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PROJECT “Schoolgarden”

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GUIDE

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INTRODUCTION

Food is much more than just nutrition — it is connected with our health, environment, traditions and everyday choices. In recent years, growing attention has been paid to the impact that our eating habits have not only on personal well-being, but also on climate change and the future of our planet. The Erasmus+ project "Schoolgarden" was created with the aim of encouraging healthier and more sustainable eating habits while showing that small changes in schools, kitchens and communities can create meaningful long-term impact.

The project was implemented from November 2024 until October 2026 and brought together partners from Poland, Lithuania and Latvia:

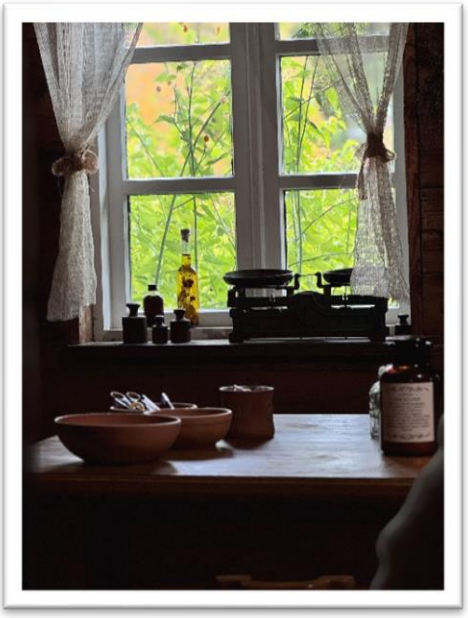
- Regionalne Centrum Kompetencji (Poland), project coordinator,
- Business and Hospitality Training Center (VESK) (Lithuania),
- Rēzeknes Tehnikums (Latvia).

Throughout the project, the partners worked together to promote planetary cuisine — an approach to cooking and eating that supports both human health and environmental sustainability. A special focus was placed on the use of products grown in school gardens, herb gardens and greenhouses, demonstrating that local, fresh and ecological ingredients can successfully become part of modern gastronomy and everyday meals.

During the implementation of the project, teachers, experts and entrepreneurs explored practical approaches to sustainable nutrition, healthy cooking methods and the use of plants, herbs, vegetables and fruits in daily diets. The project activities included research and comparative analysis in the catering sector, the development and testing of a pilot training programme, and the creation of educational and practical materials related to planetary cuisine.

One of the most valuable aspects of the project was the opportunity to learn through practice. Participants tested recipes, experimented with ingredients from school gardens, exchanged experiences and searched for simple and creative ways to introduce healthier and more environmentally friendly dishes into education and gastronomy. The project also increased

awareness about the relationship between nutrition, climate change and human health, highlighting the importance of sustainable food choices in everyday life.



As a result of the project, the partners developed a wide range of useful materials, including a training programme, recipes, practical exercises, lesson plans, presentations, instructional materials and recommendations for schools and gastronomy professionals. The testing phase carried out in the partner countries provided valuable feedback and allowed the project team to improve and adapt the developed materials to real educational and professional needs.

This Guide is one of the final outcomes of the project "Schoolgarden". It brings together the experience, ideas and recommendations collected during the project implementation. The publication includes examples of planetary cuisine recipes and dishes, practical advice, educational materials and examples of good practice related to the use of local ecological products and school gardens. It is intended for teachers, students, gastronomy professionals and everyone interested in healthy, sustainable and creative cooking.

We hope that this Guide will continue to inspire readers to discover new flavours, use more plant-based products in everyday meals and see school gardens not only as educational spaces, but also as places where healthy and sustainable food culture can grow and develop for the future.

I - TASKS AND IMPLEMENTATION OF THE PROJECT "SCHOOLGARDEN"

The implementation of the project "Schoolgarden" focused on combining knowledge about healthy nutrition with practical experience in sustainable gastronomy. The project activities were designed to help participants better understand the principles of planetary diets and learn how these principles can be applied in vocational education, gastronomy training and everyday cooking practice. Particular attention was given to the use of products grown in school gardens, herb gardens and greenhouses, promoting local, seasonal and ecological ingredients as an important part of healthy nutrition.

The project was implemented through several interconnected activities: research and comparative analysis, development of a pilot training programme, practical testing activities and preparation of educational and methodological materials. International partner meetings organised throughout the project ensured coordination of activities, exchange of experience and evaluation of the achieved results.

A central part of the project implementation was the pilot training programme entitled "Planetary diet from school herb gardens and fruit and vegetable gardens". The programme was developed as a practical educational course for teachers and gastronomy specialists interested in sustainable nutrition and environmentally friendly cooking methods. The training combined theoretical sessions, culinary workshops, study visits and practical exercises, allowing participants not only to gain knowledge, but also to test and apply it in practice.

The structure of the training programme was based on three stages:

- preparatory phase,
- implementation phase,
- testing and evaluation phase.

During the preparatory phase, the training syllabus, educational materials and practical tasks were developed. The programme was designed to address both nutritional and environmental aspects of gastronomy. Attention was paid to modern dietary challenges, including excessive consumption of processed food, the environmental impact of food production and the increasing interest in plant-based diets.

The implementation phase focused mainly on practical learning. Participants explored the concept of planetary cuisine and discussed how food choices influence human health and the environment. The programme introduced topics such as:

- the nutritional value of vegetables and herbs,
- the role of plants in disease prevention,
- reducing meat consumption,
- sustainable cooking methods,
- use of local and seasonal products,
- preparation of plant-based meals,
- ecological cultivation of herbs and vegetables,
- development of green competences in gastronomy education.

An important element of the training programme was work with products that can be grown locally in school gardens or home gardens. Participants learned about edible plants, herbs and vegetables that can be easily incorporated into everyday meals. Discussions also included the practical use of spices and fresh herbs, methods of preserving nutrients during cooking and ways to create attractive and nutritious dishes using simple ecological ingredients.

The training programme strongly focused on practical culinary workshops. Participants prepared dishes based on the principles of planetary diets and experimented with combinations of vegetables, herbs and plant-based ingredients. The workshops allowed participants to improve cooking techniques, presentation skills and creativity in preparing sustainable dishes. Examples of dishes prepared during the training included a variety of plant-based meals, soups, salads, desserts and beverages created from vegetables, herbs, fruits and regional products. Participants experimented with both savoury and sweet recipes, learning how to combine nutritional value, taste and attractive presentation while following the principles of planetary cuisine. The practical sessions also included tasting activities, plating workshops and discussions about adapting recipes to school education and catering practice. Participants analysed how sustainable dishes can be made visually attractive, nutritionally balanced and economically accessible.

Another important part of the programme involved study visits and workshops related to ecological food production. Participants visited herb gardens and educational institutions where they observed examples of growing organic products in greenhouses, school gardens and fruit and vegetable gardens. These activities helped participants better understand the relationship between food production, sustainability and gastronomy.

The programme also addressed the educational value of school gardens. Participants discussed how gardens can be used not only for growing products, but also as learning environments where students can develop practical skills, environmental awareness and responsibility for sustainable food choices.

After the training activities, the developed materials and methods were tested in educational practice. Teachers implemented selected recipes, exercises and lesson activities with students and evaluated their effectiveness. The testing phase provided valuable feedback about the applicability of the materials in vocational education and helped improve the developed resources.

