- What is plant succession?
- How can we protect cultural monuments to coexist with nature and emphasize the passage of time?

Ask the students to propose recommendations for the protection of cultural and natural heritage that can be presented to residents and local authorities:

- Preserve and secure the remnants of the old manor – through clean-up work, photographic documentation, and protection against further degradation.
- Create a local educational trail (e.g., "In the footsteps of the history and nature of Mikulczyce") with a description of cultural objects and natural elements.
- Preserve natural zones around the ponds as habitats for birds and amphibians, avoiding overly intensive interventions.
- Limit pollution - ensure the cleanliness of paths, remove illegal dumpsites, introduce bins for segregated waste.
- Promote sustainable use of the space - encourage walking, nature observation, nature photography, but with respect for silence and animal habitats.
- Organize regular educational walks or field workshops (conducted, for example, by schools, libraries, community centers).
- Conduct intergenerational activities - meetings of students with seniors who remember the old appearance of the place.
- Organize a photographic or sound exhibition ("The Voice of the Place") in a local community center or library.

PBL Principles:

- **On-site learning:** Students learn directly in the space of the former manor in Mikulczyce and its natural surroundings - in the park and by the ponds. This place becomes a "living classroom" where history, nature, and culture merge into one. By interacting with the local landscape, students learn to observe, research, and interpret phenomena in an authentic context.
- **Learning about the place:** During the classes, students learn the history of the manor and its significance for the local community. They discover how the landscape has changed over the years, how nature has taken over part of the cultural space. Through photographs and nature recordings, students look at Mikulczyce from a new perspective - not only as residents but as researchers and guardians of heritage.

- **Learning through the place:** By analyzing the relationship between plant succession and the condition of historical monuments, students perceive how global climate issues (e.g., changes in species structure, temperature increases, humidity) affect local heritage. They reflect on how decisions regarding nature conservation and monument preservation fit into the broader context of sustainable development.
- **Learning for the place:** The result of the students' work is the development of a map and a comparative analysis showing the condition of the historic buildings and nature in the manor's surroundings. A proposal for protective measures is also created, which will help maintain a balance between nature conservation and cultural preservation. This is a real contribution to raising the awareness of residents and local authorities about the need for sustainable management of the space.
- **Place attachment:** Through the experience of direct contact with the place, students develop an emotional bond with their local heritage. Reflection on its history and future leads to a sense of responsibility for the common good. Working together on documenting and protecting the manor and the park strengthens the sense of local identity.
- **Personal relevance:** The lesson was planned taking into account the specifics of Mikulczyce - a combination of cultural elements (the old manor) and natural elements (ponds, park, plant succession). The working methods - photography, field recordings, observations - were chosen to suit the character of the place and its current challenges. Students discover that the problems of heritage and nature conservation affect them directly - it is their living space, their daily route to school, a place for walks or family memories. Understanding local ecological and cultural problems becomes an impulse to act for the benefit of their own environment.
- **Active student involvement/participation:** The classes are research-oriented and creative - students conduct observations, take photos, record sounds, collect data, and create their own interpretations. The work concludes with the joint development of a map, a report, and a presentation of the results to the local community.
- **Community partnership:** Local history enthusiasts from Mikulczyce, representatives of nature conservation associations, or employees of the municipal monument conservator can join the activities. Their knowledge enriches the teaching process, and cooperation with them teaches students the dialogue between science and social practice.

- **Interdisciplinarity:** The project combines elements of geography, biology, history, art education, civics, and the Polish language. Students use tools from various fields: they analyze vegetation (biology), document and interpret the space (art, IT), describe their observations (Polish language), and also research the historical and social context (history, civics).
- **Cooperation:** The work is done in teams - students divide roles (photographers, naturalists, historians, documentalists). They jointly develop conclusions and present the results in a class or school forum. Collaboration teaches communication, planning, and responsibility for a common outcome.

Recommendations for teachers:

1. Expand the context - show the "layers of the place." Encourage students to see the location not just as a physical space, but as an interweaving of history, culture, nature, and everyday life. You could invite a local historian, a museum employee, or an older resident to talk about the former functions of the manor and its importance to the area.
2. Focus on the balance between protecting nature and historical monuments. This is a sensitive and interdisciplinary topic. Students should understand that conservation efforts are not always aligned with environmental protection goals, and vice versa. It can be helpful to talk with local naturalists or foresters about plant succession, the natural process of plants taking over a space. It is a good idea for students to try to develop a compromise proposal - for example, how to maintain the surroundings of a monument in good condition without destroying animal habitats.
3. Introduce an element of research and scientific documentation. Encourage students to systematically record their observations - not only through photos but also with field notes, sound recordings, and sketches. It is a good idea to introduce a simple observation form to facilitate the comparison of results between groups.
4. Consider safety and logistics. Before heading out into the field, discuss safety rules - how to move around the ponds, in the forest, and near old buildings. Make sure students have appropriate attire and equipment (a phone with a camera, a notebook, something to sit on outdoors). It is good to have a Plan B - alternative activities in case of bad weather (e.g., analyzing photographic materials or maps in the classroom).
5. Show that the results matter to the community. Encourage students to have the outcomes of their work (a map, presentation, photo exhibition) publicly presented

- for example, at school, the library, a local cultural center, or on social media. This kind of activity boosts motivation and the students' sense of agency.

6. Pay attention to narrative and language. Help students describe their observations not just in a scientific way, but also in an emotional and cultural one - connecting facts with personal experience. This develops communication skills and teaches them that a place can be spoken about in different "languages": that of a naturalist, an artist, a resident, or a historian.

Annexes:

Annex 1. Katalog 5a (brochure: STAWiając na Mikulczyce - głos lokalnej młodzieży w obronie przyrody, authored by teachers from the Rodło Primary School No. 26 in Zabrze).



Bibliography:

- Kostorz R., Z dawnych dziejów Mikulczyc [From the Old History of Mikulczyce], Katowice 1999.
- Sample link to information about the old manor:
<https://mikulczyce-mikultschutz-klausberg.blogspot.com/2020/03/stary-dwor.html>
- Sample link to information about the train station and railway in Mikulczyce: <https://mikulczyce-mikultschutz-klausberg.blogspot.com/2017/08/kolej-na-kolej.html>
- STAWiając na Mikulczyce – głos młodzieży w obronie lokalnej przyrody [Betting on Mikulczyce – the voice of youth in defense of local nature]:
<https://megawrzuta.pl/rrxsdve6>



*Level 3 of complexity: Unit designed to take advantage of place,
community partnerships formed*

Sliač in the heart, heart in Sliač

LESSON 14



Authors: Michaela Miklošová, Alena Lisičanová, škola: Primary School of Andrej Sládkovič, Sliač, Slovakia

Subject/ discipline: **Slovak language and literature (language component)**

Target group/ age group: **8-10 years old**

Key topics:

- Urbanonyms and their significance for the history and cultural identity of the town of Sliač
- Local environment and community, digital, reading, civic, environmental, and social/emotional literacy
- Cooperation, responsibility, critical thinking, reflection, and self-assessment in group work

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the concept of urbanonym, interpret the meaning of selected street names in Sliač, and describe their significance for the city's history and cultural identity.
- (A) - to analyze and compare street names according to their origin and create a justified proposal and presentation for a new street name.
- (V) - to demonstrate respect for cultural heritage and a sense of belonging to their city by expressing informed opinions and collaborating responsibly in group work.

Concepts and definitions:

- Urbanonym: Name (proper name) of a street, square, or other public space in a municipality
- Primary sources of information: Data obtained directly (e.g., through observation, interviews)
- Secondary sources of information: Data obtained from existing records (atlases, internet)

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
1. Introduction and preparation in class	Brainstorming, guided conversation, discussion	45 min	Photos/street map of Sliač, paper, pens, pencils, city map
2. Field work, research in Sliač	Walking, taking photos, talking to residents, working with worksheets	40 min	Mobile phones/tablets (for taking photos, recording, scanning QR codes), worksheets, access to an interactive map (e.g., Google Maps), writing materials
3. Processing and presentation, reflection	Poster creation, presentation, discussion	50 min	Paper, mobile devices, flipchart paper
Total time estimated: 135 minutes			

Teacher or facilitator notes: This part of the activity is designed for an integrated theme day or for several lessons linked into a single unit. In Slovak language class, students actively explore their town of Sliač by researching street names (urbanonyms) with an emphasis on their cultural and historical significance. The aim is to develop civic literacy, critical thinking, cooperation, and deepen their positive relationship with the place where they live.

- Encourage students to interact with local residents to obtain primary information about street names and develop communication skills.
- Use ongoing formative assessment during activities (observation, verbal feedback, encouragement, peer assessment) and provide specific feedback, focusing on the work process, collaboration, and understanding of tasks.

- Final reflection is important for developing metacognitive skills and awareness of one's own learning. It is necessary to ask open-ended questions that encourage discussion and deeper reflection on the meaning of the work.
- It is recommended not to grade the activity, but to focus on formative feedback.

Description of each activity:

Activity 1 - Introduction and preparation in the class (45 minutes)

Aim of the activity: To activate students' prior knowledge of the local environment, familiarize them with the concept of urbanonym, project objectives, safety rules, and group work, and assign tasks before fieldwork.

Preparation of the activity: Prepare photos/a map of the streets of Sliač, prepare materials for dividing into groups and discussing health and safety.

Facilitation of the activity:

- Start with brainstorming on the topic "What is an urbanonym?", a short activating discussion and a demonstration of the names of some streets in Sliač (photos, map).
- Familiarize students with safety regulations and rules for working in groups. Together, go over the principles of occupational safety and health and work in groups according to the students' own suggestions (based on the word cloud).
- Create groups of 3-4 students and assign roles (leader, note-taker, illustrator, measurer, assistant) based on the students' own decisions within the group, according to their abilities and skills.
- Give instructions: Each group should "explore" 3-4 streets – find out who they are named after, whether the names are still relevant, and what they express.

Debriefing questions

- What safety rules are important when working in the field?
- What is an urbanonym and why is it important for a city?
- How did you participate in the division of tasks within the group?

Activity 2. Fieldwork/Sliač Survey (35-40 minutes)

Aim of the activity: To collect and record urbanonymic data directly in the field in Sliach, to develop orientation and digital skills, and to promote teamwork.

Preparation of the activity: The teacher prepares worksheets with a map, questions, and space for notes. They select the field survey route for several groups in advance.

Facilitation of the activity:

- Move with the students to the survey location. Divide the students into pre-determined groups.
- The groups look for street signs, take photos of them, scan QR codes (where they find information about a person or place), take notes on the worksheet, and talk to residents (if possible - e.g., shopkeepers, passersby, seniors on a bench): "Do you know why this street is called that?"

Debriefing questions

- What information did you gather about street names and why are they important?
- How did you work together as a group to collect data?
- What problems did you encounter and how did you solve them?

Activity 3. Processing and presentation (50 minutes)

Aim of the activity: Process the collected data into a presentable form, present the results of the groups' work.

Preparation of the activity: The teacher prepares paper and materials for each group to process the results. Prepare strips of paper for the "street of memories."

Place: back in the classroom or in the school garden.

Facilitation of the activity:

- Agree with the students on the desired final form of the presentation, where they will process the results of their survey (poster, PowerPoint presentation, or other format). The groups will process their findings on the

topic: "This is what we found out about our streets," based mainly on the worksheet and their notes.

- Let the students present their conclusions and lead a discussion with them:
 - Which names did you find interesting?
 - Which ones would you change and why?
- Let them suggest a new street name - who/what would they name it after? Why?
- At the end, give the students a strip of paper on which they write one thing they have learned from this block. Create a "Street of Memories" from all the strips and hang it on the bulletin board as a "map of our learning."

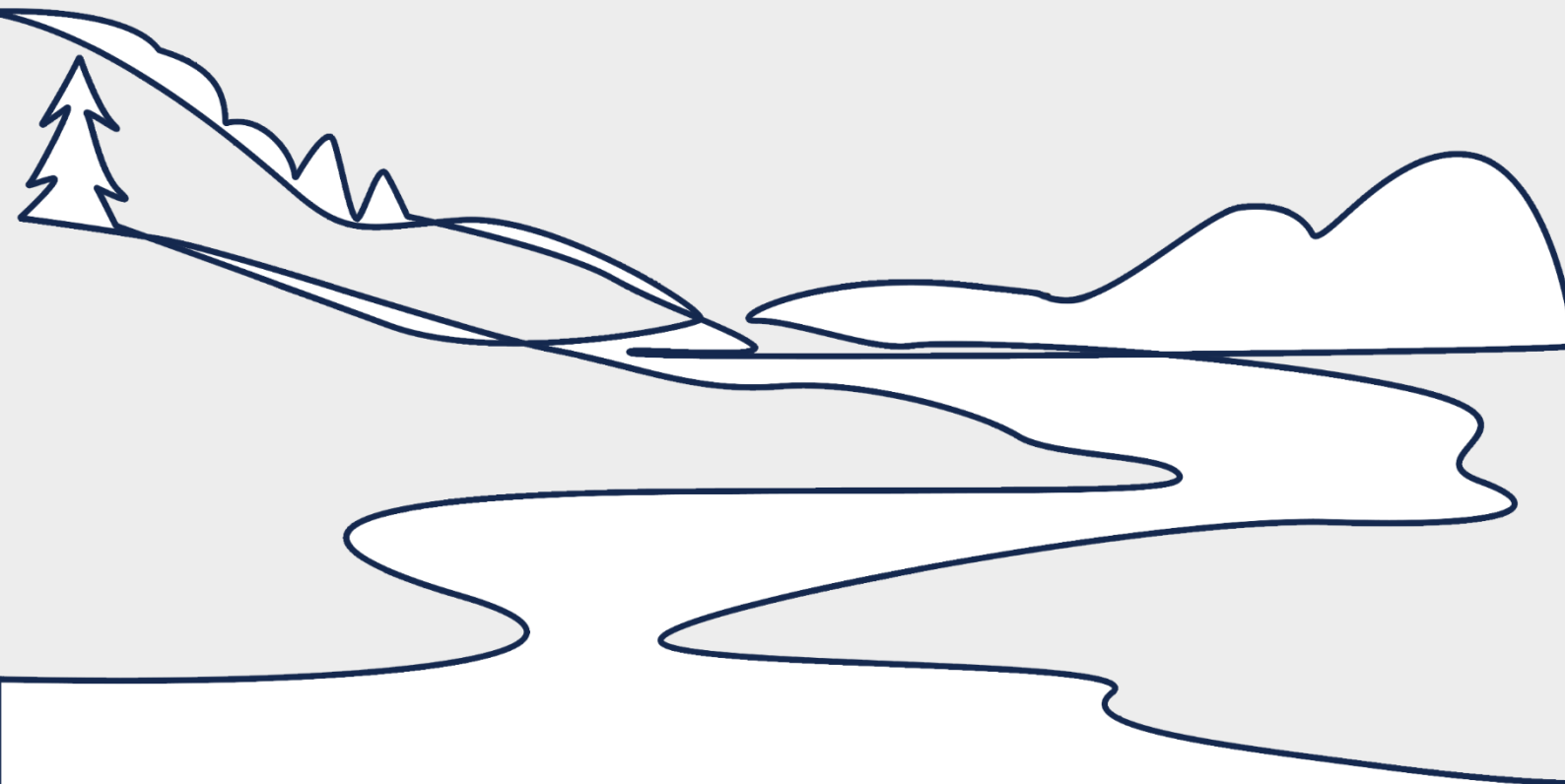
Debriefing questions

- What are the positives and negatives of our town of Sliač in relation to our topic?
- How can you use the knowledge and skills you have acquired in everyday life?
- What is the significance of this town and its history for you?
- How did you find working in groups? What skills did you practice?
- What did you find most difficult? Conversely, what did you find easy?
- How did you feel about working in the field and in the classroom?
- What new things did you learn? How can you work better next time?
- How would you rate your contribution to the group and the contribution of other members?



