



**HOME HERBAL PHARMACY
PROGRAM**

TEACHING FORM: CLASSROOM AND FIELD/OUTDOOR LESSONS

NUMBER OF LESSONS: 40

EDUCATIONAL GOALS:

- Train the participants to apply basic phytotherapy knowledge in everyday life
- Inform the participants on anatomy, systemization, effect and use of regional medicinal plants
- Educate the participants about drying and storing herbs and the production of herbal remedies
- Encourage the participants to look after the environment, preserving natural plant habitats by acquiring knowledge related to proper ways to harvest and cultivate plants for personal needs
- Motivate the participants to transfer the acquired knowledge through, to their local community

OUTCOMES:

Based on the knowledge acquired the participants will be able to recognize different plant species and their effective use for specific health goals. They will have the knowledge to identify and describe different parts of a plant and the function of different plant organs. They will be able to recognize different plant species in their natural habitat using specialised literature and mobile applications. The participants will learn how to harvest, dry and store plants and make herbal remedies. They will also be prepared for pruning, planting and plant propagation.

LITERATURE:

- Nikolić T. (2020a): Flora Croatica - vaskularna flora Republike Hrvatske, Volumen 1. Uvodni dijelovi, sinopsis porodica, opće kazalo, literatura i dr. Alfa d. d., Zagreb.
- Nikolić T. (2020b): Flora Croatica - vaskularna flora Republike Hrvatske, Volumen 2. Ključevi za determinaciju s pratećim podatcima: Equisetidae, Lycopodiidae, Ophyoglossidae, Polypodiidae, Cycadidae, Ginkgooidae, Gnetidae, Pinidae, Magnoliidae - porodice A - FAB. Alfa d. d., Zagreb.
- Nikolić T. (2020c): Flora Croatica - vaskularna flora Republike Hrvatske, Volumen 3. Ključevi za determinaciju s pratećim podatcima: Magnoliidae – porodice FAG-ZYG. Alfa d. d., Zagreb
- Lesinger I. (2012): Kućna biljna ljekarna 1-4 A-Ž, komplet. Adamić d.d., Rijeka

- Sanja Kovačić, Toni Nikolić, Mirko Ruščić, Milenko Milović, Vanja Stamenković, Darko Mihelj, Nenad Jasprica, Sandro Bogdanović, Jasenka Topić (2008): Flora jadranske obale i otoka - 250 najčešćih vrsta. Školska knjiga, Zagreb.
- Ljubica Bernardica Kovač (2022): Biljne terapije i recepti - Ljekovito bilje - dar iz Božje ruke. Verbum, Zagreb.
- Richard Willfort (2002): Ljekovito bilje i njegova upotreba. Erudit, Zgreb.

UNIT	ENCOUNTER NUMBER	LESSON NUMBER	TOPIC	ACTIVITIES	TECHING AIDS AND MATERIALS
1. SMALL PHYTOTHERAPY GUIDE	1.	1.	1. Introduction	<p><u>Lead-in:</u> introduce yourself, present the program to the participants</p> <p><u>Main part:</u> get to know the participants, find out about their motive to join the education, their expectations form the education, their experience working with plants and herbal products.</p> <p><u>Conclusion:</u> introduce the next topic.</p>	Computer, screen projector, specialised literature.
		2. 3.	2. Morphology and anatomy of plants	<p><u>Lead-in:</u> start with the question: are you familiar with the terms morphology and anatomy? Based on the answers and the discussion with the participants define morphology and anatomy of plants.</p> <p><u>Main part:</u> List the plant organs, divide by vegetative and generative plant parts, define the role of each plant organ. Describe the main morphological features of a leaf (simple and compound leaves, description based on the leaf blade, venation and blade edges). Describe the main morphological features of a root and a stem. Describe the flower structure and list the types of inflorescence. Describe fruit types.</p> <p><u>Conclusion:</u> systemize the information, clarify ambiguities and introduce the next topic.</p>	Computer, screen projector, specialised literature, handouts