The project demonstrated that planetary cuisine can become an effective educational tool that combines gastronomy, health education and environmental responsibility. The training activities showed that sustainable cooking does not require complicated solutions — local products, seasonal vegetables, herbs and simple preparation methods can become the basis for healthy, modern and environmentally friendly meals.

In the following chapters, this Guide presents a collection of recipes prepared during the project activities, lesson plans, examples of practical exercises, recommendations for educational work, as well as example instructional and demonstration videos developed within the project.

II – RESEARCH AND ANALYSIS OF THE CATERING INDUSTRY USING PLANT FOOD WITHIN THE PROJECT "SCHOOLGARDEN"

The Erasmus+ **Schoolgarden** project promotes sustainable food education and environmental awareness in vocational schools in Poland, Latvia, and Lithuania. The project connects students and teachers with nature through school gardens, local herbs, and seasonal vegetables while encouraging healthier and more environmentally friendly eating habits.

This report summarizes the current state of **planet-friendly diets** in vocational education and the catering sector across the three partner countries. It examines how sustainable food concepts are understood, taught, and implemented, as well as the opportunities and barriers to wider adoption.

1. Planet-Friendly Diets: Concept and Importance

A **planet-friendly (planetary) diet** combines human health and environmental sustainability. Based on the EAT-Lancet framework, it emphasizes:

1. Vegetables, fruits, legumes, nuts, and whole grains
2. Reduced consumption of red meat and dairy products
3. Seasonal and locally sourced foods
4. Reduced food waste
5. Lower reliance on highly processed products

Health Benefits

Research links plant-rich diets with lower risks of:

- Cardiovascular diseases
- Type 2 diabetes
- Obesity
- Certain cancers

In Poland, Latvia, and Lithuania, diet-related health problems remain significant, making healthier eating patterns increasingly relevant. Traditional regional foods such as barley, buckwheat, fermented vegetables, and legumes already provide a strong foundation for healthier diets.

Environmental Benefits

Food production significantly contributes to greenhouse gas emissions, water consumption, and biodiversity loss. Increasing plant-based food consumption can:

- Reduce carbon emissions
- Lower resource use
- Protect biodiversity
- Support local food systems

Although meat remains central to many traditional dishes in all three countries, local culinary heritage also includes numerous plant-based ingredients and recipes. Traditional foods can therefore be adapted to support sustainable dietary practices without losing cultural identity.

2. Planet-Friendly Diets in Vocational Education

Vocational schools play a key role in preparing future chefs, caterers, and hospitality professionals. Their approach to sustainability varies among the partner countries.

LITHUANIA

Lithuanian vocational schools, particularly VESK, have actively introduced sustainability concepts into culinary education. Students learn:

- Plant-based cooking techniques
- Healthy meal preparation
- Food waste reduction
- Seasonal menu planning

Many schools operate greenhouses and herb gardens, allowing students to gain practical experience growing and using fresh ingredients.

Main challenges:

- Strong traditional preference for meat-based meals
- Limited specialized training for teachers and chefs
- Perception that sustainable menus are more expensive

LATVIA

Latvia is at an earlier stage of implementation. Sustainability topics are present but are usually integrated through individual projects rather than formal curricula.

Good practices include:

- Use of local and seasonal ingredients
- School garden initiatives
- Participation in international projects

Main challenges:

- Limited learning materials
- Insufficient teacher training
- Low awareness of planetary diets among students and institutions

POLAND

Poland demonstrates the strongest integration of modern food trends within vocational education.

Schools increasingly offer:

- Vegetarian and vegan cooking modules
- Zero-waste cooking practices
- Sustainability workshops
- Cooperation with farms and restaurants

Student interest is particularly high, especially among young people concerned about health and environmental issues.

Educational Recommendations:

- Develop common teaching modules on planetary diets
- Expand school gardens and practical learning
- Strengthen cooperation with sustainable businesses
- Provide professional development for teachers
- Support international exchange and knowledge sharing

3. Catering Sector Analysis

The catering industry plays a major role in shaping public food choices. Adoption of planet-friendly diets is progressing at different speeds across the three countries.

LITHUANIA

Interest in plant-based food is growing, particularly in cities such as Vilnius and Kaunas. Restaurants increasingly offer vegetarian and vegan dishes, including:

- Lentil soups
- Vegan burgers
- Plant-based milk alternatives

Examples such as “RoseHip Vegan Bistro” demonstrate the potential of sustainable gastronomy.

Barriers:

- Limited demand outside urban areas
- Lack of plant-based culinary skills
- Continued reliance on traditional menus

LATVIA

Latvia's catering sector has begun adopting sustainable practices, particularly in Riga.

Growing trends include:

- Vegan-friendly cafés
- Seasonal ingredients
- Use of local herbs and berries

However, most restaurants still focus on traditional meat-based cuisine.

Barriers

- Low consumer demand
- Limited professional expertise
- Higher costs associated with some sustainable ingredients

POLAND

Poland shows the highest level of market development and innovation.

Key trends include:

- Rapid growth of vegan and vegetarian restaurants
- Increased use of local products
- Zero-waste operations
- Sustainable sourcing practices

Many hotels and catering providers now offer plant-based menu options and seasonal products.

Sector-Wide Recommendations

- Train kitchen staff in plant-based cooking
- Promote local and seasonal sourcing
- Introduce sustainability criteria in public procurement
- Support businesses through incentives and recognition programmes
- Share successful examples across the region

4. Consumer Trends and Future Directions

Consumer demand is a major factor influencing food system transformation.

LITHUANIA

Awareness is increasing, particularly among younger consumers.

Key findings:

- Growing interest in vegetarian and flexitarian diets
- Health and environmental concerns are primary motivations
- Availability remains limited outside major cities

LATVIA

Consumer attitudes remain relatively conservative.

Current situation:

- Strong attachment to traditional food habits
- Interest in reducing meat consumption among younger consumers
- Limited availability of plant-based options in schools and public catering

POLAND

Poland leads the region in changing food preferences.

Key trends include:

- Rapid growth of the plant-based food market
- Increased interest in flexitarian eating
- Strong consumer awareness of environmental and health issues
- Expansion of plant-based products in retail and food service

Future Opportunities

Across all three countries, the following actions could accelerate adoption of planet-friendly diets:

- Public awareness campaigns linking diet and health
- Promotion of traditional plant-based regional dishes
- School-based tasting events and practical workshops
- Collaboration between educators, businesses, and policymakers
- Increased visibility of sustainable food role models

