



LESSON PLAN

TITLE: IN THE KINGDOM OF PLANTS

DURATION: 2 lessons

MAIN SUBJECT: NATURAL SCIENCES AND ENGINEERING

GRADE LEVEL: 4th grade

AUTHORS:

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UNIT	LEARNING MATERIAL, INSTRUMENTS	CROSSCURRICULAR LEARNING
<p>IN THE KINGDOM OF PLANTS</p> <p>Learning topic: There are different living beings in different environments.</p> <p>Set: The past lives with us.</p>	<ul style="list-style-type: none"> • Science and Technology 4 (workbook part 1 for science and technology in the fourth grade of primary school) • ruler • pen • crayons • sheet of paper 	<ul style="list-style-type: none"> • natural science and engineering (science material) and social science (teamwork, helping others, self-evaluation) • outdoor work/learning – students manage to work in an environment outside the classroom, they are actively involved in the work process outside the classroom • art • Slovene language
<p>INTRODUCTION OF THE LESSON: Discussion of today's two school hours learning plan (frontal work). Setting of the work rules: students will work in smaller groups (they choose their work partners freely), students will solve tasks with help of workbook (pages 5 to 9, tasks: 2, 3, 4, 6 and 8), at the end of the lesson students will review the assignments and discuss the findings together with the teachers' guidance.</p>		

IN THE KINGDOM OF PLANTS

WHAT?	HOW?	WHY?	LEARNING OBJECTIVES
<p>Students will discover and learn about characteristics of plants in their school environment.</p> <p>outdoor work observation research group work</p>	<p>Step 1: Observation, research</p> <p>First task: On the school playground students choose a flowering plant. Students take a good look at it and answer the following questions: How do you feel when you touch it? How does it smell? What happens? Does your plant grow in a group or individually? How tall is it? Measure it? What leaves does it have? How many flowers are there on the stem? How many leaves are there on the stem? What color are the flowers? How many fruits and seeds does it have? How do the leaves smell? What part of the plant are roots?</p>	<p>Students are capable to feel the stem, leaves and flowers.</p> <p>Students know how to smell the flower (which part of the flower).</p> <p>Touch the inside of the flower with your finger.</p> <p>Know how to crush a piece of leaf between your fingers.</p> <p>Be able to draw your flowering plant.</p> <p>Students use different tools and approaches to conduct their task.</p>	<ul style="list-style-type: none"> • Students will be able to explain what the external structure of plants is on self-collected data and knowledge of the plants. • Students will be able to distinguish between flowering plants and non-flowering plants. • Students will be able to detect and name the most common types of plants in the school and local environment. • Students will be able to identify the most common trees and shrub species that grow in the school and local environment (by leaves, flowers, and fruits). • Students will be able to identify, explain, and use different plant symbols. • Students will be able to plan work steps.



	<p>Second task: Each group of students chooses their tree. They observe the tree. They try to imagine/remember how does it look during all four seasons of the year. Students draw the tree on a sheet of paper. (see attachment, page7/task4)</p> <p>Third task: (see attachment, page8/task6) Students observe the tree bark. They write down what the tree bark looks like. Students hold a sheet of paper on the tree bark with their hand and paint it with a crayon. Students compare bark fingerprints with classmates. Students discuss whether all bark prints are the same? Students write down their findings/conclusions.</p> <p>Fourth task: (see attachment, page9/task8) Students draw the bark, leaves, flowers and fruits of the trees and shrubs they have found</p>		<ul style="list-style-type: none">• Students will be able to select and use appropriate instruments to observe and measure parts of plants.• Students will be able to collect, analyse, and interpret data.
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	<p>across the school playground on the spreadsheet.</p> <p>Students compare trees and shrubs with each other. Students discuss how are they similar? Students write down their findings/conclusions.</p> <p>Step 2: Taking Notes, comparison, discussion, art</p> <p>Students draw a few plants selected by other classmates onto a spreadsheet. (see attachment, page6/task3) Students compare among themselves selected plants. Students discuss what selected plants do have in common and how do they differ. Students identify similarities and differences and write them down into their charts. Similarities/Differences</p>		
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<p>EVALUATION</p> <p>With the help of teachers students do evaluation:</p> <p>Did students learn something new?</p> <p>Was the lesson interesting and useful?</p> <p>How did students feel during activity?</p>	<p>At the end of the lesson, we talk to the students about whether they liked the lesson, whether they think they have learned something new during the lesson.</p> <p>At the end of the activity, students can choose between three points (three tables in the school park). Each table has its own purpose.</p> <p>First table represents "I learned a lot."/"I felt good during the activity."</p> <p>Second table represents "I learned in part."/"I felt something in between."</p> <p>Third table represents "I learned a little."/"I felt bad."</p> <p>They will be instructed to talk to each other about what they learned and about how they felt during the activity. Teachers will circle between the three points, observe, guide with questions if needed.</p>	<p>Students understand importance of group work. They show interest in participation in a group activity.</p> <p>Students try to reflect and contribute to a group work and dynamics.</p> <p>Students get to experience outdoor learning with instructions for each tack.</p> <p>Students work in small groups.</p> <p>By talking to each other and teachers students can express their thoughts freely. They see and learn that we could have similar or different experience in the same process. Students realize the importance of human-nature/school environment interaction.</p>	<ul style="list-style-type: none"> • Guided questions will help students to think and express what they learned, how they experienced outdoor learning, how they felt, participated in a group. • Students will manage to participate in a small group. • Students will rely on peer help. • Students will be able to develop cognitive and social skills – learning from peers, develop positive attitude towards plants, nature. • Students will develop knowledge (empathy) that plant have important role in the nature and for the humans (trees give us air, etc.). • Students will develop value of preserving school yard plants.
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“IN THE KINGDOM OF PLANTS”		
DISSEMINATION OF GOOD PRACTICE AMONG DIFFERENT AGE GROUPS		
Students from 1st to 3rd grade	Students from 6th to 9th grade	Students from 1st to 9th grade
<p>The topic of the lesson is suitable for students of all ages. Methods that can be used for this topic are:</p> <ul style="list-style-type: none"> - verbal-textual (explanation, conversation, listening to each other, reporting, reading, writing, observing), - experimental learning (practical work, use of all senses – sight, hearing, smell, touch), - social learning (working with peers, offering help to others and oneself, seeking help), - evaluation (be able to express what we learned, give opinion, listen to others). <p>Different learning forms can be used such as frontal, individual, and group.</p> <p>Using different teaching and learning methods, such as observation, comparison, asking proper questions, seeking and providing help, have positive attitude for group work. Due to their age, students develop research skills, positive attitude to the environment, and communication skills.</p>		