2.	4. 5. 6.	3. Regional plant species: -St. John's worth (<i>Hypericum perforatum</i> L.), -Nettle (<i>Urtica dioica</i> L.), -Sage (<i>Salvia officinalis</i> L.), -Dandelion (<i>Taraxacum officinale</i> F. H. Wigg), -Narrow leaf plantain (<i>Plantago lanceolata</i> L.)	<u>Lead- in:</u> through a conversation with the participants list the plant species they can recognize in their surrounding (common names). <u>Main part:</u> appoint Latin and common names for plant species, describe each plant species (organography), describe the habitat and the chemical composition of the plant. Indicate the effects and use. List similar species. <u>Conclusion:</u> systemize the information.	Computer, screen projector, specialised literature, worksheet/handouts
	7. 8. 9.	3. Regional plant species: -Curry plant (<i>Helichrysum italicum</i> (Roth) G. <i>Don fil.</i>), -Rosemary (<i>Rosmarinus officinalis</i> L.), -Common Thyme (<i>Thymus vulgaris</i> L.) -Yarrow (<i>Achillea millefolium</i> L), - Black Elder (<i>Sambucus nigra</i> L.)	<u>Lead-in:</u> repeat the description and the effects of: St. John's worth, nettle, sage and dandelion <u>Main part:</u> appoint Latin and common names for plant species, describe each plant species (organography), describe the habitat and the chemical composition of the plant. Indicate the effects and use. List similar species <u>Conclusion:</u> systemize the information. Introduce the next topic	. Computer, screen projector, specialised literature
4.	10. 11.	4. Classification and identification of plant species	<u>Lead-in:</u> Using Nettle (<i>Urtica dioica</i> L., <i>Urticaceae</i>) and Dead-nettle (<i>Lamium spp. L.</i> , <i>Lamiaceae</i>) as examples, emphasise the importance of the identification of the species, family and genus the plant is classified into. <u>Main part:</u> describe the taxonomy of plants on several examples. Mention Carl Linnéaus, the father of taxonomy. Using examples explain binary and ternary nomenclature. Explain the difference in effect an use of the plant that belongs to the same family but different type and subtype, especially for plant species that, if misused, can have negative effects on human body. <u>Conclusion:</u> worksheet that focuses on repetition	Computer, screen projector, specialised literature, worksheet/handouts
	12.	5.Preparation for outdoor/field lessons	<u>Lead-in:</u> discuss with the participants about their experience with plant harvesting <u>Main part:</u> list the tools, packaging and other equipment necessary/needed for harvesting and drying. Define harvesting time based on the plant organ that will be used later on. Propose good practices of wild plant	Computer, screen projector, specialised literature

2. IDENTIFYING, COLLECTING AND CULTIVATING SELF-GROWN PLANTS				<p>picking methods in order to conserve and protect plant habitats. List herb-drying methods. Recommend storage methods and appropriate containers for storing dry herbs</p> <p><u>Conclusion:</u> inform the participants about the outdoor class location, suggest appropriate clothes and footwear for outdoor lessons.</p>	
	5.	13. 14. 15.	6. City park tour	<p><u>Introduction:</u> meet the participants at the agreed location</p> <p><u>Main part:</u> identifying self grown and cultivated plants during the city park tour using specialised literature to determine the type and the subtype of encountered plant species. Make the participants aware of the fact that medicinal herbs are all around us.</p> <p><u>Conclusion:</u> inform the participants about the outdoor location for the next encounter.</p>	specialised literature, mobile application
	6.	16. 17. 18.	7. Identifying and collecting medicinal plants	<p><u>Introduction:</u> meet the participants at the agreed location, hand out the tools and equipment needed for collecting medicinal herbs.</p> <p><u>Main part:</u> walk around the location, identify and collect properly the right amount of medicinal herbs that will be used later on. Prepare the plants for drying and making herbal remedies.</p> <p><u>Conclusion:</u> inform the participants about the outdoor location for the next encounter.</p>	specialised literature, mobile application, pruning shears, cloth/paper bag.
	7.	19. 20. 21.	8. Identifying, collecting and cultivating self-grown plants	<p><u>Introduction:</u> meet the participants at the agreed location, hand out the tools and equipment needed for collecting and cultivating medicinal plants.</p> <p><u>Main part:</u> walk around the location, identify, collect and prune properly plants that will later on be used. Prepare the plants for drying and planting.</p> <p><u>Conclusion:</u> collect impressions from the participants</p>	specialised literature, mobile application, pruning shears, cloth/paper bag.
	8.	22. 23.	9. Cultivating self-grown plants	<p><u>Introduction:</u> prepare all necessary tools and materials</p> <p><u>Main part:</u> explain the cultivation methods of self-grown plants: sowing or green cuttings. List the conditions necessary for the germination and growth. After the</p>	Specialised literature, humus soil, pruning shears, planting pot.