Conclusion

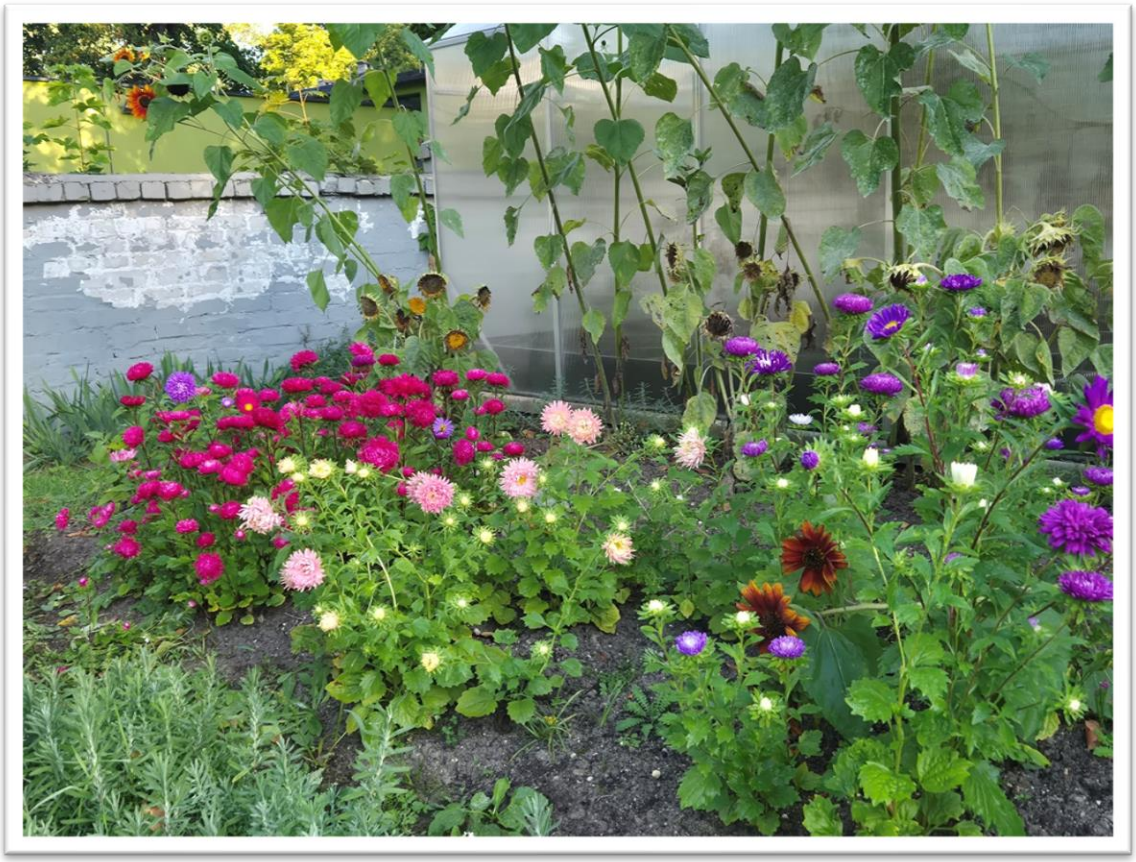
Lithuania, Latvia, and Poland are all moving toward greater acceptance of planet-friendly diets, although progress varies considerably. Poland currently leads in both educational innovation and market adoption, Lithuania is making steady progress through vocational education and urban food businesses, while Latvia remains at an earlier stage of implementation.

The **Schoolgarden** project demonstrates that vocational education can become a powerful driver of sustainable food systems. School gardens, hands-on learning, plant-based culinary skills, and cooperation between schools and industry can help prepare future food professionals for changing consumer expectations and environmental challenges.

To support long-term change, stakeholders should prioritize:

1. Teacher and chef training in sustainable gastronomy.
2. Greater integration of planetary diet principles into vocational curricula.
3. Expansion of school garden initiatives.
4. Stronger partnerships between schools, farms, and catering businesses.
5. Increased awareness campaigns promoting healthy and sustainable food choices.

By combining education, innovation, and traditional food knowledge, the region can develop a food culture that benefits both people and the planet.



III - RECIPES OF DISHES

The recipes presented in this chapter were created and collected during the implementation of the project “Schoolgarden” by teachers and gastronomy specialists from the partner countries. They reflect the shared experience, creativity and practical knowledge developed throughout the project activities, training sessions and workshops. The collection combines different culinary traditions and local ingredients while following the common principles of healthy, sustainable and environmentally friendly nutrition.

The main idea behind these recipes is to promote planetary cuisine — meals that are beneficial both for human health and for the environment. The recipes are based mainly on vegetables, fruits, herbs, legumes, grains and other plant-based ingredients, with special attention given to seasonal and locally available products. Many of the dishes were inspired by ingredients that can be grown in school gardens, herb gardens or small local farms, showing that sustainable cooking can be simple, accessible and practical in everyday life.

An important principle followed during the preparation of the recipes was the idea of reducing food waste whenever possible. Several recipes encourage the use of products that are often overlooked or discarded, such as vegetable leaves, herbs, leftovers or seasonal surplus products. The chapter also highlights practical approaches to economical cooking, creative use of ingredients and environmentally conscious meal preparation.

The recipes included in this Guide are not intended only for professional kitchens. They were designed to be understandable, adaptable and suitable for educational activities, school practice and home cooking. Some recipes are simple everyday meals, while others introduce new flavour combinations and creative approaches to plant-based cuisine. Together, they demonstrate that healthy and sustainable food can also be colourful, enjoyable and rich in taste.

This chapter reflects not only the culinary aspect of the project, but also its educational goals — encouraging curiosity, experimentation and responsible food choices. Through these recipes, the project partners hope to inspire teachers, students and readers to explore new ways of cooking, make greater use of local and seasonal products and discover that sustainable cuisine can become a natural part of daily life

1. Vegetable stew with beans and potatoes

Ingredients (for 3–4 servings)

- Potatoes — 600–800 g
- Cauliflower — 200 g
- Beans (cooked) — 1 can (~400 g)
- 1 large onion
- Carrots — 1–2 pcs.
- Bell pepper (sweet pepper) — 1 pc.
- Tomatoes (or tomatoes in their own juice) — 300–400 g
- Garlic — 2–3 cloves
- Vegetable oil — 2–3 tbsp.
- Salt, black pepper

Spices for a richer flavour

- Smoked paprika — 1 tsp.
- Sweet paprika — 1 tsp.
- A little chili pepper / hot pepper (optional)
- Bay leaf

Preparation

1. Heat the oil in a pot or deep pan.
   Fry the chopped onion until golden (3–4 minutes).
   Add the sliced carrots and bell pepper, and cook for another 4–5 minutes.
2. Cut the potatoes into medium-sized cubes and divide the cauliflower into small florets.
   Add them to the pot and fry for about 5 minutes, lightly browning them.
   At this stage, add the paprika spice so that it releases its aroma.
3. Add the tomatoes and the bay leaf.
   Pour in enough hot water to almost cover the potatoes and cauliflower.
   Simmer covered for 15–20 minutes, until the potatoes are soft.

4. Rinse the beans and add them to the stew.
   Add the chopped garlic.
   Cook for another 5–7 minutes over low heat.
5. At the end, add salt and pepper to taste.
   For a richer flavour, you can add a small piece of butter.

How does this recipe reflect the project principles?

It is healthy, plant-based and sustainable cooking. The dish is rich in vegetables and legumes, providing a nutritious and balanced meal with minimal environmental impact. Most ingredients are seasonal, locally available and suitable for growing in school or home gardens. The recipe also supports zero-waste ideas, as it can easily be adapted using leftover or available vegetables. Its simple preparation makes it suitable for school activities, practical training and everyday cooking.

2. Strawberry soufflé (a protein-rich and healthy dessert)

Ingredients

- Frozen or fresh strawberries — 100 g
- Drinking yogurt or Greek yogurt (~2%) — 100 ml
- Soft cottage cheese (creamy), 5% — 170 g
- Agar-agar powder — 3 g (≈ 1 level tsp.)
- Water — 70 ml
- Sweetener / honey / erythritol — to taste
- (optional) vanilla or lemon zest

Preparation

1. Strawberry mixture

- If the strawberries are frozen, thaw them first.
- Blend them into a purée.
- If you want a completely smooth texture, strain the purée through a sieve.