Questing – Secrets of the lake part 1

LESSON 15



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Subject/ discipline: **Geography; Biology; Civics education, History and Information and Communication Technology**

Target group/ age group: **8-10 years old, 11-13 years old**

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the historical development, ecosystem characteristics, and key ecosystem services of the lake area, highlighting the role of civic responsibility in its protection.
- (A) - to collect and analyze field data, map a learning route around the lake, and design an interactive educational quest based on local information.
- (V) - to demonstrate appreciation, civic responsibility, and collaborative spirit in promoting and protecting the local natural environment.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
1. Mapping the lake area	Group work	45 minutes	pens, pencils, notebooks, mobiles or tablets and the mapy.cz app.
2. Visit to the local municipal office	Group work	90 minutes	pens, pencils, notebooks
3. Closing and reflection		25 minutes	none
Total time estimated: 160 minutes			

Teacher or facilitators' note: This is a lesson plan for six consecutive 45-minute lessons; can be implemented as a day-long program.

The students explore the area of the lake near the school. They learn about its history, ecosystem, biodiversity and services that the area offers. The project focuses on using the method of place-based learning, which connects education with the real-life environment in which students live. Upper primary school students explore a selected route in the Jazero area of Košice through the lens of several subjects-geography, biology, history, and civics. During field lessons and research activities, they gather information about the area's natural conditions, historical development, biodiversity, and civic life. They then transform the acquired knowledge into the creation of an interactive educational game - a questing - that serves as a tool to test knowledge while also promoting experiential learning for other students and the public. The goal of the project is not only to develop interdisciplinary connections but also to foster interest in the local environment and encourage civic engagement among young people.

It is important to take into account the time needed to move between individual locations. Students should be divided into groups in such a way that each group is capable of working independently.

Before implementing the minilesson, make sure students have basic knowledge about the questing. The game originates from Scotland and England, where it has a long-standing tradition and is known as "letterboxing." Under the name "questing," it is widespread in the USA. The quest text guides players along a specific route, presenting them with various riddles, the solutions to which ultimately lead them to the treasure.

The game is somewhat similar to geocaching, combining hiking, land navigation, and treasure hunting. Unlike geocaching, however, it does not use GPS; instead, it relies on the ability to navigate terrain and follow a route based on solving various tasks.

When creating a questing, it's important to be well acquainted with the location or route being presented. The route should not be too short, but not too long either (ideally 3-7 km). It should be set in nature, yet easily accessible, and should follow a clearly visible path. Along the route, it's important to choose stopping points where participants will complete tasks that help them learn something about the area.

A map is an essential part of the quest. You can use a tourist or topographic map, marking the route, its starting and ending points, the various stops, and points of

interest. Alternatively, you can draw the map by hand, just like in the old days of adventurous expeditions.

We recommend to show students the existing questing of other places, such as:

- https://huravon.sk/wp-content/uploads/2019/10/Eko_hladacka-GMH-Hnusta.pdf
- <https://huravon.sk/wp-content/uploads/2019/10/Cyklopotulky-po-Levickom-okrese.pdf>
- <https://huravon.sk/wp-content/uploads/2019/10/ZS-s-MS-R.Dilonga-Trstena.pdf>

Integrating the place and the community in the minilesson

- the work takes place in a local area where students reside or go to school;
- a municipal office employee introduces the students to the history

of the area and answer the students' questions;

Activity 1: Mapping the lake area (4 x 45 minutes)

Preparation of the activity: pens, pencils, notebooks, mobiles or tablets and the mapy.cz app.

Facilitation of the activity: We recommend dividing class into small teams (each with approx. 4 - 5 students). Each team obtains a notebook and a tablet. The students will walk through and explore the area around the lake. The students will investigate the plants and animals that occur there, as well as other interesting places and take photos. They identify suitable locations for creating tasks for the quest. Using an app, they mark the route and designated points on the map.

Activity 2. Visit to the local municipal office (2 x 45 minutes)

Preparation of the activity: pens, pencils, notebooks

Facilitation of the activity: The students will investigate the history of the area. Before the actual visit to the local municipal office, it is necessary to arrange an appointment with a municipal office employee who will introduce the students to the history of the area. Also, the students prepare questions they want to ask about the history and the services the area offers. During the presentation, the students take notes. Remind students that after returning to the classroom, they will use their findings to create the tasks in the Questing.



Questing – Secrets of the lake part 2

LESSON 16



Authors: Silvia Barlogová, Ľudmila Jakubová, Adriana Halčáková, Iveta Timárová,
Basic school Dneperská, Košice, Slovakia

Subject/ discipline: **Geography; Biology; Civics education, History and Information and Communication Technology**

Target group/ age group: **11-13 years old, 14-16 years old**

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the key natural, historical, biological, and civic characteristics of the Jazero lake area in Košice and how they reflect the interaction between environment and community life.
- (A) - to collect, synthesize, and apply interdisciplinary field data to collaboratively design meaningful tasks for an interactive educational quest.
- (V) - to demonstrate responsibility, civic engagement, and appreciation for the local environment by actively contributing to a shared place-based learning product.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
1. Summarizing gathered information	Group work	30 minutes	whiteboard, markers
2. Creating tasks for the questing	Group work	360 minutes	route map, pens, crayons and colour markers, notebook, access to photos taken while exploring the lake area

3. Discussion and selection of the final tasks	Simulation exercise	75 minutes	route map, tasks
4. Closing and reflection		25 minutes	none
Total time estimated: 490 minutes			

Teacher or facilitators' note: There are six consecutive 45-minute lessons; can be implemented as a day-long program. The project focuses on using the method of place-based learning, which connects education with the real-life environment in which students live. Upper primary school students explore a selected route in the Jazero area of Košice through the lens of several subjects - Geography, Biology, History, and Civics. During field lessons and research activities, they gather information about the area's natural conditions, historical development, biodiversity, and civic life. They then transform the acquired knowledge into the creation of an interactive educational game - a questing - that serves as a tool to test knowledge while also promoting experiential learning for other students and the public. The goal of the project is not only to develop interdisciplinary connections but also to foster interest in the local environment and encourage civic engagement among young people. Based on the information they have gathered about the lake area near their school, the students create various tasks for the questing. They discuss and choose the most suitable tasks for the final version of the scavenger hunt.

The time allocated for creating tasks for the questing is suitable for students who already have experience with project-based learning. Otherwise, it is necessary to allow more time for task creation. The activity was carried out as a full-day block of instruction. If the organization of teaching does not allow for this, the block can be divided into several parts.

Activity 1: Summarizing gathered information (30 minutes)

Preparation of the activity: Prepare whiteboard, markers.

Facilitation of the activity: After returning to school, the teams take turns presenting the facts they have gathered while exploring the lake area and visiting the local municipal office and list them on the board.

Activity 2: Creating tasks for the questing (4 x 45 minutes)

Preparation of the activity: Prepare route map, pens, crayons and color markers, notebook, access to photos taken while exploring the lake area.

Facilitation of the activity: We recommend dividing class into small teams (each with approx. 4 - 5 students), each team will create tasks from various subjects - Geography, Biology, History, Civics. Student use photos taken while exploring the lake area to create tasks.

Activity 3: Discussion and selection of the final tasks (75 minutes)

Preparation of the activity: route map, tasks

Facilitation of the activity: Conclude by opening a debate in which students (in teams, individually, or together) will summarize their teamwork and individually reflect on the following aspects:

- Create tasks about the place of various topics - historical

development of the place, biodiversity - plants and animals living in the lake area, civic life and services that the area offers.

- Create tasks that provide new information about the place.

Recommendations for teachers: Before implementing the minilesson, make sure students have basic knowledge about the questing.

The game originates from Scotland and England, where it has a long-standing tradition and is known as "letterboxing." Under the name "questing," it is widespread in the USA. The quest text guides players along a specific route, presenting them with various riddles, the solutions to which ultimately lead them to the treasure.

The game is somewhat similar to geocaching, combining hiking, land navigation, and treasure hunting. Unlike geocaching, however, it does not use GPS; instead, it relies on the ability to navigate terrain and follow a route based on solving various tasks.

When creating a questing, it's important to be well acquainted with the location or route being presented. The route should not be too short, but not too long either (ideally 3-7 km). It should be set in nature, yet easily accessible, and should follow a clearly visible path. Along the route, it's important to choose stopping points where participants will complete tasks that help them learn something about the area.

A map is an essential part of the quest. You can use a tourist or topographic map, marking the route, its starting and ending points, the various stops, and points of interest. Alternatively, you can draw the map by hand, just like in the old days of adventurous expeditions.

We recommend to show students the existing questings of other places, such as:

- https://huravon.sk/wp-content/uploads/2019/10/Eko_hladacka-GMH-Hnusta.pdf
- <https://huravon.sk/wp-content/uploads/2019/10/Cyklopotulky-po-Levickom-okrese.pdf>
- <https://huravon.sk/wp-content/uploads/2019/10/ZS-s-MS-R.Dilonga-Trstena.pdf>



Discovering the world around us - outdoor mapping of the terrain in the town of Detva

LESSON 17



Authors: Mgr. Eva Kuráková, Mgr. Bohuslav Ilavský, Mgr. Eva Ilavská, ZŠ J. J. Thurzu Detva, Slovakia

Subject/ discipline: an interdisciplinary approach connects several subject areas and allows for a contextual understanding of the world: **Geography, biology, environmental education, civics, art education, technical education.**

Target group/age group: **11-13 years old**

Key topics:

- Place as a textbook -The municipal library as a community building and its contribution to the citizens of the city, exploring the significance of the building and finding connections.
- Art in public space - architecture, objects, crafts, 3D object imaging.
- The relationship between people and the environment – natural elements, caring for plants, the importance of flora in public space, how we influence each other.

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to describe the key architectural and natural features of a building and its surroundings.
- (A) - to measure, record, and represent the building through sketches and basic technical drawings (floor plan, side view, elevation).
- (V) - to demonstrate responsibility and appreciation for the visited place by recognizing its value for the local community.

Concepts and definitions

Concept 1 - Place = the building and its surroundings as a source of knowledge.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
1. Pulling in, tuning in to discovery	Energizer, game	30 minutes	Paper, markers

2. Measurement and description of the building	Group work, practical measurements	90 minutes	Paper, pencils, markers, rulers
3. Drawing and sketching buildings	Artistic activity, observation	60 minutes	Tablet, paper, markers
4. Survey of the natural environment around the building	Field work, team sharing	60 minutes	mobile phone with app, coloured paper, pen
5. Final reflection	discussion	10 minutes	Nothing or online form
Total time estimated: 250 minutes			

Teacher or facilitators' note:

- Students work in groups. It is necessary to consider how to divide the groups.
- Activities can also be carried out separately over several days.
- Instructions must be precise and understandable.
- Time management and monitoring the dynamics of the entire process are important.
- It is important to collect/store/share individual outputs in one place.

Description of each activity:

Activity 1. Pulling in, tuning in to discovery (30 minutes)

Aim of the activity: Get kids interested in the mapped location and get them excited about exploring and searching. Encourage kids' imagination and creativity.

Preparation of the activity:

Prepare several interesting energizers, e.g.:

- Detail Hunter (The teacher asks the students to look around the room

for one minute and remember as many details as possible. Then they close or cover their eyes and say what they noticed. Everyone usually notices something different - noticing details in the field.

- Find lost information about this location (Based on written clues/instructions, children search for textual, visual, and tactile information located in the area. Once they have collected it, they reflect on it together with the teacher.)

Facilitation of the activity: Choose one or more of the activities described above. Introduce the topic to the students (new project, spatial exploration, developing research skills and creativity). Ask the children to complete the task within a short time frame. Finish each activity in a group discussion with the following reflective questions.

Debriefing questions

- How did you feel during the activity?
- Do you enjoy discovering new things in a new space?
- What new things did you learn about this space?

Activity 2 - Measuring and describing the building (90 minutes)

Aim of the activity: Students will be able to measure certain parameters of the building and individual elements and areas of the property (e.g., flower bed, sidewalk, lawn). Students will be able to record data and estimates in a clear table.

Preparation of the activity:

- Traditional manual measurement (measuring tapes) or measurement with string, steps
- Geodetic and technical methods (GPS/GNSS measurements, total station/geodetic theodolite)
- Map and digital methods (digital maps and orthophotos/Google Earth, mapy.cz)

Materials needed: paper, rulers, colored markers, measuring tools according to the chosen method (meter, pedometer, etc.)

Procedure:

A) Children measure the dimensions of the plot or its individual parts

B) They draw a floor plan on paper to scale (e.g., 1 step = 1 cm).

Facilitation of the activity: The teacher explains the measurement methods to the children and introduces them to the individual measuring tools. He/she shows them what the final form of their outputs should look like (display in a table).

Debriefing questions

- What was easy/difficult about measuring?
- How did you work together?
- Which dimension surprised you the most?
- What knowledge did you use in the activity?
- What skills did you use in the activity?

Activity 3 - Drawing and sketching buildings, creating a 3D model (60 minutes)

Aim of the activity: To develop spatial imagination, geometric thinking, and creativity. To develop work with proportions, scale, and ratio. The student will be able to measure land or space. They will be able to use a scale and create a visualization of space. Develop digital skills and creativity.

Preparation of the activity:

- Draw a floor plan (teaches them to work with scale and proportions)
- Modeling with materials (children can better understand height and proportions)
- Digital visualizations (digital floor plan or 3D model)
- Photographs and collages (combine reality with visualization, also suitable for less accurate)

Tools: tablet, simple application for creating 3D models (e.g., Tinkercad, SketchUp)

Procedure:

- A) Enter the dimensions of the building or land
- B) Create a 3D model
- C) Add color details and objects

Facilitation of the activity: The teacher explains the task to the children and reminds them how to use the application. Agree with the children on the final form of the activity/what the final result will look like.

Debriefing questions

- What did you notice that you hadn't seen before?
- What surprised you when viewing the images?
- What is the difference between the whole and the detail?
- What is elevation, side view, and floor plan?
- Why do we need architecture?
- What is the difference between a sketch and a technical drawing?

Activity 4. Survey of the natural environment around the building (60 minutes)

Aim of the activity: Identify plants and trees in the area, write down the names of individual species.

Preparation of the activity: get to know the PlantNet app

Materials: cell phone, camera, paper, glue, markers, PlantNet mobile app

Procedure:

- Children photograph plants and objects in the area (concrete flowerbed, etc.).
- They look up their names and specifications.
- They write the names on colored paper and take a photo with the name.