3. HOME PHARMACY HERBAL REMEDIES				demonstration every participants plants green cuttings in appropriate planting pots and sows the seeds. <u>Conclusion:</u> cleaning and tidying up work surfaces, tools and accessories	
		24. 25.	10. Making tinctures	<u>Introduction:</u> start the conversation with the question: have you ever used a tincture ? <u>Main part:</u> define the term tincture, clarify the volume fraction of alcohol and explain the difference between hydrophilic and i hydrophobic solvents. List the benefits and disadvantages of using herbal tinctures and possible contra-indications. The educator demonstrates the preparation of a tincture and the participants, in pairs, prepare three different tinctures: Nettle root tincture – for prostate adenoma, Sage leaf tincture – for sore throat and Rosemary leaf tincture for better digestion. <u>Conclusion:</u> choosing the right packaging, cleaning and tidying up work surfaces and laboratory equipment	Laboratory glassware and equipment, storage packaging for the medicinal form (30 ml glass bottle with a dropper , 30 ml glass bottle with a spray nozzle), a lable
	9.	26. 27. 28. 29. 30.	11. Making a syrup	<u>Introduction:</u> list the syrup types we use. When do we usually take syrups? <u>Main part:</u> define the term syrup, list different syrup preparation methods. The educator demonstrates the preparation of a syrup and the participants, in pairs, prepare, according to the regulation: Syrups simplex, Plantain and Common Thyme cough syrup , Common Thyme and Mullein flower cough syrup. <u>Conclusion:</u> choosing the right packaging, cleaning and tidying up work surfaces and laboratory equipment	Laboratory glassware and equipment, storage packaging for the medicinal form (125 ml glass bottle with a tap), a lable
	10.	31. 32. 33. 34. 35.	12. Making teas and tea mixtures	<u>Introduction:</u> through a conversation find out if the participants are familiar with different types of water infusions (infusions and decoctions)? Give examples. <u>Main part:</u> combine, in different ratios, herbal medicines such as Plantain leaf, Dandelion leaf, green Yarrow, green Thyme and Elder flower to make tea mixtures for: cough, cold, digestion. The educator demonstrates the	Laboratory glassware and equipment, storage packaging for the medicinal form (paper bag), a lable

				preparation and the participants, in pairs, prepare tea mixtures according to the regulation. Conclusion: choosing the right packaging, cleaning and tidying up work surfaces and laboratory equipment	
	11.	36. 37. 38. 39. 40.	13. Making oil macerate and ointment	<p><u>Introduction:</u> define the term oil macerate, describe the preparation procedure, explain the term Non-polar solvent, suggest vegetable oils and fat used for making oil macerates.</p> <p><u>Main part:</u> demonstrate the preparation of an oil macerat and an ointment. The participants, in pairs, according to the regulation, prepare: St. John's worth oil macerate – for wounds and hemorrhoids, Curry plant oil macerat – for hematoma and skin care. Demonstrate the preparation of an ointment. The participants, in pairs, according to the regulations, prepare Curry plant ointment and St. John's ointment used for the conditions mentioned above.</p> <p><u>Conclusion:</u> choosing the right packaging, cleaning and tidying up work surfaces and laboratory equipment Discussion about the advantages and disadvantages of herbal remedies prepared during the course.</p>	Laboratory glassware and equipment, storage packaging for the medicinal form (30 ml glass bottle with a tap , 50 g. cosmetic pot), a lable

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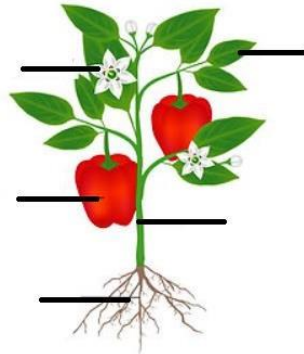
TOPIC: *Morphology and anatomy of plants*

ACTIVITY: *Revision*

FIRST NAME AND LAST NAME:

DATE:

Observe the photo and name the organs, answer the questions below:

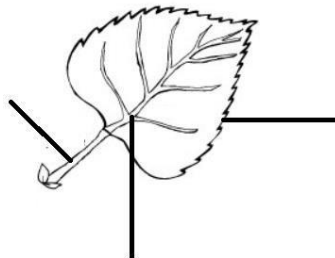


a) List the vegetative organs?

b) What is the role of vegetative organs? What is the role of generative organs?

c) What is the role of a flower?