2. Cottage cheese cream

In a bowl, blend together:

- the cottage cheese
- the yogurt
- the sweetener
- the vanilla (if using)

You should get a completely smooth and creamy mixture without any lumps (this is the main secret to a good soufflé).

3. Preparing the agar-agar (THE MOST IMPORTANT PART)

- Put 3 g of agar-agar into a small saucepan.
- Add 70 ml of water.
- Stir well.
- Place on the stove.
- Bring to a boil and cook for 30–40 seconds (with small bubbles forming).

4. Combining the mixture (you need to work quickly)

Agar-agar starts to set after about 2–3 minutes.

- Slowly pour the hot agar into the strawberry purée in a thin stream, stirring constantly.
- Immediately mix this into the cottage cheese cream.
- Quickly blend for 10–15 seconds.

5. Shaping

- Pour into small containers, silicone molds, or one large mold.
- Leave at room temperature for 5 minutes, then refrigerate for 30–40 minutes.

How does this recipe reflect the project principles?

This dessert shows that healthy and sustainable food can also be light, attractive and enjoyable. The recipe uses simple ingredients with a high nutritional value, combining fruit and dairy products into a balanced dessert with reduced sugar content. It follows the principles of planetary cuisine by encouraging the use of seasonal berries and natural ingredients instead of heavily processed sweets. It can easily be prepared with locally grown strawberries and adapted according to seasonal availability. The recipe also demonstrates that healthier dessert alternatives can be simple to prepare and suitable for both educational activities and everyday meals

3. Omelette with goutweed

Ingredients

- a generous handful of rinsed, dried, and chopped goutweed
- 2 eggs
- 3 tbsp milk
- a pinch of salt
- a little grated hard cheese

Preparation

- Put all the ingredients into a bowl and lightly beat them with a fork.
- Heat the pan well, add oil, and fry on both sides.
- Serve with bread and butter.

How does this recipe reflect the project principles?

This recipe highlights one of the key ideas of the project — using locally available plants and herbs in everyday nutrition. Goutweed is an example of a wild edible plant that is often overlooked, although it is nutritious, accessible and sustainable.

The omelette demonstrates how simple ingredients can be transformed into a healthy meal with minimal waste and environmental impact. The recipe also encourages learning about local biodiversity, seasonal products and traditional food knowledge, connecting sustainable cooking with practical everyday use.

Bonus recipes and ideas – videos

1. Roasted vegetable salad (*proposed by VESK*):
https://drive.google.com/file/d/1NWnGVUDlJ9iWpHQLBzc8O5XOI0Q9MznY/view?usp=sharing

2. Sunflower and pumpkin seed candy (*proposed by VESK*):
https://drive.google.com/file/d/1Su3fShS9_QvMwC9mt6onQCNv7Xs-DQXI/view?usp=sharing

3. Homemade salt-free Vegeta (*proposed by VESK*):
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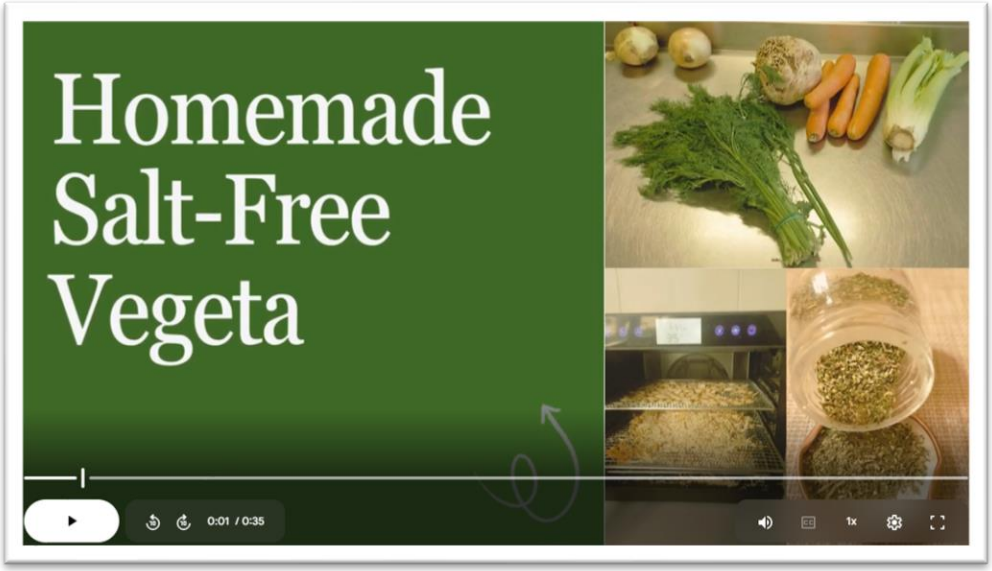
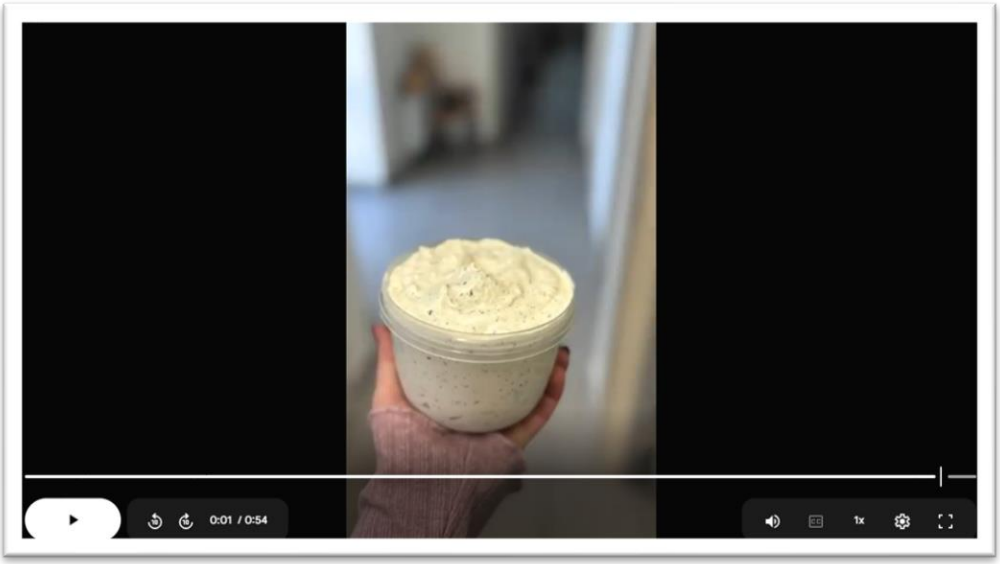