Facilitation of the activity: The teacher explains the assignment to the children and reminds them how to use the app. They agree with the children on the final form of the activity/what the final result will look like.

Debriefing questions

- What new plants did you learn about?
- What surprised you?

Recommendations for teachers: Set aside time to reflect on this block of teaching - this can also be done later (in the near future) indoors. Focus not only on academic knowledge, but also on reflecting on group work, outdoor teaching, and the feelings associated with it, as well as the connection between education and practical life.



Learning Beyond the Classroom: Multidisciplinary Exploration of Utra's History, Culture, and Environment

LESSON 18



Authors: Sami Rätty, Henna Hulmi, Mike Miikkola, Satu Kovanen & ENO Schoolnet Association, Utra School, Joensuu, Finland

Subject/ discipline: **History, social studies, environmental studies, visual arts, Finnish language / expressive skills, physical education**

Target group/ age group: **8-10 years old**

Key topics: local history, nearby environment, local nature, log driving tradition

Learning Objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain how the history, natural environment, and human activities (e.g., log driving, industry, recycling) have shaped the present identity of the Utra area in Joensuu.
- (A) - to investigate and synthesize local historical and environmental information through fieldwork, collaboration, creative expression, and the use of digital and observational tools.
- (V) - to demonstrate appreciation for local heritage and nature, developing a sense of belonging and environmental responsibility toward their living area.

Concepts and definitions

Log driver (Tukkijätkä): A person who worked with logs in the forest or floated them down rivers to sawmills. This physically demanding and dangerous profession was common from the late 1800s to the 1950s.

Seppo: A Finnish gamification platform that allows users to create and play educational games on mobile devices. On the platform, teachers or other creators can design games combining goal-oriented activities, teamwork, and skill application. Tasks can involve videos, images, or text, and games can be played indoors or outdoors, designed to engage and motivate learners in various settings.

Utra: A district of Joensuu. According to the City of Joensuu, the population in 2022 was 3,344. Utra is located on the shore of the Pielisjoki River, between Rantakylä and Kupluskylä (in Kontiolahti). Utra was annexed to Joensuu in the 1950s; before that, it belonged to Kontiolahti.

MOK: A multidisciplinary learning module lasting about a week, focusing on studying a broad theme. During the week, students work across multiple subjects to deepen their understanding of the chosen theme instead of traditional lessons.

Such a module is usually organized twice per school year, with at least one being a uniform week-long period.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
Workshop 1 - Utra, Activity 1: Utra's history	Lecture (e.g., expert visit), discussion	45 minutes	Note-taking materials, lecturer
Workshop 1, Activity 2: Exploring Utra district	Small-group visits to local historical sites	45 minutes	Note-taking materials, local guides (if possible)
Workshop 1, Activity 3: Utra sites - reflection	Information seeking and production, poster creation and presentation	90 minutes	Computer, internet, cardboard, markers/paint, tape, glue, printed images
Workshop 2 - Utra's nature: River nature	Aquatic insects' workshop by the Pielisjoki River	60 minutes	Nets, containers, magnifiers, identification guides/cards
Workshop 3 - Log driving tradition, Activity 1: Exploring log driving	Watching videos and discussion	45 minutes	Videos
Workshop 3, Activity 2: Log driver in visual arts	Studying and drawing a log driver silhouette, placing it in a river landscape	90 minutes	Drawing paper, pencils, markers, scissors, cardboard, tissue paper, art books

Workshop 3, Activity 3: Exhibition	Display of posters and artworks for the whole school	15 minutes	Tape, string, etc.
Workshop 4, Activity 1: Outdoor learning adventure - summary	Interactive mobile adventure on Utra's history	3 hours	Seppo platform, mobile devices
Total time estimated: approx. 3-4 school days (implemented during MOK week)			

Teacher or facilitators' note: Teachers should familiarize themselves with the local area and its sites in advance and contact local partners for collaboration. Outdoor learning requires attention to safety, especially near water.

Students should be guided toward investigative and observational learning - insights gained on-site are central to learning. Reflection after each activity deepens understanding and helps connect history, nature, and the present.

Community spirit and local participation can be strengthened by presenting student work to the school community or local residents. The teacher's role is to act as a facilitator who creates

conditions for insightful, meaningful, and place-based learning.

Bibliography:

Utra Mobile Guide: <https://www.museoeliel.fi/utran-mobiilioppaat>



The Local Forest is Home to Birds - Learning About Local Nature, Natural Resources, and 3D Creativity

LESSON 19



Authors: Sanna Huovinen, Janne Salin, and Sirkku Hämäläinen & ENO Schoolnet Association, Kontioniemi School, Kontiolahti, Finland

Subject/ discipline: **Environmental Studies, Arts, Mother Tongue, Physical Education, Global education, foreign languages (English)**

Target group: **8-10 years old**

Key topics: Local forest, birds, recycling, reuse, upcycling, natural resources and materials, craftsmanship, 3D visualization, creativity

Learning Objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to describe local forest birds and vegetation, explain the concepts of natural resources, recycling, reuse, and upcycling, and identify different materials and their origins.
- (A) - to creatively reuse and combine materials in a 3D product, applying imagination, storytelling, aesthetic skills, and basic English communication.
- (V) - to demonstrate appreciation for natural resources, material responsibility, and intercultural cooperation while valuing the biodiversity of the local environment.

Concepts and definitions:

Recycling: Collecting, processing, and reusing used materials or products as raw materials for new products.

Reuse: Using a product or material again in its original or nearly original form without processing it into new raw material.

Upcycling: Reusing materials or objects in a way that increases their value, quality, or function compared to the original.

Natural Resources: Substances, energy, or living organisms occurring in nature that humans can use for products, services, or sustaining life.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
Exploring the local environment as a bird habitat	Excursion, observation (birds/traces), discussion	45 minutes	Notebooks, camera, list of common birds/bird book
Recycling, reuse, upcycling, and natural resources	Visit from an upcycling artist, lecture and hands-on guidance	30 minutes	Notebooks, camera, recycling/reuse materials
Designing your own bird	"My Bird" writing exercise with guiding questions	15 minutes	Printed guiding questions, notebooks, pens
Creating a 3D bird	Upcycling craft	90 minutes	Recycled materials, scrap materials, glue, scissors, (paint and brushes)
3D birds in the local environment	Excursion to place birds, photography, collecting natural materials for frames	45 minutes	Camera, photo prints
Presentation	Assemble a bird exhibition indoors or outdoors, sending best ones to the international 3D upcycling ENO Art bird contest.	45 minutes	Tape, string, etc.
Total time estimated: 6 x 45 minutes			

Description of each activity:

Lesson 1: Exploring the local environment as a bird habitat (45 minutes)

Aim of the activity: Introduce local birds and understand that the forest is their home, which should be respected and protected.

Preparation of the activity: Teacher identifies typical local birds, creates a display with images, or consults a bird book. Optional: camera for photos and audio device for bird calls.

Facilitation of the activity: Observe and record bird species, nests, and other signs. Listen to bird songs and try to identify species. Move quietly to avoid disturbing birds.

Debriefing questions

- How many birds did you see that you hadn't known before?
- Were you surprised by the number of birds observed?
- Which bird made the strongest impression and why?

Lesson 2, Activity 1: Recycling, reuse, upcycling, and natural resources (30 minutes)

Aim of the activity: Understand what recycling, reuse, upcycling, and natural resources mean, and how these practices conserve virgin materials.

Preparation of the activity: Invite a local recycling/upcycling artist or prepare a lecture/video. Collect materials for students to use in making their birds.

Facilitation of the activity: Artist visits or online video/lecture. Students apply knowledge to create bird models.

Debriefing questions

- What is the difference between recycling and reuse? What about upcycling?
- How do you decide if a material is waste or useful?

Lesson 2, Activity 2: Designing Your Own Bird (15 minutes)

Aim of the activity: Ideate a 3D bird and write a story describing it.

Preparation of the activity: Use "My Bird" guiding questions.

Facilitation of the activity: Writing exercise.

Lesson 3&4: Creating Your Own 3D Bird (90 minutes)

Aim of the activity: Create a 3D bird from recycled/upcycled materials.

Preparation of the activity: Prepare materials and tools.

Facilitation of the activity: Students create a 3D bird from recycled/upcycled materials.

Lessons 5&6: 3D Birds in the Local Forest and Exhibition (90 minutes)

Aim of the activity: Place 3D birds in the forest or photograph them for an indoor exhibition, combining creativity and environmental engagement.

Preparation of the activity: Ensure good weather if outdoors, camera, bags for collecting natural materials, plan exhibition indoors or outdoors.

Facilitation of the activity: Hang birds in the forest or display photographs indoors. Frames can include natural materials illustrating bird habitats and behavior.

Debriefing questions

- Why did you choose this spot in the forest for your bird?
- Which natural materials does your bird prefer, and why?
- What does it eat or use for nesting?

Recommendations for teachers: Suitable for elective arts courses, integrating multiple subjects. Allocate sufficient time for 3D creation from recycled materials.

Annexes:

Annex 1 "My Bird" writing guide (questionnaire)

Annex 2 ENO Art: Upcycling Art Contest 2025



Bibliography:

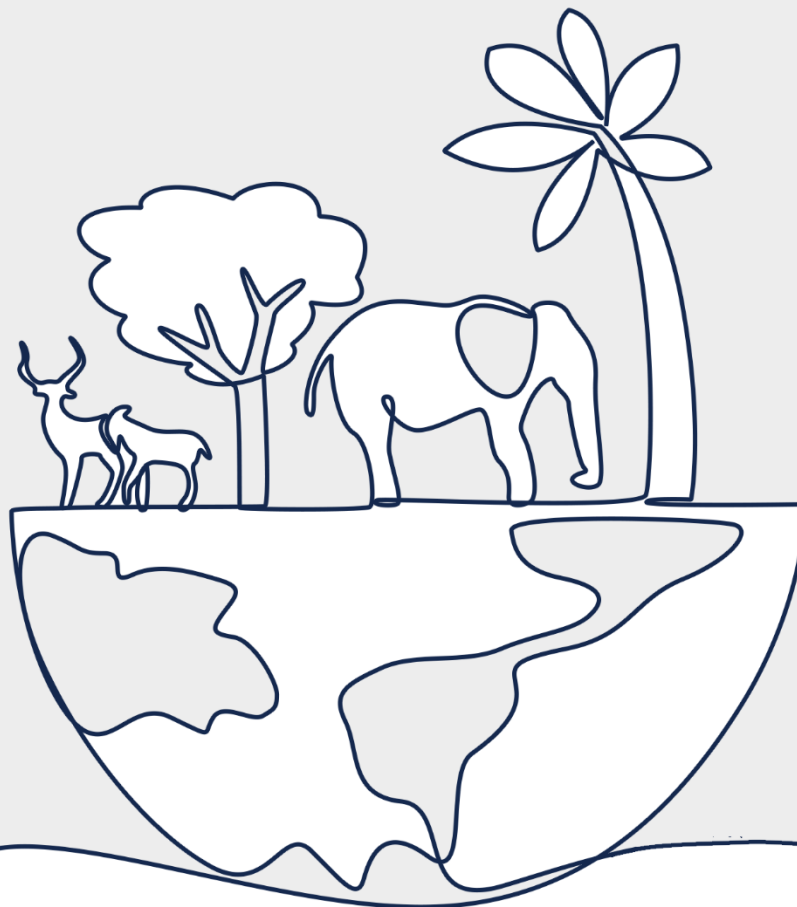
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- Upcycling - Vaatteiden toinen elämä, Paula Malleus (Basam Books, 2022)
- Luonnonvarojen maailma, Otava Oppiminen website



Level 4 of complexity: Integrated place-based unit with Service Learning, strong community partnership (high complexity)

In the world of plants and animals

LESSON 20



Authors: Daniela Alexandra Tritean, "Iuliu Hațieganu" Secondary School, Cluj-Napoca, Romania

Subject/discipline: **Living Environments/Mathematics and Environmental Exploration**

Target group: **8-10 years old**

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to identify and describe the diversity of flora and fauna in the visited environment and understand basic principles of nature conservation.
- (A) - to observe and compare natural elements (sounds, colors, shapes, phenomena) and apply appropriate environmental protection rules during field activities.
- (V) - to demonstrate respect for nature and teamwork by engaging responsibly and cooperatively in outdoor learning experiences.

Concepts and definitions:

To live and grow, plants need light, heat, water, air and nutritious soil.

To live and develop, animals need light, heat, water, air, and food in different ways.

Some animals eat meat, others eat plants. However, there are animals that eat both types of food.

Some animals give birth to live young, which they feed on milk. Others reproduce by laying eggs. The eggs hatch into young.

Living environments:

The forest: is the living environment for numerous plants and animals.

Deciduous forests: forests that are made up of trees whose leaves fall in autumn (oak, beech, sycamore, acacia, birch).

Coniferous forests: found in the mountains and have needle-shaped leaves: fir, spruce and pine.

Other plants also grow in the forest: fern, mushroom, raspberry, strawberry, moss, blueberry, blackberry. Animals: wolf, bear, fox, deer, squirrel, marten, woodpecker, blackbird, nightingale, cuckoo, but also snakes, insects, lizards.

Lake, pond: these are standing waters. They are habitats for many plants and animals.

On the water's edge we find plants such as reeds, rushes, and willows. Water-loving animals live here:

birds: wild duck, mallard, swan; insects: dragonflies, mosquitoes, spiders; other animals: frogs, fish, snakes, crayfish.

Landmark = sign or object that facilitates orientation

Saplings = young woody plants that are transplanted elsewhere

Nursery = land reserved for the propagation and formation of plants until they are planted in their final location

Durability = the ability to last a long time

Energy yield=energy efficiency

Biodiversity = multitude of environments for animals and plants

Sustainability = sustainable development = balance between economic growth and environmental protection and finding alternative resources;

Stolon = creeping stem or root that, in contact with the ground, forms roots at the nodes and gives rise to a new plant;

Alveola = tray or pot for planting;

Fertilizer/nutrients = material used in agriculture to fertilize (enrich) the soil.

Activity outline/description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
1. "We take root - We plant life" Participation in afforestation activities alongside CERT Transylvania	Learning through discovery, practical activity	4 hours	Beech, alder, oak saplings, tools Story

2. "More than a stopover! – a source of health" Visit Berryland Recreation Complex	Learning through discovery, practical activity -planting strawberry stolons; -making dessert from healthy ingredients	5 hours	Strawberry stolon, alveolus, soil, fertilizer, water, berries, Greek yogurt, biscuits
3.The story of the strawberry stolon Reflection activity	Creative writing + drawing	1 hour	Sheets, colored pencils
Estimated total time: 10 hours			

Teacher or facilitator's notes: Why are children so captivated by the environment? Because they love nature, animals, plants, and especially spending time outdoors.

In order to find the answer to as many questions as possible, some of the activities took place at school, integrated with different disciplines, but also at specialized institutions.

Description of each activity:

Activity 1 "We take root - We plant life (240 min)

Aim of the activity: The activity aims to help students recognize forest types by their specific features and develop their interest in plants, animals, and their habitats.