APPENDICES

Workbook	Step 1: HOW - Observation, research Second task: (page 7/task 4)	Step 1: HOW - Observation, research Fourth task: (page 9/task 8)	Step 2: HOW - Taking Notes, comparison, discussion, art (page 6/task 3)																																																																																																														
<p>Ekološko Erazmovo</p> <p>Planeta, smo nastali z njimi! Kaj torej odkoprega in v čem se razlikujemo? Zgodbe, prešibitveni in narke so jih najti.</p> <p>Posebna:</p> <p>Knjige:</p> <p>Najljubše drevo</p> <p>4. V svoje drevo opazuj v vseh letih, češ in ga narči.</p> <p>Avtorice: Kolman, Danica; Metl, Darinka; Žena, Darinka; Marta, Karjotin; Lucija, Dora; Žilinc; Matjaž, Šušter; in Kilec, Željka</p> <p>Naravoslovje in tehnika 4 DELOVNI ZVEZEK 1. del ZA NARAVOSLOVJE IN TEHNIKO V ČETRTEM RAZREDU OSNOVNE ŠOLE</p> <p>PRISODRŽELJENA IZDAJA</p> <p> </p>	<p>4. V svoje drevo opazuj v vseh letih, češ in ga narči.</p> <p>Najljubše drevo</p> <p>4. V svoje drevo opazuj v vseh letih, češ in ga narči.</p> <p>Moje drevo junec</p> <p>Moje drevo poznanec</p> <p>Moje drevo spominjal</p> <p>Moje drevo spominjal</p>	<p>6. V preglednico napiši imega, like, cvetove in plodove dreves in grmovnic v okolici šole.</p> <table border="1"> <thead> <tr> <th>IME DREVEGA ALI GRMOVNICE ČE GA POZNAŠ</th> <th>SKOPIJA</th> <th>LIST</th> <th>CVET</th> <th>PLOD ALI SEME</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>Primenjaj drevesa in grmovnice v okolici šole. V čem so si podobna? Napiši vsepe ugotovitve:</p> <p>UČIM SE UČITI</p> <p>Didaktična igra – Sedeni drevo</p> <p>Izbiri si drevo, ki ti je všeč. Počisti splošno list, cvet, plod in druge.</p> <p>Kakšno živijo opazil na svojem drevesu?</p> <p>Opisaj in odpradi liste. Ali so ga objadila žuželke?</p>	IME DREVEGA ALI GRMOVNICE ČE GA POZNAŠ	SKOPIJA	LIST	CVET	PLOD ALI SEME																																																			<p>3. V preglednico napiši imega, like, cvetove in plodove dreves in grmovnic v okolici šole.</p> <p>IME DREVEGA ALI GRMOVNICE ČE GA POZNAŠ</p> <table border="1"> <thead> <tr> <th>IME DREVEGA ALI GRMOVNICE ČE GA POZNAŠ</th> <th>SKOPIJA</th> <th>LIST</th> <th>CVET</th> <th>PLOD ALI SEME</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>Ali bolje razlaga svoje v skupini ali doma?</p> <p>Kajno stoku pet letni je?</p> <p>Kakšno nam ime?</p> <p>Kakšno cvetno ima na svetlu?</p> <p>Kakšno listovano na svetlu?</p> <p>Kakšno barvo so rožnate?</p> <p>Kakšno je plodov in semen?</p> <p>Kako si, kaj mevedaj med post. kalenostjo list?</p> <p>Kakšno so listovine?</p>	IME DREVEGA ALI GRMOVNICE ČE GA POZNAŠ	SKOPIJA	LIST	CVET	PLOD ALI SEME																																																		
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RESOURCE

- A. Kolman, idr. (2009). NARAVOSLOVJE IN TEHNIKA 4, delovni zvezek za 4. razred osnovne šole, 1. Del. 3. izdaja. Ljubljana: Rokus Klett.