4. Pumpkin cake (*proposed by VESK*):
https://drive.google.com/file/d/1qeuSog7mYYvN5hMT4JjDEK5SiuH5yku-/view?usp=sharing

5. Ice-cream (*proposed by RT*):
https://drive.google.com/file/d/12Azq6iV4tTUamWNKdZHrZL7bT7KmAPVO/view?usp=drive_link



6. Planetary diet breakfast (*proposed by RT*):
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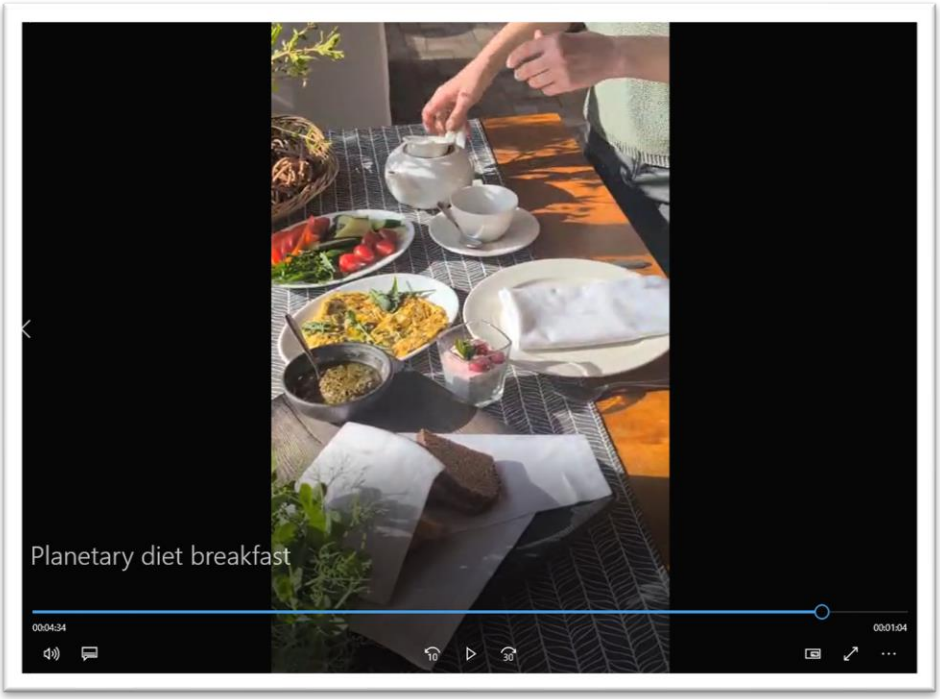
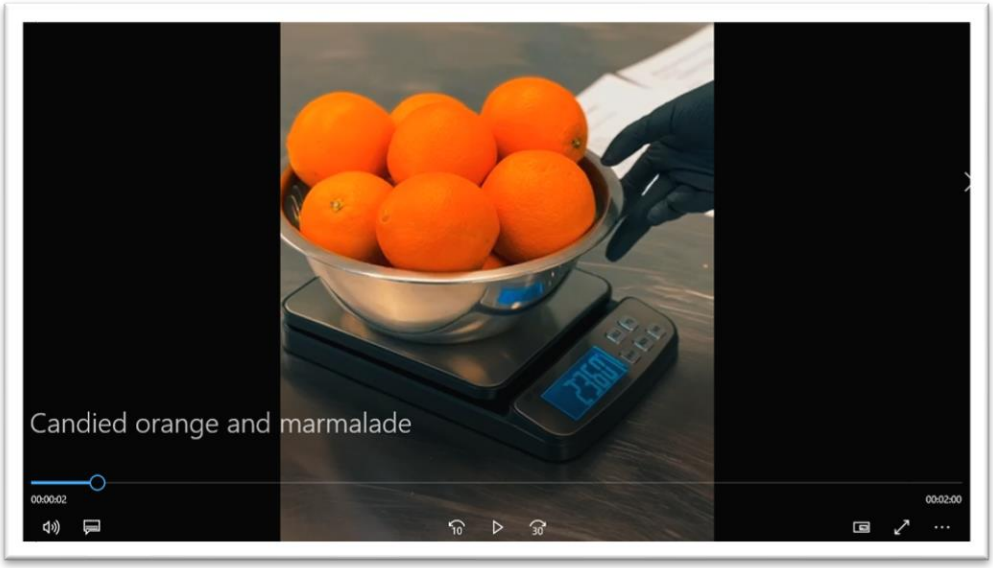
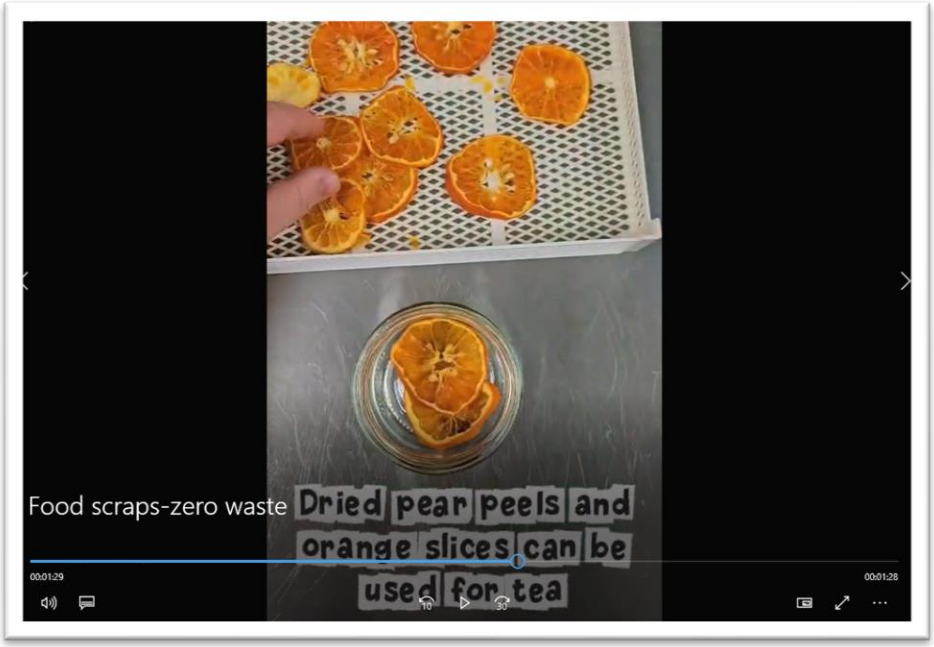


7. Candied orange and marmalade (*proposed by RT*):
https://drive.google.com/file/d/1wVhJWXpTr5EpqEQkl-EmdycU3W5jWEJE/view?usp=drive_link



8. Food scraps - zero waste ideas (*proposed by RT*):
https://drive.google.com/file/d/1Ozs5y86Jhlde8O4UHMT710v52P6PEfOA/view?usp=drive_link



IV – INCORPORATION OF ELEMENTS INTO SCHOOL ACTIVITIES

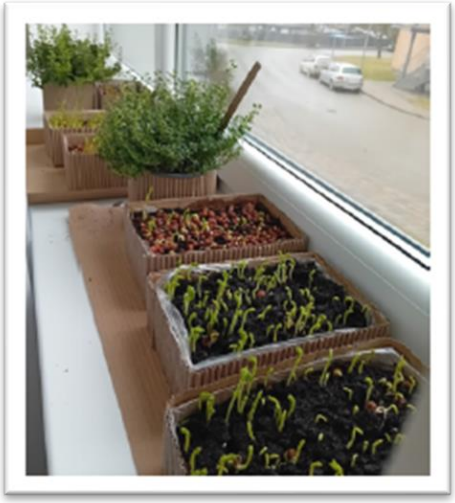
One of the important aims of the "Schoolgarden" project was to ensure that the knowledge and experience gained during the project would not remain limited to training sessions, but would become part of everyday educational practice. After participating in the project activities and training, teachers had the opportunity to apply new ideas and approaches in their regular work with students.