At the same time, it supports the formation of an awareness of volunteerism among students and families, by understanding the importance of environmental protection gestures.

Preparation of the activity:

- concluding a collaboration protocol with various associations, NGOs that organize afforestation activities, in our case CERT Transylvania, with the support of the National Forestry Agency ROMSILVA;
- informing students and their families about these campaigns;
- raising awareness and bringing all educational actors involved

(students, teachers, parents) closer by complementing the formal education offered by the school with informal education generated by various projects;

- registration of participants on various platforms at the request of the organizers;
- identification of participants' means of transport;
- the establishment by teachers of the activities that will be carried

out in that context.

Facilitation of the activity: Integrated activities: Romanian language communication, Mathematics and environmental exploration, optional "MINI Architecture". The activity began with a theoretical part, by presenting the story "The Story of the Bunny" (see link) https://docs.google.com/presentation/d/1_2-wB40eo3xltVwLsGNfP0B8my0IP-ws/edit?slide=id.p15#slide=id.p15

This story aimed to help students discover the main elements specific to forests (types and habitats for animals), as well as to raise their awareness of the role and importance of forests and improve their attitude regarding human responsibility towards nature.

During the presentation of the story, students will be asked various questions, starting from the events in the story:

- What animals are found in our forests? (wolf, bear, fox, deer, squirrel, marten, woodpecker, blackbird, nightingale, cuckoo, but also snakes, insects, lizards)
- What trees give us acorns and cones? (oak and fir)
- What other tree species do you know? (oak, beech, sycamore, acacia, birch)
- What is the difference between the trees you see around you? (some have deciduous leaves)
- What are forests made up of trees whose leaves fall in autumn called? (deciduous)
- What are forests with needle-shaped leaves called and what species of trees do we find there? (conifers: fir, spruce and pine)
- What do we do with the wood from the forest? (we use it as fuel and for construction)

The optional collaborating architect "MINI Architecture" explains to students the use of wood as a construction material for buildings (processing, use, benefits - durability and energy efficiency).

What is the forest good for? (air purification, air quality improvement, oxygen production, biodiversity - environment for animals, plants, food source - mushrooms, berries, medicinal plants, soil fixation, raw material and fuel, tourism and recreation).

A short recap of the story is done through questions based on the text: What happened to our heroes? Why did the bunny leave? What about the Bear and the Squirrel? Why was the forest cut down? What can we do to protect the forest?

In the city? Do we need forests, green spaces? Why? (architectural elements: absorb noise, dust and heat; transform urban areas aesthetically; for recreation; encourage movement and socialization).

<https://docs.google.com/document/d/1xKtHWrOgyFHAvuC1E8QLDyDo06t6MJ0R/edit?tab=t.0>

Here is the instructional part regarding planting seedlings:

Notions of units of measurement: Pit depth/width: 30/30 cm; Distance between seedlings: 1 meter between seedlings, 2 meters between rows; Identification of the types of trees planted: hornbeams, beeches, oaks (trees from deciduous forests).

Identifying landmarks for establishing rows (e.g. 2 trees at the end of the row). Taking over the tools and dividing the tasks: the hardest work is done with the help of adults (digging the holes), cleaning the site, establishing the distance, planting the seedlings (the students' task). The groups are made up of 2-3 people.

Finally, the number of seedlings planted by each group and their total were counted. And after work, each participant was rewarded with a tasty meal.

Moment of relaxation: the students built a fortress from the bark of fallen trees.

Debriefing questions

- What do you think was the purpose of our activity today?
- What did it mean to you? How did you feel?
- What did you learn?
- What do you think happens if the forest disappears?
- What can we do?
- How will this experience change your behavior in the future?

Activity 2 "More than a stopover!" - a source of health (300 minutes)

Aim of the activity: The activity aims to develop skills in recognizing, planting and caring for young strawberry plants.

At the same time, it stimulates interest in learning about the characteristics of plants and living environments, as well as in understanding the health benefits of consuming berries.

Preparation of the activity:

- informing students and their families about the activity carried out;
- contacting the complex representative for reservation (online or by phone <https://berryland.ro/contact/>);
- identification of participants' means of transport;
- the establishment by teachers of the activities that will be carried out in that context;
- preparing the documentation necessary for carrying out the activity and its approval by the management of the educational institution.

Facilitation of the activity: Integrated activities: Romanian language communication, Mathematics and environmental exploration, Visual arts and practical skills, Personal development

The activity began with a visit to the Berryland Recreation Complex to observe and analyze the poultry and strawberry plantations. The aim was to raise students' awareness of the possibility of developing a sustainable, low-cost agricultural business by reducing pollution. They were presented with the idea of the business, the fact that in addition to the forest fruit plantations, there is also a recreational area, namely a playground made of sustainable materials, a relaxation area, namely gazebos built of natural materials (wood + reed).

During the presentation, students will be asked various questions:

- What do you understand by sustainability? (sustainable, efficient development, by reducing costs and reducing polluting factors)
- What berries do you know? (blackberries, blueberries, strawberries, raspberries)
- How can they be consumed? (fresh, frozen or processed: jams, preserves, syrups)
- Why is it important to consume berries? (they contain vitamins, minerals, fiber, are detoxifying, antioxidant and strengthen the immune system)

Activity 1: Next comes the activity of planting strawberry stolons

The organizers have prepared for each student a strawberry stolon, a socket, soil, water, fertilizer. In an organized manner, the objects on the table are identified and the coordinator explains step by step how to plant the stolon, starting with introductory notions:

- What is a stolon? (young plant)
- How is it formed? (from a stem that leaves the mother plant and takes root)
- What is an alveolus? (planting pot)
- Why does each alveolus have an opening? (to eliminate excess water and thus avoid root rot)

The soil contains nutrients (rich in vitamins and contains vegetables, eggshells). To make it easier to understand, a comparison is made between healthy food and fast food.

The steps for planting stolon are explained step by step:

- soil is placed in the alveolus without being compacted;
- a space is left in the middle for the root;
- the root is inserted and covered with soil by tamping;
- place the fertilizer grain at the edge of the planting container;
- the ground gets wet.

Replanting rules (mathematics and environmental exploration - units of time):

- Keep it in that container for 14 days, with daily watering in the morning and evening;
- After the 2 weeks, transplant it into the garden or into a larger pot;
- The fruits will be good to eat in a month and a half.

To retain concepts and rules, students are asked to repeat what they have learned.

Activity 2: Making a healthy dessert

Preparation of the activity: Glasses, spoons, cookies, Greek yogurt, and fresh berries are prepared for each student.

Facilitation of the activity: The students are challenged to make their own dessert from the prepared ingredients: they add crushed biscuits, a spoonful of Greek yogurt and decorate with berries. And thus, the students learned that from simple

but healthy ingredients, they can make a delicious and healthy dessert (personal development).

For English, the names of forest berries are translated, pronounced and repeated: strawberries, blueberries, raspberries, blackberries.

Also at this stage, for the personal development of each student, the Berryland representative chose to tell the students his life story, who, from an orphaned child, abandoned by his mother and raised in unimaginably difficult conditions in orphanages, managed to go to school, despite the system that tried to hinder him, and to become the adult he is today, overcoming all the hardships of life. He explained to the students that success depends on each person's desire, on the motivation that each person has.

Debriefing questions

- What do you think was the purpose of our activity at Berryland?
- What did it mean to you? How did you feel?
- What did you learn?
- How will this experience change your behavior in the future?

Activity 3. The Story of the Strawberry Stolon (60 minutes)

Aim of the activity: The aim of the activity is to develop students' creativity and imagination by encouraging them to reflect on their real-life experience with planting strawberries through a literary text and an artistic drawing.

Preparation of the activity: You prepare sheets of paper, colored pencils or crayons, and set a calm classroom environment. You recall with students the visit to Berryland and the stages of planting the strawberry stolon, activating prior knowledge and experiences.

Facilitation of the activity: You invite students to imagine that the strawberry stolon they planted has its own story. You explain that they will write a short creative text entitled "The Story of the Strawberry Stolon", describing its journey from planting to growth, using what they learned about plants, care, and the environment. After writing, students create an illustrative drawing related to their story. You encourage individual work, offer guidance when needed, and ensure that all students complete both the text and the drawing. At the end, students present their stories and artworks to the class.

Debriefing questions

- What do you think was the purpose of our activity at Berryland?
- How did you feel while writing the story and drawing the stolon?
- What new things did you learn about plants through this activity?
- How do you think this experience will influence the way you care for plants and nature in the future?

Recommendations for teachers: Good organization of activities is needed. Being a project that takes place in the middle of nature, it can be influenced by the weather forecast, which can ruin plans.

Annexes:

Annex 1

[https://docs.google.com/presentation/d/1_2-wB40eo3xltVwLsGNfP0B8my0IP-
ws/edit?slide=id.p15#slide=id.p15](https://docs.google.com/presentation/d/1_2-wB40eo3xltVwLsGNfP0B8my0IP-ws/edit?slide=id.p15#slide=id.p15)

Annex 2

[https://docs.google.com/document/d/1xKtHWrOgyFHAvuC1E8QLDyDo06t6MJ0R
/edit?tab=t.0](https://docs.google.com/document/d/1xKtHWrOgyFHAvuC1E8QLDyDo06t6MJ0R/edit?tab=t.0)



Marjala in Our Hearts - It Takes a Village to Raise a Child

LESSON 21



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Subject/ discipline: **Environmental studies, physical education, history, social studies, mother tongue, drama/visual arts, religion/ethics**

Target group: **8-10 years old**

Key topics: Local environment, school surroundings, local history, environmental education, biodiversity loss, nature conservation, community, teamwork, life skills, community art event, digitalized learning.

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the natural, historical, cultural, and civic characteristics of their local area, including ecosystems, water systems, local governance, and elements of the Kalevala connected to the environment.
- (A) - to navigate and analyze their local surroundings from multiple perspectives, carry out practical and collaborative activities, and apply map-based and experiential learning strategies.
- (V) - to demonstrate responsibility, appreciation, and civic engagement toward their community, environment, cultural heritage, and shared well-being.

Concepts and definitions:

Marjala - Marjala is a district of the city of Joensuu, located on the western shore of the Höytiäinen Canal. It is divided into northern and southern parts by the Marjala Canal, also known as Kuunvirta. Marjala has about 2,300 residents. The area consists mostly of detached houses and row houses, but several apartment buildings have been built, especially near the canal estuary.

MOK-week - The MOK week is a multidisciplinary learning module that lasts about a week and focuses on studying a specific broad theme. During the week, students work across multiple subjects to deepen their understanding of the chosen theme instead of following traditional lessons. This type of learning period is usually organized at school twice during the academic year, and at least one of them is intended to be a uniform, week-long module.

Seppo - Seppo is a Finnish gamification platform that allows users to create and play educational games on mobile devices. On the platform, teachers or other creators can design games that combine goal-oriented activities, teamwork, and

the use of personal skills, with tasks solved through elements such as videos, images, or text. The games can be played both indoors and outdoors, and they are designed to engage and motivate learners in a variety of environments.

Activity outline/ description of the lesson plan:

Activities	Methods used	Duration	Supplies/ resources
Walking and cycling tour of the school's surroundings and local history	Fieldwork	90 minutes	Notebooks, maps, local historian, bicycles
Survey for students about Marjala's local area	Digital survey	45 minutes	Google Forms
Community activity 1: Establishing a meadow at the parish hall	Hands-on project	90 minutes	Seeds, planting area
Community activity 2: Daycare collaboration event	reading, studying elves	30 minutes	Christmas folktales
Community activity 2: Daycare collaboration event	Cooperative event/drama	30 minutes	Elf costumes, lanterns
Adopt-an-area project	Study, exploring, observing, creative work	3 × 45 minutes	prints, notebooks, poster-making materials, art supplies
"Amazing Race Marjala" Interdisciplinary learning week (MOK week)	Multidisciplinary workshops	4 days	Seppo learning platform, mobile devices, notebooks, cameras, external assistants/experts
Total time estimated: 10 x 45 minutes			

Description of each activity:

Lesson 1. Our School's Surroundings and History Walk (90 minutes)

Facilitation of the activity: Students explore the area, marking monuments, artworks, buildings, and natural features on a map. A local historian participates, explaining the history and notable local features.

Lesson 2. Student Survey about Marjala (45 minutes)

Facilitation of the activity: Students create a Google Forms survey for peers about the local environment and its attractiveness. Results are presented to the whole school.

Lesson 3. Community Activity 1 - Establishing a Meadow (90 minutes)

Facilitation of the activity: In cooperation with the parish, students plant a flower meadow. They learn about local flower bulb species and the process of establishing a meadow. Learning is linked to nature-loss and biodiversity phenomena. Includes shared community effort and observation of results in spring.

Lesson 4, Activity 2 Community Activity 2 - Daycare Collaboration (30 minutes)

Facilitation of the activity: Getting to know Finnish Christmas folktales, exploration of elves in folklore. Revives Finnish folktales and traditions through storytelling and costumes. Students visit a nearby daycare dressed as elves and read Christmas folktales.

Lesson 5. Adopt-an-Area Project (3 x 45 minutes)

Facilitation of the activity: Each class works on its designated area, integrating it into various lessons. High Interdisciplinarity and community engagement.

Lesson 6. "Amazing Race Marjala" Interdisciplinary Learning Week (MOK Week)

Preparation of the activity: A whole-school week dedicated to cross-subject learning through workshops and outdoor activities. Using the interactive digital outdoor learning platform Seppo as a basic tool to manage activities. Using the Amazing Race TV show as a model, but adapting the concept slightly. Each class organizes one workshop. Collaboration with external assistants and experts.

Recommendations for teachers: Good preparation is half the work.

- Engage the whole school early-teachers, staff, and community partners.
- Schedule major events like MOK Week well in advance.
- Allow time for planning outdoor lessons.
- Create an annual calendar before the school year begins.
- Contact community representatives and experts early, explaining the project's goals.
- Secure materials and resources beforehand to ensure no activities are hindered.
- Get to know and explore all the possibilities that a digital platform like Seppo can offer, and learn how to use them effectively for learning purposes.
- Large-scale PBL projects like this require flexibility, good cooperation, and a positive school atmosphere.