Name the parts of the leaf indicated in the drawing:



Describe the leaf according to the leaf blade, venation and blade edges.



Inflorescence is:

- a) A cluster of flowers
- b) Male part of the flower
- c) Evergreen's flower shape
- d) Female part of the flower



TOPIC: *Local plant species*

ACTIVITY: *Revision*

FIRST NAME AND LAST NAME:

DATE:

St. John's worth (*Hypericum perforatum L.*),

1. St. John's worth belongs to the family _____. Latin name for St. John's worth is _____.

2. Describe morphological features of St. John's worth.

3. How does St. John's worth reproduce?

4. Healing properties of St. John's worth.

5. List the medicinal forms of St. John's worth.

6. List the active substances in St. John's worth flower .

7. List common names for St. John's worth.

8. When should St. John's worth flowers be picked and why?

9. How do we store St. John's worth macerate?



TOPIC: *Tea mixtures*

ACTIVITY: *Preparing a tea mixture*

FIRST NAME AND LAST NAME:

DATE:

SPECIES DIAPHORETICAE

Cold tea

PREPARATION:

Chamomillaeflos 20g

Sambuciflos 40g

Tiliaeflos 40g

Weigh the herbal drugs according to their seize, mix well in a mortar using a laboratory card sheet or a spoon.

How it works : Containing flavone glycosides (Elder, Chamomile, Linden) this tea mixture has a diaphoretic effect , it causes sweating. As the sweat evaporates the body loses temperature which leads to lowering our body temperature. This tea mixture also has a slight spasmolytic, diuretic and anti-inflammatory effect..

When to use: in different febrile states (cold, flu).

How to use: 1 tea spoon cover with 2 dcl of hot water, leave for half an hour in a covered bowl, stir occasionally, strain and sweeten if necessary. Drink a few times a day.

NOTES:

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MINI CURRICULUM ON SUSTAINABILITY AND ENVIRONMENTAL PROTECTION

TEACHING FORM: CLASSROOM

NUMBER OF LESSONS: 4

EDUCATIONAL GOALS:

- to develop attitudes about the need to protect nature and preserve the quality of the environment and the need for personal involvement and personal contribution of each individual
- to understand and accept the need to preserve nature and the environment and list the possibilities of your personal contribution
- to get to know the meaning of technique and technology in the overall human life
- to develop awareness of individual responsibility for health
- to learn to participate actively in social issues and to express an opinion on social issues, to form as an active participant in public life

OUTCOMES:

Based on the knowledge about environmental sustainability and greater awareness in nature's respect and about public and individual health, the participants will be able to practice these principles in their family and community. The participants would follow simple daily rules and easy responsible attitudes learned, about how not to waste natural resources, how to preserve local environment (not to produce waste for example) or to be participant and active in their community to protect local biodiversity and to reduce its threats.

LITERATURE:

- Primavera silenziosa (Silent Spring), Rachel Carson - Feltrinelli Editore 2023
- Psicologia ambientale, sostenibilità e comportamenti ecologici, Bonnes, Carrus, Passafaro - Carocci 2006
- La nuova economia ambientale. Sostenibilità e giustizia, Laurent - UTET Università 2022
- Il pianeta di tutti, Vandana Shiva - Feltrinelli 2020
- Mangiare è un atto agricolo, Wendell Berry - Lindau 2024
- Possiamo salvare il mondo prima di cena, Jonathan Safran Foer - Guanda 2019

UNIT	ENCOUNTER NUMBER	LESSON NUMBER	TOPIC	ACTIVITIES	TECHING AIDS AND MATERIALS
1 - Little Ecological Guide: theory and practice	1	1, 2	Introduction the principles of environmental sustainability and nature protection	Through theoretical ideas, based on the specialized literature and on the 2030 European Agenda, get to know what sustainability in general may concern, and how to live in a sustainable way on our planet, respecting social, healthy and natural needs.	Specialised, literature, worksheets, videos, handouts
	2	3, 4	Social and Environmental Engagement	Teach the learners how to produce and reproduce respectful attitudes about nature, biodiversity conservation and environmental protection. Show to the participants a list of best practices (for example a list of ten simple rules) to follow and to realize in their daily life and to share with their family and community.	Specialised Literature, handouts

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