This chapter presents examples of how the project principles were incorporated into school activities by the participating teachers. The activities cover a range of topics explored during the project, including the use of school garden products, planetary diet principles, plant-based nutrition, seasonal and local ingredients, sustainable food preparation and zero-waste practices.

The examples show different ways in which teachers adapted the knowledge gained through the project to their subjects, students and available resources. Some activities focused on practical cooking and the use of products grown or collected locally, while others addressed sustainability, healthy nutrition, food waste or responsible use of resources through classroom discussions and practical tasks

TEACHER 1
(RT, Latvia)

Presentation and a lecture to 1st-year students of Rezekne Technical School (Hospitality Service Specialists, within the module "Preparation of Premises and Environment for Guest Reception") on the topic "The importance of the Planetary diet as a model of healthy and planet-friendly nutrition."



Students were tasked with preparing **ideas and proposals** on how elements of the Planetary diet model could be implemented at Rezekne Technical School.

Students also carried out a small project by creating a **herb garden on a windowsill**.

TEACHER 2
(VESK, Lithuania)

The principles of the planetary diet were integrated into the curriculum through the subjects **"Cooking Technology"** and **"Food Preparation Basics"**, with a focus on seasonal ingredients, natural seasoning, and healthy cooking methods.

In practical lessons, students applied **plant-based approaches** and worked with seasonal ingredients.

The principles of the planetary diet were introduced through the preparation of **natural, plant-based spice mixtures without added salt**.

Together with students, a **homemade vegetable-based seasoning mix** using seasonal herbs and vegetables was prepared. The mixture contains no added salt and is now used in daily cooking lessons. Students learned about hidden salt in industrial products, natural taste enhancement, and healthier food preparation.

A strong emphasis was placed on **seasonal cooking**, particularly using pumpkin as a key ingredient. As part of school-wide activities, students contributed to the **Pumpkin Café**, where a variety of pumpkin-based dishes were prepared.

Students also participated in the **Čiurlionis-inspired café event**, where seasonal, plant-based products were used to create a connection between culture, sustainability, and food.

The teacher plans to continue developing **natural, salt-free seasoning** with students using school-grown and seasonal herbs and vegetables. The homemade spice mix will be further applied in different dishes during cooking lessons.

TEACHER 3
(RT, Latvia)

Food preparation (for students of the "Food Technology" and "Catering Services" (Cook/Pastry Chef) programmes):

- ✓ Emphasis is placed on the use of plant products, seasonal vegetable and fruit preparation techniques, sustainable menus and waste reduction methods.

Food technology:
The theoretical part includes the principles of the Planetary Diet, analysis of the nutritional value of products and the importance of a sustainable food chain.

Food production and preservation:
In practical classes, we use materials from the school's microgreen garden, as well as home-grown greens, fruits and vegetables - self-sprouted microgreens, which are further used in cooking and decorating dishes, and fruits/berries/vegetables are used for further processing, drying, sublimation and preservation, as well as used to decorate desserts and dishes.

TEACHER 4
(VESK, Lithuania)

Participation in the Schoolgarden training strengthened the teacher's understanding of the importance of **biodiversity, ecosystems, and natural plant resources** for sustainable food systems and encouraged greater integration of nature-based learning into teaching practice.

Planetary diet principles were incorporated into the school curriculum through the subjects **"Floristics," "Decorative Gardening," and "Plant Studies."** Within these subjects, environmental awareness, plant recognition, and ecosystem understanding were emphasized to help students recognize the connection between natural biodiversity and sustainable, plant-based nutrition.

As part of the implementation, students from the floristics and decorative gardening groups participated in an **educational field lesson at the Varnių Nature Cognitive Trail**. During this outdoor activity, students deepened their knowledge of forest biodiversity and identified native Lithuanian tree species.

The lesson also focused on understanding how **natural ecosystems support sustainable food systems** and why plant diversity is essential for planetary health.

Together with students, practical activities were organised around **processing school-grown organic produce**, including the preparation of dried apples, beetroots, and other seasonal products grown in the school garden.

Students learned about **simple and sustainable food preservation methods**, the value of locally grown organic products, and how school gardens can be used effectively in line with planetary diet principles.

The teacher also plans to continue organising **outdoor educational lessons, nature trails, and plant recognition activities**, further linking biodiversity education with planetary diet awareness

TEACHER 5
(RT, Latvia)

Use of product waste: (waste-free production)

- ✓ Chokeberries -> Chokeberry syrup (2nd and 3rd year "Food Production Technicians" students in food specializations: Fruit and vegetable processing, Beverage production)
- ✓ Evaporated Chokeberries - > Dried Chokeberries -> Crushed into powder - > Used as a colouring agent (for confectioners)

Use of bread waste/leftovers: (zero-waste production)

✓ Baked bread

✓ Bread scraps used to make bread kvass

✓ Leftovers from making kvass (toasted and soaked bread cubes)

✓ New products invented and produced (Bread chips, Dry mixes: Bread soup with Christmas flavour, Chocolate cake with bread flavour, Bread cookie mix).

Pickling pumpkins and processing pumpkin peel into chips

Using recipes and pumpkin cutting methods directly from what was seen in Balystok as part of the project, plus zero-waste production.

TEACHER 6
(VESK, Lithuania)

Planetary diet principles were **incorporated into the school curriculum** through the subjects of "Bakery Technology" and "Cooking Technology". Within these subjects, students apply plant-based approaches in both theoretical and practical lessons, focusing on the use of seasonal vegetables, natural ingredients, and sustainable food preparation methods. The integration supports the development of healthy cooking habits, environmentally responsible food production, and modern culinary competencies aligned with planetary diet principles.

Planetary diet elements were introduced into practical lessons **by focusing on plant-rich bakery products and seasonal vegetables**. Students worked with pumpkin and zucchini as main ingredients and explored how vegetables can be successfully integrated into bakery production.

During practical lessons, students baked homemade bread, pumpkin cake, and zucchini cake, using seasonal vegetables as the main components. These activities **strengthened their understanding of plant-based baking, seasonality, and sustainable ingredient use**.

In addition, students were involved in **practical work at the school canteen**, where they prepared semi-finished products for daily lunch meals. This allowed them to gain experience of real catering workflows, teamwork, and sustainable kitchen organisation in practice.

TEACHER 7
(RT, Latvia)

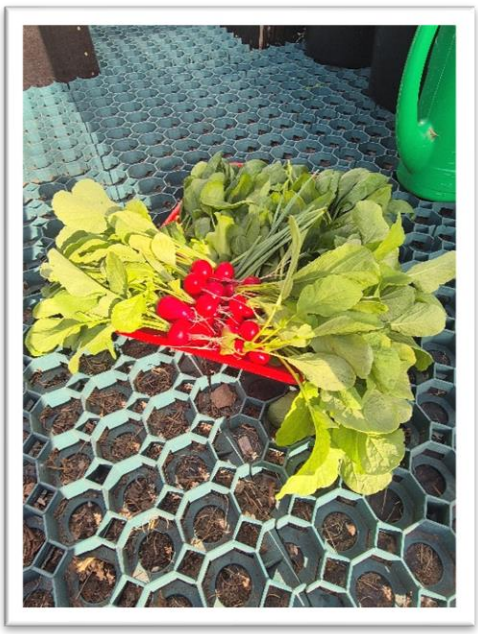
The principles of the planetary diet were included in both theoretical and practical lessons, emphasizing sustainable food production, the use of local raw materials, seasonality, the importance of plant-based products and reducing food waste.