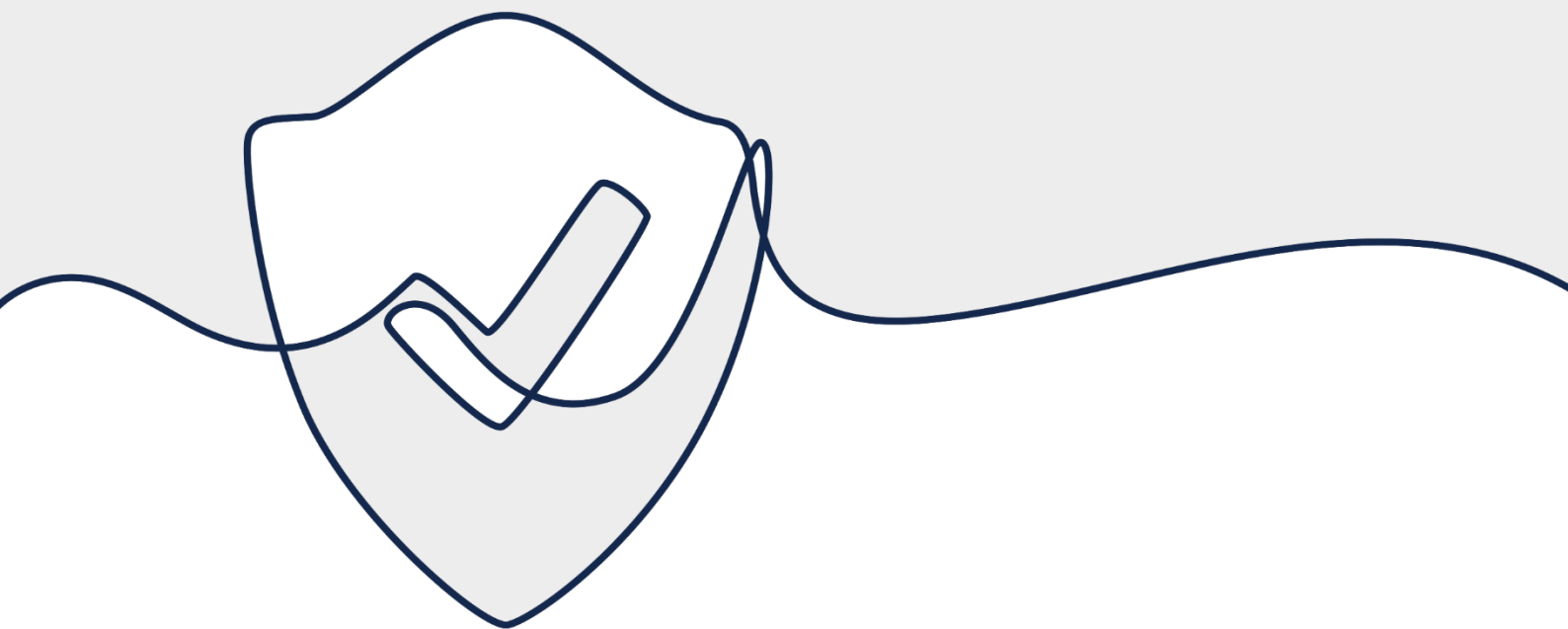
Bibliography:

www.seppo.io – digital outdoor learning platform.



River Guards. We act locally

LESSON 22



Authors: Małgorzata Krakowczyk / Grażyna Postulka, King Jan III Sobieski Primary School No. 5 in Zabrze, Poland

Subject/ discipline: The lesson is interdisciplinary and can be conducted as part of: **Biology, Polish language, IT, art, technology/crafts.**

Target group: **14-16 years old**

Key topics: biodiversity, water pollution, river ecosystem, river protection, social responsibility for rivers

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the current condition and history of the river, identify the main sources of pollution (agriculture, industry, climate change), and describe the role of environmental protection institutions.
- (A) - to gather and analyze information through community interaction, communication with institutions, and the creation of models or multimedia presentations that propose solutions to river pollution.
- (V) - to demonstrate responsibility and civic agency in protecting water quality by cooperating with community members and local authorities.

Activity outline/ description of the lesson plan:

Activities	Methods used	Duration	Supplies/ resources
1. Activity 1 (Information gathering)	Mini-lecture, talk, discussion, educational walk, field research, practical exercises	35 minutes	Magnifying glasses, devices for taking photos and recording sounds (e.g., mobile phones), apps for identifying various plant species, e.g., Flora Incognita, PlantNet Identification
2. Activity 2 (Activities by the river)	Group work, metaplan technique, brainstorming	40 minutes	Blankets, canvases, paints, brushes, glue, cardboard (A4), strings, wooden sticks, plasticine, artificial moss,

			colored paper, tablets, mobile phones, 16-page notebook, adhesive tape; Presentation software, e.g., PowerPoint, Canva, Impress
3. Activity 3 (Presentation and summary of group activities. Creating "Guidelines for the city authorities and residents")	Presentation of work results	15 minutes	Materials prepared by the students
Total time estimated: 90 minutes			

Teacher or facilitators' note:

Zabrze is a city located in southern Poland, in the Silesian Voivodeship, in the very heart of the Upper Silesian Industrial Region (GOP). It has a population of about 160,000 people. For decades, the development of Zabrze was linked to the coal mining and steel industries. The intensive industrial activity has left its mark in the form of environmental problems - degraded soils, transformed land, and polluted rivers. We took up the topic of ecological education for our students because we are convinced that the children and youth raised in a spirit of responsibility for nature will in the future become adults who can care for the sustainable development of the region.

To equip students with knowledge and skills, as well as to shape in them a sense of responsibility for the place where they live, we drew on the experience of experts who deal with the problem of water pollution in a highly industrialized region like Silesia on a daily basis. For the purpose of our classes, we established

partnerships with local and national institutions: PGW Wody Polskie (State Waters Holding Polish Waters), a sewage treatment plant, and an ecology expert from the Zabrze City Hall.

The lesson lasts 90 minutes and should take place in the field - in the natural environment, in the area of the studied river or another watercourse.

- Before starting the project lesson, familiarize the students with the planned activities so they can choose the group they want to work in.
- You can ask students to bring some of the materials, although the teacher provides most of them.
- Arrange the details of the partnership with local experts in advance to confirm their participation in the class.
- The lesson should be conducted in early autumn or late spring so that students can observe the diversity of plants and animal species in the studied environment.

Description of each activity:

Activity 1. Information gathering (35 minutes)

Aim of the activity: to gain knowledge about the actual state of the river, to learn its history.

Preparation of the activity: prepare the logistics for the field trip, provide educational materials prepared by the experts; prepare apps for identifying various plant species, e.g., Flora Incognita, PlantNet Identification.

Facilitation of the activity: This stage of the lesson is dedicated to gathering information. To do this, invite local water experts to the school. We invited experts from the Zabrze Water and Sewage Company - Śródmieście Wastewater Treatment Plant; PGW Wody Polskie - Regional Water Management Authority in Gliwice; and the Zabrze City Hall. The first presentation was led by representatives from the Zabrze Water and Sewage Company - Śródmieście Wastewater Treatment Plant. The topic of the lecture was "The Purity of Water That Flows in the Pipes". The experts presented the processes of drinking water treatment and quality control, emphasizing the measures taken to ensure its safety for residents.

The second presentation, prepared by specialists from PGW Wody Polskie - Regional Water Management Authority in Gliwice, was titled "Bytomka Closer to Us". It focused on the problems and challenges related to the protection of the Bytomka river. The experts discussed actions to improve water quality and ways to actively involve the local community in protecting river ecosystems.

The third lecture was given by a representative of the Zabrze City Hall (Ecology Department), focusing on key issues related to water management in the city. An important element was that the presentations were held outdoors, by the river. This combined the lecture format with an educational walk. Students could ask questions, which promoted interactivity and a better understanding of the topics discussed. In this way, students collect materials for the next stage of the class.

Activity 2. Activities by the river (40 minutes)

Aim of the activity: to carry out project tasks consisting of: identifying the key problem affecting the river ecosystem and formulating improvement strategies.

Preparation of the activity: You should provide the necessary materials, e.g., blankets, canvases, paints, brushes, glue, cardboard (A4), strings, wooden sticks, plasticine, colored paper, tablets, mobile phones, a 16-page notebook, adhesive tape.

Facilitation of the activity:

- Group I - Creating a model of the river area. Students develop a spatial model presenting ideas for improving the river's condition (e.g., trash cans, benches, additional vegetation). You can use the Design Thinking method, provided it has been discussed beforehand.
- Group II - Multimedia presentation. Students prepare a presentation containing photos of the river's current state and proposals for remedial actions. You can use the metaplan technique, answering the questions: "What is the situation like?", "What should it be like?", "Why isn't it as it should be?", and "What's next?".
- Group III - Creating a landscape of the river. The students' task is to create a painting showing the river ecosystem: its biodiversity or its decline, which is a common phenomenon in Silesia. The work should be reinforced with a slogan encouraging the protection of river ecosystems.
- Group IV - Survey and field interviews. Students prepare questions and conduct short interviews with passers-by, recording their answers on a voice recorder. Sample questions:
 - Do you like spending time near the river? Why?
 - How can the biodiversity in its surroundings be improved?
 - Do you prefer a natural or a regulated riverbed? Why?
 - Would you sign a citizen's project concerning the construction of a bicycle path along the river?

- How do you assess the current condition of our river?
- Do you have any memories connected with the river?

Activity 3. Presentation and summary (15 minutes)

Aim of the activity: Students present and discuss their work, referring to the content of the experts' lectures and their own observations.

Preparation of the activity: Select group leaders and prepare for the presentation of the work.

Facilitation of the activity: Each group presents the results of its work, sharing reflections that arose during the tasks and the lectures. The students point out solutions inspired by both expert knowledge and their own ideas. At the end, the students jointly draft a short "Guidelines for the city authorities and residents," containing recommendations on how to make the river's surroundings more friendly to people, animals, and plants. This document serves as a summary of the entire lesson and a practical application of the acquired knowledge.

Instructions on making the river and its surroundings more friendly to people, wildlife, and plant life:

1. Increasing biodiversity: planting shrubs and trees along the river; introducing riparian vegetation to provide shelter for birds and insects and improve water quality.
2. Improving recreational infrastructure: installing more benches and trash cans; designating areas for nature observation and recreation by the water; considering the construction of a bicycle and walking path along the river.
3. Protecting and improving water quality: creating natural weirs and small waterfalls to promote river oxygenation; limiting the discharge of pollutants and sewage into the riverbed; regularly monitoring water quality in cooperation with local institutions.
4. Education and community involvement: organizing riverbank clean-up campaigns; conducting workshops and lectures on the importance of rivers for the environment; involving residents in project activities and consultations regarding river revitalization.
5. Aesthetics and landscape protection: creating natural green buffer zones; avoiding excessive regulation of the riverbed to preserve its natural character; promoting architectural and natural solutions that harmonize with the surroundings.

Recommendations for teachers:

- Prepare the space and materials well.
- Ensure that the area by the river is safe and accessible for students.
- Gather all art and technical materials in advance to avoid downtime in group work.
- Establish cooperation with experts in advance.
- Contact representatives of institutions (waterworks, offices, environmental organizations) well in advance to determine the topic and form of their participation.
- It is a good idea to provide experts with sample questions that may interest the students.
- Engage students even before the class.
- Present them with the project lesson plan and explain the role they will play in each group.
- Encourage them to bring their own materials (e.g., phones for photo documentation, notebooks for notes).
- Build a bridge between theory and practice.
- During expert lectures, motivate students to ask questions and note down inspirations that they can later use in their projects.
- Emphasize that the knowledge gained during the lesson has a direct application in real life.
- Maintain a balance between work and reflection.
- Provide time for the presentation of group results and a summary so that students can exchange observations.
- Ensure that every student has the opportunity to speak.
- Support creativity and diversity of ideas.
- Encourage students to use different methods - models, presentations, artistic activities, interviews - all are valuable and complement each other.
- Let the students decide on the form of the final solutions.
- Extend activities beyond the lesson.
- Consider the possibility of forwarding the created "Guidelines for the city authorities and residents" to local officials or organizations. This will show students that their work has a real impact.

- Encourage further monitoring of the river's condition and continuation of activities within, for example, a nature club or a student project.



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In the pond, cold water

LESSON 23



Authors: Katarzyna Krulicka, Ewa Dunajewska-Ozimek, 31st Primary School in Zabrze, Poland

Subject/ discipline: **Polish language (literary studies, film education)**

Target group: **11-13 years old, 14-16 years old**

Key topics: water as a literary motif, film education, regional education

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the characteristics of Romanticism, the concept of a film etude, and the basic structure of a film script in relation to the ballad "Świtezianka" and local cultural context.
- (A) - to analyze and interpret the literary work and its film adaptation, and to create a film script inspired by the ballad and the cultural significance of local water bodies.
- (V) - to demonstrate sensitivity toward local nature, especially water environments, and responsibility in raising community awareness about their protection.

Concepts and definitions:

Romanticism - a literary era, in Poland dated between 1822 and 1863, characteristic features of the works of this period are: individualism, fantasy, mysticism, patriotism, nature, folklore, exoticism.

Ballad - a syncretic literary genre, combining elements of drama, lyric, and epic; typical for the romantic ballad was the use of folklore, the introduction of fantasy characters, e.g., nymphs, and a clear emphasis on nature as a literary character.

Świtezianka - a water nymph inhabiting Lake Świtez.

Film etude - a short film piece, the purpose of which is to perfect one's craft and experiment with form and content.

Activity outline/ description of the lesson plan

Activities	Methods used	Duration	Supplies/ resources
1. Activity 1	Brainstorming, visual method (district map)	10 minutes	Canva presentation, Padlet or AnswerGarden app
2. Activity 2	Working with literary text, heuristic method, mind map	15 minutes	Canva presentation, WolneLektury.pl, Lucidspark app
3. Activity 3	Active method (film), associative note-taking	20 minutes	YouTube, Canva presentation or Padlet
4. Activity 4	Comparative analysis, problem-based method, group work	20 minutes	Canva presentation, worksheets, rooms in the Teams app
5. Activity 5	Miniature project method, group work	15 minutes	Worksheet (script template)
6. Activity 6	Mini-presentation of ideas, discussion	8 minutes	Canva presentation
7. Activity 7	Online survey	2 minutes	Mentimeter app
Total time estimated: 90 minutes			

Teacher or facilitators' note:

How can you teach about the place your students come from during Polish language lessons without sacrificing the core curriculum? Can you imagine combining Romantic poetry with a stream, river, or pond located near your school?

During an online lesson, students will learn the history of their place, look at old photos of the local pond and swimming pool, and compare the photos with the places' current state. The educational framework for the class is a re-reading of Adam Mickiewicz's ballad "Świtezianka" and its film equivalent. Students will

analyze how nature-specifically water-participates in the events presented in the work and whether the film etude accurately reflects the mood of the literary original. Additionally, students will try to independently develop a script inspired by "Świtezianka" and propose their own vision of the pond as a character.

Before starting the lesson, it is a good idea to divide the class into groups and arrange rooms where work in smaller teams will be possible. The lesson can be moved to a normal classroom, and parts of it can even be carried out in the field. During the lesson, you can use any type of water space - the water context is what is important.

You can change the literary material freely depending on the requirements of the core curriculum. However, it is worthwhile for the mood of the work to be mysterious, and for fantasy characters to appear among the heroes. If a different literary work is used, the lesson objectives should be modified accordingly.

Description of each activity:

Activity 1. Water around us (10 minutes)

Aim of the activity: to activate students, check and consolidate their knowledge about water in the city, and anchor the water motif in a local context.

Preparation of the activity: prepare a presentation, a board in the Padlet app (link to share), a board in the AnswerGarden app (link to share/QR code).

Facilitation of the activity: start the class with a brainstorm - students share their knowledge about water bodies in the district and the city. They publish their suggestions in the Padlet app, where they can also post photos and links to interesting materials about water in the city, which they can get acquainted with during the class or in their free time. Students also share their thoughts on the role of water during a discussion; in the meantime, they can post their reflections in the AnswerGarden app. Present to the students a map of Zabrze with marked watercourses and natural and artificial water reservoirs.