In practical lessons, **recipes were developed** based on vegetables, fruits, legumes, whole grains and local raw materials.
The module "Bread making and baking" integrated local fruits, vegetables and herbs into bread recipes.

Some animal products were replaced with **plant-based alternatives**.
Within the framework of the module "Bread making and baking", students studied raw materials that can be used to replace eggs when baking flour products.

Demonstration of **food waste reduction** techniques (use of the whole product, portion planning).
As part of the "Young Baker 2025" competition, a dessert called "Tangerine Tart" was developed. In this dessert, all intermediate products were prepared using the "zero waste" principle.

TEACHER 8
(VESK, Lithuania)



Although the branch primarily provides bartender training and does not offer chef or cooking programmes, planetary diet **ideas were incorporated through community-level activities**, dissemination, and cooperation with catering services. The focus was placed on **raising awareness** of seasonal, plant-based food and sustainable ingredient use in everyday school life.

The experience gained during the "Schoolgarden" training was **shared with colleagues** during a meeting of the vocational teachers' methodological group, where the project goals, key topics, and practical examples were presented. This helped increase awareness of planetary diet principles and encouraged discussion on how these ideas can be applied across different vocational subjects.

In cooperation with the school canteen, a **seasonal pumpkin soup** was introduced into the daily menu, demonstrating a simple and accessible plant-based dish aligned with planetary diet principles.

In addition, **organic vegetables grown in Veisiejai** were shared with colleagues in Vilnius, promoting the value of local, seasonal, and environmentally friendly products.

The dissemination of planetary diet-related knowledge within the school community will be continued through **presentations, informal discussions, and practical examples**. Future actions will include promoting seasonal plant-based dishes, encouraging **cooperation with local producers**, and supporting colleagues in integrating sustainability topics into their teaching practice, regardless of subject area.

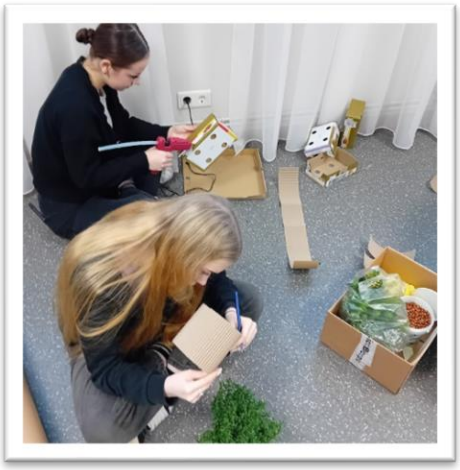
V – LESSON PLANS

An important part of the project was the integration of planetary cuisine principles into educational practice. During the project, teachers developed and tested lesson plans and practical activities that combine healthy nutrition, sustainability and gastronomy education. These materials were created to support both theoretical learning and hands-on experience, encouraging students to explore food, nutrition and environmental responsibility in an engaging and practical way.

The lesson plans included in this chapter focus on topics such as healthy eating habits, plant-based ingredients, sustainable cooking methods, school gardens, seasonal products and zero-waste principles. Many activities were designed to promote creativity, teamwork and critical thinking while helping students better understand the connection between food choices, health and the environment.

The developed activities combine discussions, practical cooking tasks, tasting sessions, product analysis and work with herbs, vegetables and local ingredients. The lesson plans can be adapted to different educational settings and age groups, making them useful for vocational education, gastronomy training and interdisciplinary school activities.

Through these educational materials, the project aimed to show that learning about sustainable nutrition can be interactive, practical and closely connected with everyday life. The activities encourage students not only to gain knowledge, but also to develop responsible habits and practical skills that can support healthier and more environmentally friendly lifestyles in the future.



Lesson plan 1

1.	**The title of the lesson**	**HERBS AND BIODIVERSITY**
2.	**Annotation (what will be the topic discussed)**	This lesson introduces learners to the role of herbs in the garden and their importance for biodiversity. Learners explore different herb species, their characteristics, uses, and contribution to attracting pollinators and supporting ecological balance. Through practical activities, learners develop plant recognition skills and understand how biodiversity strengthens sustainable garden ecosystems.
3.	**The lesson structure (plan of the lesson)**	• Introduction to herbs and biodiversity in the school garden. • Theoretical explanation of the role of herbs in ecosystems and their importance for pollinators. • Practical work – identifying herbs, observing their characteristics, and labelling selected plants. • Observation of insects and discussion about biodiversity in the garden. • Reflection on the importance of biodiversity for sustainable gardening. • Conclusions.
4.	**The goals of the lesson**	• to recognise common herbs grown in the school garden; • to understand the role of herbs in biodiversity; • to identify how herbs support pollinators and ecological balance; • to develop observation and plant care skills; • to strengthen sustainable gardening awareness.
5.	**The theoretical part of the lesson**	Herbs are valuable plants in the school garden because they serve multiple functions: culinary use, medicinal value, and ecological support. Many herbs attract pollinators such as bees and butterflies through their flowers and scent. Biodiversity in a garden means the presence of different plant and living organism species that together create a balanced ecosystem. The lesson explains how biodiversity helps protect plants naturally, supports pollination, and improves overall garden health. Examples of herbs may include: • mint • basil • thyme • dill • parsley • oregano

6.	**The practical part of the lesson (tasks, exercises, tests, workshops)**	**Practical tasks:** • identify herbs growing in the garden; • compare leaf shape, smell, and texture; • label herbs correctly; • observe insects visiting herbs; • water or maintain herb beds. **Group exercise:** Learners work in groups and prepare a short herb observation table including: • herb name; • smell; • possible use; • visible biodiversity around the plant. **Optional workshop:** Plant one new herb species in a selected area.
7.	**Sources of information**	Urban School Garden: A Teacher's Guide — practical teacher resource for organising garden-based lessons and biodiversity activities.
8.	**Methods, tools, approaches**	**Methods:** • observation • experiential learning • plant identification • guided discussion • teamwork **Tools:** • plant labels • simple gardening tools • observation sheets • herb samples **Approaches:** • learning by doing • environmental education • sensory learning
9.	**Conclusions of the lesson**	After the lesson learners are able to: • identify common herbs; • explain the role of herbs in biodiversity; • recognise pollinator-friendly plants; • describe how biodiversity supports healthy gardens; • apply basic herb care practices.