Activity 2. The ballad "Świtezianka" (15 minutes)

Aim of the activity: understanding a literary, source text, analyzing the images and emotions contained in the work.

Preparation of the activity: the text of the ballad, a board in the Canva or Lucidspark app (link to share).

Facilitation of the activity: share with the students a link to the freely available literary work. In the next step, selected students read the text with a division of

roles, attempting to convey the mood, mystery, and drama of the work with their voices. Students interpret the work, referring to their knowledge of the genre and the literary era. Moderate the discussion around the text. Students jointly create a graphic note in the form of a mind map in the Canva or Lucidspark app.

Activity 3. The film "Świtezianka" (20 minutes)

Aim of the activity: developing the ability to receive an audiovisual message and compare it with a literary text, emphasizing the advantages of intersemiotic translation.

Preparation of the activity: film etude (link to the recording), preparation of a board in the Padlet app.

Facilitation of the activity: share the film by the Bui sisters titled "Świtezianka" with the students. During the screening, students note their observations, reflections, and emotions in the Padlet app - the note can be of a diverse nature - reflections, emoticons, colors, keywords.

Activity 4. Group work (20 minutes)

Aim of the activity: developing online collaboration and critical thinking skills, learning by discovery.

Preparation of the activity: division of students into groups and preparation of rooms for work, worksheets in a presentation in the Canva app (link to share).

Facilitation of the activity: each group of students receives a specific task concerning the analysis of the film. The students jointly develop answers to the problems posed to them. Each group places the prepared materials directly in the presentation in the Canva app.

Sample tasks for the film:

I. Understanding and observation

- How does water appear in the film - as a background, a border, a threat, or perhaps a character?
- How does the appearance of the water change at different moments in the film? What might this change symbolize?
- In which scene does water play the most important role in the development of the plot? Justify your position.

II. Image and symbolism

- What emotions does the water in the film evoke - peace, anxiety, mystery, horror, purification?
- Pay attention to the color scheme of the water - what colors dominate and how do they affect the perception of the mood?
- What can the immersion of the characters in water mean – physically and symbolically?
- How are reflections on the surface of the lake used in the film - do they have a metaphorical meaning (e.g., the border between the real and supernatural worlds)?
- Is the water in the film an ally or an enemy of man? Justify, referring to specific scenes.

III. Sound and mood

- What sounds related to water appear in the film (splash, murmur, echo)? How do they affect the atmosphere of the scenes?
- Does the music in the moments with water differ from other parts of the film? What might this suggest?

IV. Interpretation and message

- What symbolic role does water play in the film - is it a sign of life, death, purification, or perhaps punishment?
- How does the relationship between the characters change in contact with water? What does this say about their emotions and decisions?
- What function does the lake serve as a border between the world of humans and the world of nature or spirits?
- Can it be said that the water "takes revenge" or "defends" the sanctity of nature? Justify your interpretation.

The presentation of the tasks can end with a class discussion:

- Does the water in the film signify destruction or rather purification and truth?
- What message about the relationship between man and nature can be read from how the water is shown?
- Can a contemporary viewer read the symbolism of water in the same way as a reader of Mickiewicz in the 19th century? Why or why not?

Activity 5. "Świtezianka in Rokitnica" (15 minutes)

Aim of the activity: stimulating the imagination, showing the universality of literary motifs in the local world.

Preparation of the activity: preparing tips for creating a script.

Facilitation of the activity: students, working in a group, develop their idea for an adaptation of "Świtezianka" to make it closer to the residents of Zabrze. Additionally, they develop at least one scene of the film etude, using the template provided in the form of a worksheet (Annex 1).

Activity 6. Mini-presentations of ideas (8 minutes)

Aim of the activity: learning from each other, improving online self-presentation skills.

Preparation of the activity: setting a time limit for the mini-presentation.

Facilitation of the activity: the leader of each student group briefly presents the idea for their own film etude. Guide the discussion on the presented ideas for film adaptations of Adam Mickiewicz's work.

Activity 7. Conclusion (2 minutes)

Aim of the activity: summarizing the content, closing the lesson in an engaging way, strengthening personal reflection.

Preparation of the activity: preparing a survey in the Mentimeter app.

Facilitation of the activity: students complete a survey in which they share their reflections on the lesson, in their statement they can include answers to the questions:

- What did you like about the class?
- What elements of the lesson did you not like?
- What will stay with you after the class?

Recommendations for teachers:

- Test the tools you will be using. This will help you avoid the stress associated with working with a new application or tool.
- Prepare the students for the class - perhaps you can organize a walk beforehand with water as the main theme, or organize a meeting with a local activist or ecologist who will bring the problem of water in the district

a little closer, and sensitize the students to the presence or absence of water.

- Encourage students to be bold, to play with form and content, to build new, urban mythical water creatures.
- Find space for reflection, for noticing the common space between the local and global resonance of the educational content.
- Don't be closed to expanding the lesson scenario with further points - perhaps your students will turn their scripts into film works and prepare a screening of their works at school or in the city library. Such a presentation can contribute to a broader discussion on water and the need to protect it in the district and the city.

Annexes:

- Annex 1 (worksheet)
- <https://www.menti.com/alwfs45swrak>
- <https://answergarden.ch/5044674>
- https://www.canva.com/design/DAGz0ZOGg0k/nuC_FpjaFB4xWOJKdfkidw/edit?utm_content=DAGz0ZOGg0k&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton
- https://padlet.com/Pani_Ka/woda-wok-nas-3p0jj760fe8kfo08
- https://lucid.app/lucidspark/13f2d8ee-2638-4c34-bea6-20e916e3507e/edit?invitationId=inv_e4166fa4-1a2e-417a-891f-9999c6e85d0a&page=0_0#



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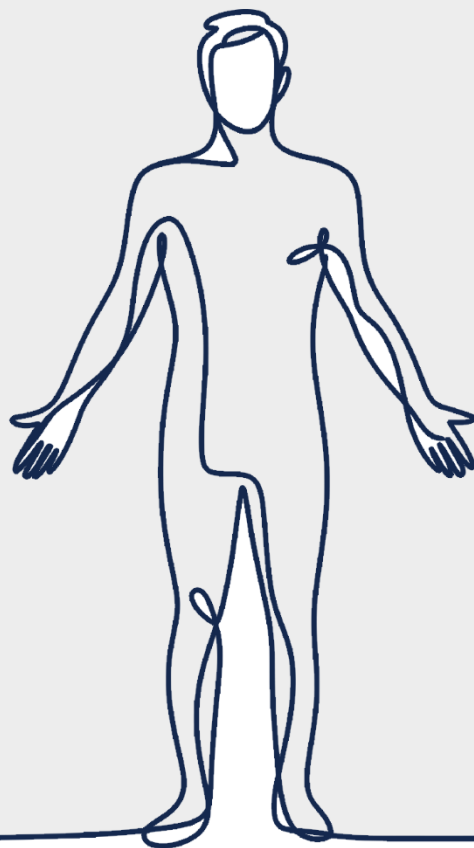
Adam Mickiewicz, Świtezianka,
<https://wolnelektury.pl/katalog/lektura/ballady-i-romanse-switezianka.html> [access: 18.09.2025]

Film "Świtezianka" <https://www.youtube.com/watch?v=w5OtCYJe7jA> [access: 18.09.2025]



Journey through the human body

LESSON 24



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Subject/discipline: **Biology, Technological education, Romanian Language and Literature, Latin, English language, ICT, Art education**

Target group: **14-16 years old**

Learning objectives:

At the end of this activity/lesson, students will be able to:

- (K) - to explain the structure and functions of major human body systems using appropriate scientific terminology (including Latin and English terms) and to understand the principles of explanatory texts, 3D modeling, and digital presentation.
- (A) - to collaboratively create functional models, clear explanatory texts, bilingual glossaries, and digital or artistic presentations that accurately represent human body systems.
- (V) - to demonstrate responsibility for personal health, environmental awareness through reuse of materials, appreciation for scientific language and clear communication, and creativity in interdisciplinary teamwork.

Concepts and definitions:

Biological system: A set of organs that act together to perform an essential function (e.g. digestive, nervous, respiratory systems, etc.).

Disease prevention: All actions aimed at avoiding the occurrence or worsening of diseases (e.g. hygiene, healthy eating, vaccination).

3D Model: Three-dimensional representation of a real object, using various materials: cardboard, plastic, clay, rocks, etc., to understand its structure and functionality.

Creative recycling (upcycling): The transformation of used or unused materials into products with educational or artistic value.

Sensory devices: Simple objects or tools constructed to stimulate or highlight the functioning of the senses (e.g., tactile objects for touch, scent sticks for smell, electrical circuits for vision, musical instrument creation for sound). They support learning through multi-sensory exploration and discovery.

Explanatory text: Informative text that clarifies a phenomenon, process or concept, using clear and logical language, adapted to the age of the target audience.

Medical terminology of Latin origin: Many terms in biology and medicine come from Latin and retain close forms (e.g. cerebrum, pulmo, cor).

Bilingual guide: An informative material written in two languages (Romanian-English), useful for learning vocabulary and the structure of scientific texts.

Anatomical terms in English: Names of organs and bodily processes in English, frequently used in international medical materials (e.g. stomach, intestines, brain).

Digital Presentation (PowerPoint): An interactive and visual way of organizing information, using text, images, animations, and translations for effective communication.

The logical structure of a presentation: The coherent order of ideas in a digital material: introduction - content - conclusions - resources.

Artistic representation: The creative interpretation of an object, process, or idea, through color, shape, texture, symbolism.

The human body as an artistic theme: The human body can be a source of inspiration in art, being illustrated realistically, symbolically, or abstractly, to reflect functionality or emotion.

Activity Outline/Lesson Plan Description 1

Journey Through the Human Body - Review of Relationship and Nutrition Functions

Activity	Methods used	Duration	Supplies/resources
1. Activity 1 ("Systems Greetings")	Role play, mime	10 minutes	Flashcards with names/pictures of organs
2. Activity 2 (Grouping and identification)	Teamwork, collaborative learning	10 minutes	Worksheets, images, markers, classification tables

3. Activity 3 (Group information search)	Guided search, teamwork, discovery learning	25 minutes	Internet-enabled devices, information organization sheets, textbooks, encyclopedias, visual dictionaries
4. Closure and reflection	Reflection, guided conversation	5 minutes	Conclusion
Estimated total time: 50 minutes			

Teacher or facilitators' note: The 8-lesson series "Journey through the Human Body" is a transdisciplinary educational project for students, which combines science, creativity, technology and service-learning. At the end of the lessons, each team will send their group leader to do interactive "Human Body Escape Room" presentations for younger grades. Students explore the human body from multiple perspectives: biological, artistic, linguistic, digital and social, through practical activities, discussions with specialists, role-playing, drawing, teamwork and the creation of a bilingual mini-guide. Each lesson has a clear purpose - from learning body parts and their functions, to raising awareness of the importance of health and community collaboration.

All the information found will be used in the next lesson, Romanian language and literature. The teams formed in biology class will also work in other classes.

Description of each activity:

Activity 1. "Systems Greetings" (10 minutes)

Aim of the activity: This activity aims to activate prior knowledge about body organs and their functions, stimulating active involvement, quick thinking, and collaboration among students.

Preparing the activity: The teacher must prepare the following materials:

- Cards (or notes) with organ names written on them (e.g. heart, brain, eyes, stomach, kidneys, lungs, etc.).
- Optional: images or pictograms of the respective organs (for visual diversity or for younger students).

- A free space in the classroom so that students can move freely and safely.

Facilitation of the activity:

- The teacher invites the students to form a circle or sit in a semicircle.
- Explain to them that they will participate in a mime game involving the organs of the human body and their functions.
- Each student, in turn, draws a card with an organ or a keyword (for example: "eye", "lung", "breathing", "pump", "hearing").
- The student mimics the organ or the related action (e.g. "heart" - makes the sign that it is beating, "eye" - pretends to look, "stomach" - touches his belly and imitates digestion).
- The other classmates have to guess the organ or function being mimicked. If they can't guess within 30 seconds, the teacher gives a clue.
- After each mime, the teacher can quickly add a short addition/explanation to correctly establish the function of that organ.
- The activity continues until all students participate or until the 5 minutes expire.

Debriefing questions

- Which organ did you find the easiest to imitate? But the hardest?
- Why?
- Why do you think it is important to know how our organs work?

Activity 2. Grouping and identification (10 minutes)

Aim of the activity: activity aims to consolidate knowledge about the organ systems of the human body, by identifying and correctly classifying organs in nutrition and relationship systems, as well as understanding their basic functions.

Preparing the activity: The teacher prepares:

- Cards with images of different organs (printed and cut out individually or on A4 sheets - e.g. heart, lung, liver, brain, kidneys, bones, muscles, eyes, etc.).
- Two large sheets or two tables on the flipchart/whiteboard with two categories:
 - Nutritional systems (digestive, respiratory, circulatory, excretory).

- Relationship systems (nervous, muscular, skeletal, sense organs).
- Markers, glue/tape or blu-tack for attaching the cards.

Facilitation of the activity: The teacher divides the class into teams of 3 students.

Each team receives an identical set of cards with pictures of body organs.

The team's task is:

- classify the received organs into the two major categories: nutrition systems or relationship systems.
- associate them with the corresponding sub-system (e.g. lung → respiratory system → nutrition).
- write down the main function of each organ in a worksheet or on a common sheet.
- to present ways to avoid the occurrence or worsening of diseases (e.g. hygiene, healthy eating, vaccination).

After 7 minutes of work, the teams come in turn and pin their sheets on the common table (on the class board or on the flipchart), explaining the choice made.

The teacher guides the collective correction and provides explanations where needed.

Debriefing questions

- Why is it important to know which system an organ belongs to?
- How do you think the nutritional and relationship systems interact?

Activity 3. Group information search (25 minutes)

Aim of the activity: Students develop their research, collaboration, and presentation skills by learning to identify the components and functions of an organ system.

Preparing the activity: Prepare worksheets for each previously formed team, with guiding or structural questions (e.g.: What organs make up the system? What are their functions?). Provides access to information sources (textbooks, atlases, tablets/laptops with internet connection, encyclopedias, medical brochures).

Facilitation of the activity: The teacher divides the class into organ systems to study: digestive, respiratory, circulatory, excretory, nervous, sensory organs, skeletal,

locomotor, etc. Each team receives a worksheet and the system they will be working on. Teams are looking for information about:

- Component organs
- Main functions
- Hygiene and disease prevention rules

Debriefing questions

- How can we take better care of this system in our daily lives?
- What did you like most about the teamwork mode?
- How do we realize that a healthy lifestyle leads to the prevention of diseases related to diet and stress?

Activity outline/lesson plan description 2

Journey through the human body - Explanatory text

Activity	Methods used	Duration	Supplies/resources
1. Activity 1 ("What is an explanatory text?")	Energizing/ Brainstorming	10 minutes	Not necessary
2. Activity 2 (Structure the trip!)	Pair/small group work, text analysis	10 minutes	Worksheets with examples of explanatory text (found by students in biology class)
3. Activity 3 (We create the explanatory text "Journey through the human body")	Creative writing, collaboration, editing	25 minutes	Flipchart paper, markers, outline guide (with text structure)
4. Closure and reflection	Reflection, feedback	5 minutes	Post-its

Estimated total time: 50 minutes

Teacher or facilitators' note:

Some teams may experience difficulty finding appropriate sources of information or synthesizing information. Some groups may need help with the structure of the text or in formulating clear and concise ideas. The teacher will provide step-by-step guidance and clarify any concerns at any time.

Description of each activity:**Activity 1. "What is an explanatory text?" (10 minutes)**

Aim of the activity: This activity aims to develop students' ability to understand and present information about human body systems by creating an explanatory text.

Preparing the activity: The teacher starts with an interactive question: "What is an explanatory text and what information should it contain to help us "travel" through the human body?". Students respond with ideas about structure (introduction, content, conclusion), language (clear, logical), and purpose (informing the reader) and a work plan is created for each system.

Facilitation of the activity: The teacher will encourage students to think about what characteristics an expository text has: usually, an expository text is clearly structured (introduction, main body, conclusion) and uses simple and clear language to help the reader understand a topic. Logical structure:

- Introduction: provides a clear picture of the purpose of the received system.
- Development: details each organ of each system, explaining the role of each in an accessible way.
- Conclusion: finally, some curiosities and advice related to the importance of a healthy lifestyle are presented.

Debriefing questions

- Why is it important for information to be clear and well-organized in an explanatory text?
- What is the difference between an explanatory text and other types of texts (for example, a descriptive or narrative text)?

Activity 2. Structuring the journey! (10 minutes)

Aim of the activity: The activity helps students develop skills in organizing information and clearly formulating ideas.

Preparing the activity: Before starting the activity, the teacher must prepare the following: flipchart sheets, markers, the worksheets worked on by the students in biology. The teacher explains the purpose of the activity and emphasizes that students will learn how to structure an explanatory text.

Facilitation of the activity: Students are divided into the same biology groups and each have a system they will work on (e.g. digestive, respiratory, nervous, etc.). The teacher determines together with the students what the explanatory text of each system will contain:

- a generic name for each system;
- which organs should be presented;
- order of explanations (from general to specific);
- curiosities about the system in question;
- a short story from the world of medicine;
- the essential/to remember.

Debriefing questions

- Why is it important to know which system an organ belongs to?
- How do you think the nutritional and relationship systems interact?

Activity 3. We create the explanatory text "Journey through the human body" (25 minutes)

Aim of the activity: Developing students' ability to create an explanatory text about the systems of the human body, learning to describe each system, its role and how it interacts with the other parts of the body.

Preparing the activity: Before the activity, the teacher provides clarifications on the structure of an explanatory text and the ways of presenting information; guides the student to find additional sources of information (textbooks, educational websites, explanatory sheets) for students. The explanatory text must be created and the message adapted so that it can be used for different audiences.

Facilitation of the activity: Students will work in groups to create an explanatory text about one of the human body systems. Each group will research information,

based on which they will develop an explanatory text. Students can illustrate the text with drawings/diagrams. After completing the text, the groups will present the result to the other colleagues.

Debriefing questions

- Why is it important for an explanatory text to be clear and logical?
- How did group collaboration help you in creating the explanatory text?

Activity outline/lesson plan description 3

"Journey through the human body" - Creative workshop

Activity	Methods used	Duration	Supplies/resources
1. Activity 1 (The Journey of the Mysterious Organ)	Active brainstorming, movement, riddles	5 minutes	Kahoot platform, phones
2. Activity 2 ("Discovering body functions and modeling the human body")	Discussion, debate	5 minutes	Not necessary
3. Activity 3 ("We create the models" - Creation, modeling workshop)	Creation and modeling workshop	35 minutes	string, thread, stones, sand, cardboard, clay, glue, paints, soil, balloons, glossy paper, markers, water, glass vessels, wood, PET bottles, metal, cutter, etc.
4. Closure and reflection	Reflection, feedback	5 minutes	Wordwall "The Inventor's Wheel"
Estimated total time: 50 minutes			

Teacher or facilitators' note: The teacher prepares as many materials as possible for students to use, possibly discussing an hour in advance what materials could be used.

Description of each activity:

Activity 1. "The Journey of the Mysterious Organ" (5 minutes)

Aim of the activity: To help students become familiar with the parts of the human body and their functions through active and interactive play.

Preparing the activity: The teacher will prepare a Kahoot with riddles related to the human body (ex: It's not a wheel, but it turns, / Hold your head high and strong. / Without him you wouldn't be whole, / What keeps you straight, mate? A: The brain)

Facilitation of the activity: The teacher invites the students to enter the game code and starts the riddles. Students respond and recall what they studied in biology and Romanian language and literature lessons.

Debriefing questions

- How does it help you to know your body better in everyday life?
- Have you had any situations where you felt that information about your body helped you (e.g. when you were sick, playing sports, etc.)?

Activity 2. "Discovering the functions of the body" and "we shape the human body" (5 minutes)

Aim of the activity: To help students recall the functions of each system created in the previous activity in biology and Romanian language and literature and to understand the connection between structure, function and then apply knowledge about the human body by creating models of body systems using various materials.

Preparing the activity: The teacher will encourage brainstorming about what each system of the human body does, and students will discuss their functions and how they are interconnected.

Facilitation of the activity: The teacher will encourage free discussions. Students grouped together from previous classes will debate what materials used in technological education they can use to represent it.

The teacher will guide students to collaborate to create a representation of a system, using the available materials.

Debriefing questions

- How did you personally contribute to the creation of the chosen model?
- What materials did you find most suitable for representing organs?
- Why?

Activity 3. "We create models" - Creation, modeling workshop (35 minutes)

Aim of the activity: To enable students to create physical models of human body systems by applying knowledge of their functions.

Preparing the activity: The teacher prepares the necessary materials. The teacher presents compliance with SSM, PSI, environmental protection norms.

Facilitation of the activity: Students will work in groups to build 3D models of a chosen system of the human body, using available materials (cardboard, clay, stones, string, etc.). The teacher will monitor the groups, providing support if necessary for building the models. At the end, each group will present the model and explain how the respective system works.

Debriefing questions

- How can technology help to gain a deeper understanding of how the human body works?
- What challenges did you encounter in creating the model and how did you overcome them?

Activity outline/lesson plan description 4

"Journey through the human body" (Latin)

Activity	Methods used	Duration	Supplies/resources
1. Activity 1 (Hail, corpus!) (Energizing)	Movement game (energizing with Latin vocabulary)	5 minutes	Not necessary

2. Activity 2 (The human body in Latin)	Group work	10 minutes	A4 papers, markers, sheets with body parts and Latin names
3. Activity 3 ("Living Statues from the Latin World")	Simulation exercise (role play)	30 minutes	situation sheets
4. Closure and reflection	Guided discussion, oral and visual recap	5 minutes	
Estimated total time: 50 minutes			

Teacher or facilitators' note: The teacher prepares as many materials as possible for students to use.

Description of each activity:

Activity 1. "Hail, corpus!" (5 minutes)

Aim of the activity: It helps activate students' energy and focus at the beginning of the lesson, as well as introduce Latin vocabulary related to the human body.

Preparing the activity: The teacher prepares a list of 6-10 Latin terms corresponding to body parts.). A clear rule is established: we listen, then we act (to avoid excessive agitation).

Facilitation of the activity: The teacher explains the rule of the game: "I will say a word in Latin, and you touch that part of the body as quickly as possible.". A short demonstration is made (e.g. "Head" → everyone touches their head). It goes through new, varied terms, in increasing order of difficulty.

Debriefing questions

- Which words were easiest for you to remember?
- Did you recognize some words in Romanian?

Activity 2. "The Human Body in Latin" (10 minutes)

Aim of the activity: To reinforce Latin vocabulary related to human anatomy and to practice teamwork and the development of logical thinking through association

Preparing the activity: Students divided into groups formed in previous lessons receive sets of images with parts of the human body and different names in Latin that they must correctly associate.

Facilitation of the activity: Each group receives an envelope with pictures and cards with Latin terms. Task: to correctly associate each picture with its Latin name and write them on a sheet of paper. After completion (approx. 10 min), each group presents the poster they created, pronouncing the Latin words aloud.

Debriefing questions

Which words did you find easy to associate?

Activity 3. "Living Statues from the Latin World" - role play (30 minutes)

Aim of the activity: To allow practicing vocabulary through movement, collaboration, and creative expression in Latin.

Preparing the activity: Organizing the classroom so that there is room for movement.

Facilitation of the activity: Each group extracts 2-3 Latin words related to body parts. Groups have 10-15 minutes to create a "living statue" (a static scene that suggests the meaning of the words). Example: a student stands with his arms outstretched → "Brachia extendit" (he stretches his arms). Another group can create a statue with a student holding his head → "Caput tenet" (he holds his head). A representative from each group describes the statue using Latin terms. The other students can try to guess the terms represented.

Debriefing questions

- What new things have you discovered about the human body and the Latin language?
- How did you feel expressing yourself through movement and language?

Activity outline/lesson plan description 5

"Journey through the human body" (English)

Activity	Methods used	Duration	Supplies/resources
1. Activity 1 (Warm-up – "Touch and Say")	Energizer	5 minutes	Not necessary
2. Activity 2 (The Human Body – Bilingual Mini-Guide)	Group work	55 minutes	Information made on boards in biology and Romanian language and literature classes
3. Closure and reflection	Individual reflection	2 minutes	
Estimated total time: 60 minutes			

Teacher or facilitators' note: I recommend revisiting more difficult terms in subsequent lessons and including activities that encourage conversation in real-world contexts (e.g. doctor visits, sports, personal hygiene). The volume of translations can be quite large, and then students are asked to translate part of it at home and corrections are made with the help of the teacher.

Description of each activity:

Activity 1. Warm-up - "Touch and Say" (5 minutes)

Aim of the activity: To activate attention and basic English vocabulary related to body parts, through movement and play, in a fun and interactive way.

Preparing the activity: Ensures that students have space to move freely in the classroom. The teacher prepares a short list of terms (e.g. head, nose, arm, leg, hand, ear, knee, foot).

Facilitation of the activity: The teacher tells the students to stand up and pay attention. Say a word in English, e.g. "Nose!". Students must touch that body part

and repeat the word out loud. Variations in pace or friendly competition can be added (whoever does it first or who makes a mistake is out of the round). The teacher can introduce new terms or vary the order quickly for dynamism.

Debriefing questions

- Which part did you find funnier?

Why do you think it is important to know these words in English?

Activity 2. The Human Body - Bilingual Mini-Guide (55 minutes)

Aim of the activity: To consolidate vocabulary related to body parts in English and Romanian through collaborative activity.

Preparing the activity: The information made on the boards in biology and Romanian language and literature classes is prepared to be translated

Facilitation of the activity: The teacher explains the task: each group must translate the information into the received system. The teacher provides feedback and corrections, if necessary.

Debriefing questions

How would such a mini-guide be useful to you in real life?

Activity outline/lesson plan description 6

"Journey through the human body" presentation creation bilingual mini-guide

Activity	Methods used	Duration	Supplies/resources
1. Activity 1 ("Emoji Quiz - Guess the Body Part")	energize	5 minutes	Mentimeter
2. Activity 2 (Sketching the model)	Group work	10 minutes	Laptops, PowerPoint / Canva

3. Activity 3 (Making the digital presentation)	Simulation exercise, digital work	30 minutes	Laptops, PowerPoint / Canva
4. Closure and reflection	Guided discussion, feedback	5 minutes	
Estimated total time: 50 minutes			

Teacher or facilitators' note: We recommend repeating this type of lesson for other interdisciplinary topics as well, as it brings added motivation, active learning, and personal involvement.

Description of each activity:

Activity 1. "Emoji Quiz - Guess the Body Part" (5 minutes)

Aim of the activity: To develop digital knowledge and thematic vocabulary (RO/EN) in a playful and visual way.

Preparing the activity: The teacher displays on the board/smartboard or in the presentation a set of 5-6 emoji combinations that represent body parts.

- e.g.: 🦻🎵 = ear, 👁️👁️ = eyes, 🧠💡 = brain, etc.

Facilitation of the activity: Can be done as a digital quiz on Mentimeter. For a classroom without equipment, the teacher can write on the board/printed emoticons. Students can create an emoji quiz themselves for other classmates at the end of the lesson, as an app.

Debriefing questions

If you were to create your own emoji quiz, what body part would you include and what symbols would you use?

Activity 2. Sketching the model (10 minutes)

Aim of the activity: To develop digital planning skills and logical structuring of a PowerPoint presentation, in the context of creating a bilingual mini-guide about the human body (RO-EN).

Preparing the activity: Ensuring students have access to computers/laptops/tablets with PowerPoint installed (or access to an online version: Canva, etc.). Create and share a simple presentation template (optional). Organizing students into small groups, those formed in the other lessons. A demonstrative example from the teacher (1-2 slides) for clarity.

Facilitation of the activity: The teacher explains the task: each group creates the digital outline of the presentation, i.e. the structure of the slides without entering all the complete content (only titles, main ideas, places reserved for images/text). Students decide together: how many slides they will use, what the chapters are (e.g. Introduction, Caput - Head, Manus - Hand, etc.), what they will include in each section (images, bilingual texts). The teacher provides guidance and answers technical questions related to PowerPoint.

Debriefing questions

What are the advantages of digital team planning?

Activity 3. Making the digital presentation (30 minutes)

Aim of the activity: To develop students' digital, collaborative and communication skills by creating a digital presentation that synthesizes researched information about the human body.

Preparing the activity:

- available digital devices (laptops/tablets).
- open platforms for making presentations: PowerPoint / Google Slides / Canva.
- use of the chosen presentation model by all crews.
- previously collected materials/information about the human body's organs.
- timer for time management.

Facilitation of the activity: Reminder of the presentation creation criteria: clarity, coherence, relevant illustrations, bilingual content (Romanian-English). Each team divides its responsibilities: who writes the text, who looks for images, who handles the English part, etc. The teacher/facilitator guides the teams, answers questions, and provides feedback along the way. Finally, the teacher combines all the presentations received from the teams into a single presentation

Debriefing questions

What skills do you think you practiced today?

Activity outline/lesson plan description 7

"Journey through the human body" visual artistic interpretation

Activity	Methods used	Duration	Supplies/resources
1. Activity 1 ("Draw with your eyes closed")	Energizing game, dramatization	5 minutes	Colored pencils, A4 sheets
2. Activity 2 ("The human body expressed in color and form")	Artistic exercise, plastic creation	30 minutes	Sheets, watercolors, brushes
3. Activity 3 ("Exhibition and gallery")	artistic expression	10 minutes	improvised exhibition
4. Closure and reflection	directed conversation	5 minutes	Post-its for feedback

Estimated total time: 50 minutes

Teacher or facilitators' note: The practical activity allowed for an interdisciplinary approach, combining elements of biology with the expressiveness of the fine arts.

The students' creativity was highlighted and a positive atmosphere was noted, open to collaboration and personal expression.

Description of each activity:

Activity 1. "Draw with your eyes closed" (5 minutes)

Aim of the activity: To stimulate students' creativity and imagination. To relax the working atmosphere and encourage free expression.

Preparing the activity: Prepare a sheet of paper and watercolors, brushes. Choose a term or part of the human body.

Facilitation of the activity: The teacher announces that each student will draw a chosen organ with their eyes closed. Students close their eyes and have 1-2 minutes to draw without seeing what they are doing. After finishing, they open their eyes and compare the result with reality or with their classmates' drawings.

Debriefing questions

How did you feel when you drew without seeing?

Activity 2. "The human body expressed in color and shape" (30 minutes)

Aim of the activity: To encourage the creative expression of knowledge about the human body through plastic means. To reinforce visual and sensory learning of elements related to anatomy. To develop aesthetic sense and the ability to communicate through art.

Preparing the activity: Prepare: A3 sheets of paper, watercolors, brushes, colored pencils, felt-tip pens. Some examples of artistic interpretations of the human body can be shown (line, color, stylized shape, etc.).

Facilitation of the activity: The teacher explains the task: students will create an artistic work that expresses the human body not necessarily realistically, but symbolically, abstractly, stylized - using colors, shapes and lines that convey a state or message. The teacher circulates among the students, encouraging them to freely express their ideas and explain what they want to convey.

Debriefing questions

How did you feel that you communicated something through your drawing?

Activity 3. "Exhibition and gallery" (10 minutes)

Aim of the activity: To value the work done by students in the previous activity

Preparing the activity: A display space is being set up

Facilitation of the activity: The teacher invites students to exhibit their works. The rules are explained: visit the exhibition quietly, with respect for the work of others, you can ask constructive questions and express impressions. Students move through the "gallery".

Debriefing questions

How can we use creativity to learn better in other subjects?

Activity outline/lesson plan description 8

"Journey through the human body - Health in check"

Activity	Methods used	Duration	Supplies/resources
1. Activity 1 ("Healthy Greetings")	Energize	5 minutes	Not necessary
2. Activity 2 (Health Detectives)	Group work	10 minutes	Images with healthy and unhealthy habits
3. Activity 3 (Discussion with a nurse)	Learning through direct interaction	30 minutes	Organized meeting space
4. Closure and reflection	Guided reflection	5 minutes	Emoticon cards
Estimated total time: 50 minutes			

Teacher or facilitators' note: We recommend resuming such a format in future contexts, as it contributes to the development of key skills related to health, citizenship, and interactive learning.

Description of each activity:

Activity 1. "Healthy Greetings" (5 minutes)

Aim of the activity: To create a positive and dynamic atmosphere at the beginning of the lesson, encouraging the expression of emotions, peer interaction and awareness of personal well-being (physical and emotional).

Preparing the activity: No specific material is required. A space is prepared where students can move freely.

Facilitation of the activity: Each greeting is accompanied by a question related to well-being, e.g.: "How are you feeling today?", "What healthy food did you eat today?", "What part of your body is the most active today?". The activity ends with applause and a "collective smile".

Debriefing questions

How is our emotional state related to our physical health?

Activity 2. "Health Detectives" (10 minutes)

Aim of the activity: To stimulate students' curiosity and critical thinking by investigating healthy and unhealthy habits related to the care of the human body.

Preparing the activity: They prepare with images/descriptions of behaviors

Facilitation of the activity: Students must identify which of the behaviors presented are healthy and which are not, also providing an explanation. Each one presents their conclusions and proposes an idea for a "remedy" for unhealthy habits.

Debriefing questions

How can we become "health detectives" in our own lives?

Activity 3. "Discussion with a nurse" (30 minutes)

Aim of the activity: To familiarize students with the role of medical professionals in health care and to understand the importance of prevention, hygiene and healthy behaviors in everyday life.

Preparing the activity: Students are encouraged, before the activity, to formulate 2-3 questions related to health, hygiene, nutrition, first aid, etc. A quiet space is set up for the discussion (classroom).

Facilitation of the activity: The activity begins with a brief introduction of the guest and her job. The nurse talks about a typical work day, the importance of prevention, basic hygiene rules, and what first aid entails. Students ask the prepared questions. Simple demonstrations can be carried out (e.g. how to wash hands correctly, what to do in case of a scratch, etc.).

Debriefing questions

- How did this meeting make you look at the nursing profession differently?
- What healthy habits would you like to adopt from now on?

Recommendations for teachers:

- Choose interactive methods: role-playing, simulations, drawing, teamwork, free discussions. These increase student involvement and motivation.
- Include moments of reflection in each lesson. Debriefing questions help students understand more deeply what they learned and how they feel about the activities.
- Invite local professionals (medical assistants, artists, parents with relevant expertise) to support the lesson. This way, students will better understand the connection between school and real life.
- Discuss self-care and caring for others, collaboration, empathy, responsibility. Lessons about the human body are a good opportunity for socio-emotional education.

4. Acknowledgements & Partners

Stredisko ekologicke výchovy SEVER Horní Maršov, Czech Republic

The Environmental Education Centre SEVER Horní Maršov was founded in 2012. Its mission is to promote responsible attitudes toward nature, people, and the Earth through education that supports sustainable living. SEVER focuses on participation, community learning, transdisciplinarity, and experiential, real-world learning as well as place based education and climate education. The centre works mainly with schools, teachers, and educators, while also supporting other groups such as public servants, farmers, and NGOs. SEVER is actively involved in international projects, university partnerships, national school networks, and the publication of environmental education resources.

Website: www.sever.ekologickavychova.cz

Youtube: <https://www.youtube.com/@strediskoekologickevychovy9449>

New Horizons Foundation, Romania

New Horizons Foundation (NHF) has over 25 years of experience in transformative education. It empowers children and young people to reach their full potential and become agents of positive change by strengthening the ecosystems around them-schools, communities, and families. The foundation supports key actors such as parents, educators, school leaders, librarians, and volunteers, and continuously tests, refines, and scales educational models nationwide. These include service-learning, outdoor and adventure education, and approaches that strengthen parent-child relationships, such as the Circle of Security method.

Website: www.noi-orienturi.ro

Youtube: <https://www.youtube.com/@FundatiaNoiOrienturi>

Green Foundation, Slovakia

Green Foundation (GF) is a Slovak NGO founded in 2015, working to promote sustainable development through education, biodiversity protection, and sustainable finance. Its flagship educational program, Roots & Shoots, uses service-learning to develop compassionate leadership and sustainability competencies among children, youth, and young adults. Since 2016, the program has engaged over 2,000 participants from 160 schools and universities in Slovakia. GF also implements biodiversity restoration projects and social innovation initiatives with strong regional and community impact.

Website: <http://greenfoundation.eu/en>

Youtube: <https://www.youtube.com/@greenfoundation8920/featured>

ENO Schoolnet ry, Finland

ENO Schoolnet Association is a non-profit NGO based in Finland, coordinating a global network of schools and communities focused on sustainable development since 2000. Officially registered in 2009, ENO has engaged over 10,000 schools from 150 countries in environmental learning and action. Its initiatives include global campaigns such as tree planting days, climate action weeks, and environmental art competitions, with more than 30 million trees planted worldwide. ENO also organizes international conferences and leads global commitments like the Climate Agreement of Schools (2019-2025). Through strong international coordination, ENO supports schools in turning sustainability education into concrete environmental action.

Website: <https://www.enoprogramme.org/>

Youtube: <https://www.youtube.com/@enoprogramme>

Code For Green Foundation, Poland

CFG is a foundation established in 2017 that supports children and youth through innovative, technology-based education connected to social and environmental contexts. Its mission focuses on equal access to digital and 21st-century skills, especially for young people from rural areas, small towns, vulnerable families, and girls. CFG designs curricula and projects adapted to local realities, addressing

sustainable development, civic engagement, and social responsibility. The foundation has implemented several large-scale educational and digital inclusion projects funded by national and European programs. In recent years, CFG has also been actively involved in humanitarian support for refugee children and families at the Polish-Belarusian and Polish-Ukrainian borders.

Website: www.cfg.edu.pl (for English: <https://www.cfg.edu.pl/eng/>)

Youtube: <https://youtube.com/@fundacjacodeforgreen>

ANEXE

Lesson Useful physical quantities in translational motion

Worksheet used: Useful physical quantities in translational motion - experimental session grade VIIa

In a translational motion of a rigid solid, the line determined by any two points of the body DOES NOT change its orientation during the motion.

We plan to use the schoolyard/sports field to study translational motion; each student will calibrate their stride and then we will determine the length and width of the football field as well as the average speed of travel in a rectilinear translational motion.

Students will be organized into groups of two and will need a tape measure, stopwatch (phone), chalk, and the worksheet.

Steps calibration:

- Find a horizontal surface in the schoolyard that you can move on in a straight line;
- On a previously measured/established distance d (a running track with markings can be used), the steps n necessary to cover this distance are counted;
- The step length will be $L = d/n$;
- Complete the table below; (rounded to 2 decimal places)

No. of details	$d(m)$	n	$L(m)$	$L_{average} (m)$	$\Delta L(m)$	$\Delta L_{average} (m)$

The length of your stride will be: $L = L_{\text{mean}} \pm \Delta L_{\text{mean}} = \text{_____}(\text{m})$

Application 1: Using the average value of your stride, determine the length and width of the school's soccer field.

$l_1 = \text{_____}(\text{m})$ and $l_2 = \text{_____}(\text{m})$

Application 2: Calculate the average speed you traveled during the measurements made in application 1.

- Time the time it takes to cover the length of the field Δt (try to walk at the same pace); $\Delta t = \text{_____}(\text{s})$
- Calculate the distance traveled $l_1 = n \cdot L$; $l_1 = \text{_____}(\text{m})$
- Calculate the average speed $v_m = l_1 / \Delta t$ (m/s); $v_m = \text{_____}(\text{m/s})$

Review all the steps of these experiments and note possible sources of error.

Lesson What does water hide?

Annex 1

Detection of Phosphates (PO_4^-) in Water

- Take 2.5 ml of water for testing.
- Add 3 drops of reagent from bottle $\text{PO}_4\text{-1}$ to the test tube with water, close the cap, and shake to mix.
- 1. Then add 3 drops of reagent from the bottle labeled $\text{PO}_4\text{-2}$, close the cap again, and shake to mix.
- Wait 5 minutes and compare with the scale.
- Enter the data into the table.

Sample number	I	II	III	Katowice	Kraków
Phosphate content					

Lessons	learned	from	experience:
.....			
.....			

Specific Electrical Conductivity

- Specific electrical conductivity of water, also known as electrical conductivity, measures how well water can conduct electricity.

- The conductivity of water depends on its level of contamination – it increases with the number of impurities in the water. Pure water hardly conducts electricity at all.
- After each measurement, record the results in the table.
- Dip the meter into a sample of distilled water.
- Then, dip the meter into each water sample one by one, recording the result each time and rinsing the meter in distilled water between samples.
- Determine the cleanliness of the water samples.

Sample number	Filtred water	I	II	III	Katowice	Kraków
SEC						
Cleanliness of the samples						

Lessons learned from experience:

Check the pH of the Water

- Place the tip of the universal pH paper in the water sample and determine the pH.
- Check if the pH is acidic, basic, or neutral.

3. Enter the data into the table.

Sample number	I	II	III	Katowice	Kraków
pH (1-14)					
Solution pH					

Lessons learned from experience:

Detection of Nitrates (NO_2^-) in Water

1. Take 5 ml of water for testing.

2. Add 4 drops of reagent from the bottle labeled NO2-1 to the test tube, close the cap, and mix.
3. Then add a flat spoonful of reagent from the bottle labeled NO2 -2. Immediately start mixing the test tube for 1 minute.
4. Wait 10 minutes and check against the scale.
5. Enter the data into the table.

Sample number	I	II	III	Katowice	Kraków
Nitrates content					

Lessons learned from experience:

.....

.....

Lesson Sliač in the heart, heart in Sliač

Annex 1. Worksheet for Slovak language - Urbanonymia of the town of Sliač

			Domestic representatives	Foreign representatives
Society-driven names	According to personality	Politics (presidents, politicians, members of the military, nobles, kings...)		
		Art and culture (poets, writers, painters, sculptors, architects...)		

		The Church (saints, priests, bishops, other religious figures)		
		Science (personalities who have contributed to progress in various scientific disciplines)		
		Crafts and trade (entrepreneurs, craftsmen, patrons of towns)		
	Historical names, institution s			
Names that are not socially motivat ed (the so-called neutral group)	Geograph y	Geographical names (names of rivers, cities, regions, states, mountain ranges, islands)		
		Names of locations (e.g., vicinity of a train or bus station)		
		Features A (determine the direction, shape, and		

		properties of an object)		
		Features B (biological attributes)		
	Crafts and trade (places where butchers, blacksmiths, millers, etc. worked)			

Lesson The Local Forest is Home to Birds – Learning About Local Nature, Natural Resources, and 3D Creativity

My Bird – Writing Exercise

1. Species

Describe your bird and state what species it represents. It can be a familiar garden bird (like a great tit or crow), an exotic bird (like a flamingo), or even an imaginary bird.

If your bird is imaginary, you can also consider the following questions:

What kind of imaginary species could it be? Invent a name for it.

Is it related to humans, gods, or animals—or a mix of them?

2. Basic Information

Answer the following questions in your writing:

What is your bird's name?

Where does it live (for example, in Finland, the tropics, a forest, or a city)? What kinds of places does it especially like?

What does it look like? (Color, size, any special features?)

What does it eat?

How does it move? (Does it fly, walk, swim?)

Does it have any special skills? (Sings beautifully, is fast, builds nests skillfully?)
Write down its song style (for example: "ti-tyy ti-tyy," "caw caw," "tii-tii-tililililili"...).

3. Fun or Interesting Facts

Is it common in this area, rare, or protected?

What role does it play in the natural food chain?

Does anything exciting happen to it in different seasons (e.g., migrates south)?

Does it have chicks, and how does it take care of them?

Is the bird threatened by anything?

4. Tell in Your Own Style!

Think about what interests you about this bird or character and why. What idea, trait, or feeling does your bird represent? (For example: "My bird represents strength, freedom, independence, love, and peace.")

Do you have any wishes or hopes for your bird? Write as if you are telling a friend about it. You can use your own style and even a little humor if you like.

Lesson In the pond, cold water

Annex 1. Worksheet – Screenplay

A few words about making a screenplay:

SCENE I OUTSIDE. FOREST CLEARING - DAY, EARLY EVENING.

Thick woods, the camera reaches the clearing. MAN and WOMAN Stand near each other. The sun highlights their joined hands.

MAN

(softly, emotionally)

Tell me my lovely, sweet girl, tell my heart,
Why with the secrets we bother

WOMAN

(running away)

Hold back – she responds – with your hasty words

· Using information about screenplay structure, complete or expand the following outline. Use "Świtezianka" as a source of plot inspiration.

SCENE I

Stage directions (brief description of the space/setting, characters):

.....
.....
.....

(character's name)

.....
.....
.....

(character's name)

.....
.....
.....