Lesson plan 2

1.	**The title of the lesson**	**PREPARATION OF HEALTHY SWEETS FROM ORANGES WITHOUT ADDED SUGAR**
2.	**Annotation (what will be the topic discussed)**	During the lesson, 4th-year students learn the principles of full utilization of food raw materials by preparing two different products from oranges — candied peel and marmalade candies made from orange juice. No sugar is used in the preparation process; instead, alternative sweeteners and a plant-based gelling agent, agar, are used. The lesson promotes understanding of healthier sweet production and food waste reduction.
3.	**The lesson structure (plan of the lesson)**	1. Introduction – the importance of healthy nutrition and full utilization of food raw materials. 2. Theoretical explanation about sugar substitutes and the properties of agar. 3. Practical work – processing oranges and preparing the products 4. Shaping and cooling the products. 5. Evaluation and tasting of the finished products. 6. Discussion about the importance of healthier alternatives. 7. Conclusions.
4.	**The goals of the lesson**	• Promote understanding of healthy sweet production. • Develop skills in full utilization of raw materials to reduce food waste. • Introduce sugar substitutes and their applications. • Develop practical skills in working with plant-based gelling agents. • Encourage a creative approach to food product development.
5.	**The theoretical part of the lesson**	Students become familiar with: • the nutritional value of oranges and their possible uses, • the effects of sugar on health and alternative sweeteners, • the properties of agar and its differences from gelatin, • the principles of sustainable and zero-waste food production.
6.	**The practical part of the lesson (tasks, exercises, tests, workshops)**	Students: • prepare orange peels by cleaning and processing them for candied peel production, • make candied orange peels using sugar-free sweeteners, • squeeze orange juice and prepare a marmalade mixture based on agar, • sweeten the marmalade using alternative sweeteners,

		• pour the mixture into molds and cool it until a candy-like consistency is achieved, • taste and evaluate the finished products.
7.	**Sources of information**	1. Materials about healthy nutrition and sugar-free products: https://medon.lv/blog/saldumi-bez-cukura-kapec-tie-var-but-sliktaki-par-istajiem- 2. Material about the use of agar-agar: https://ieber.lv/products/agars-augu-valsts-alternativa-zelatinam-25g 3. Erasmus+ project "Schoolgarden" materials.
8.	**Methods, tools, approaches**	• Practical learning • Group work • Experimental approach • Tasting and sensory evaluation • Discussion and reflection
9.	**Conclusions of the lesson**	Students concluded that: • several different products can be made from a single fruit, • healthy sweets can be prepared without added sugar, • sugar substitutes and agar are suitable for producing functional sweets, • full utilization of raw materials reduces food waste and promotes sustainability.

Lesson plan 3

1.	**The title of the lesson**	**SUSTAINABLE DESSERT PREPARATION: ICE CREAM WITHOUT USING ELECTRICAL RESOURCES**
2.	**Annotation (what will be the topic discussed)**	During the lesson, 4th-year students practically explore sustainable food preparation methods by making ice cream without the use of electrical resources. Natural winter conditions — frost, snow and salt — are used in the process. Students work with a minimal amount of ingredients, analyse the process and conclude that a high-quality and tasty dessert can also be prepared in an environmentally friendly way.
3.	**The lesson structure (plan of the lesson)**	1. Introduction – the importance of sustainable food production. 2. Theoretical explanation about the effect of cold and salt on the freezing process. 3. Practical work – preparing ice cream in outdoor conditions. 4. Process documentation (video recording step by step). 5. Evaluation and tasting of the final result. 6. Discussion and conclusions. 7. Video editing and reflection.
4.	**The goals of the lesson**	• Develop understanding of sustainable food preparation. • Demonstrate that desserts can be prepared without using electrical resources. • Encourage creative and practical thinking. • Develop skills in working with local and minimal ingredients. • Build cooperation and communication skills within a group.
5.	**The theoretical part of the lesson**	Students become familiar with: • the freezing process and the effect of salt on the melting temperature of ice, • the principles of sustainable food production, • the importance of local and homemade ingredients, • possibilities for saving energy resources in the food industry.
6.	**The practical part of the lesson (tasks, exercises, tests, workshops)**	Students: • prepare an ice cream mixture using sweet cream purchased from a local farm, homemade sweetened condensed milk and dark chocolate flakes, • create a freezing environment in the snow using salt and place the bowl with the mixture inside,

		• stir the mixture for approximately 40 minutes until a soft ice cream consistency is achieved, • film the process step by step and later edit the video, • taste and evaluate the finished product.
7.	**Sources of information**	1. Materials about sustainable food production: https://www.lbtu.lv/sites/default/files/files/projects/Ilgtspejigas_partikas_razosanas_sistemas.pdf?_gl=116goydv_upMQ..*_ga*MjAzMjk3MjczNC4xNzcwODE2ODg1*_ga_KTMKVYLGX5*czE3NzA4MTY4ODQkbzEkZzAkdDE3NzA4MTY4ODQkajYwJGwwJGg2MjYxNDY2NTg . 2. Self-created educational video: https://www.facebook.com/share/r/1DURt51zsX/ 3. Erasmus+ project "Schoolgarden" materials.
8.	**Methods, tools, approaches**	• Practical learning (learning by doing) • Group work • Experimental method • Discussion and reflection • Digital tools for video recording and editing
9.	**Conclusions of the lesson**	Students concluded that: • a tasty and high-quality dessert can be prepared without using electrical resources, • natural conditions can be used as an effective production resource, • high product quality can be achieved with a minimal number of ingredients, • sustainability and creativity are important in the modern food industry.

Lesson plan 4

1.	**The title of the lesson**	**PREPARATION OF A BREAKFAST DISH: GOUTWEED PESTO WITH HAZEL BUDS AND BREAKFAST TABLE PRESENTATION**
2.	**Annotation (what will be the topic discussed)**	During the lesson, students become familiar with the sustainability principles of the planetary diet and their application in breakfast preparation. In the practical part, students prepare wild goutweed pesto with hazel buds, exploring the use of wild plants in gastronomy. At the end of the lesson, students create a natural and aesthetic table presentation using seasonal materials.
3.	**The lesson structure (plan of the lesson)**	1. Introduction: the relevance of the planetary diet. 2. Use of wild plants in gastronomy. 3. Practical preparation: goutweed pesto with hazel buds. 4. Creation of table presentation. 5. Presentation and evaluation of the completed work.
4.	**The goals of the lesson**	• Understand the principles of the planetary diet and their importance in breakfast menus. • Be able to identify and safely use wild plants (goutweed) and buds (hazel buds). • Learn sustainable food preparation techniques. • Practically prepare pesto. • Create an aesthetic and environmentally friendly table presentation.
5.	**The theoretical part of the lesson**	• The concept of the planetary diet and its impact on health and the environment; • The use of wild plants in gastronomy: safety, seasonality and nutritional value; • Goutweed – culinary properties, flavour and methods of use; • Hazel buds – biologically active substances; • Sustainable food preparation techniques: minimal processing and resource saving; • Principles of table presentation: naturalness and aesthetics.
6.	**The practical part of the lesson (tasks,**	**Task 1**: prepare goutweed pesto with hazel buds (see recipe in Appendix 1); **Task 2**: create a breakfast table presentation; **Task 3**: present the dish and the table decor.

	exercises, tests, workshops)	
7.	**Sources of information**	1. https://www.theguardian.com/environment/2025/oct/02/planetary-health-diet-could-save-40000-deaths-a-day-landmark-report-finds 2. https://www.fitoterapija.lv/
8.	**Methods, tools, approaches**	• Demonstration and practical cooking • Group work • Creative design approach in table presentation • Discussion and conclusions
9.	**Conclusions of the lesson**	At the end of the lesson, students are able to: • understand the principles of the planetary diet and apply them in breakfast dishes; • safely use wild plants and buds in gastronomy; • prepare goutweed pesto with hazel buds; • create an aesthetic table presentation; • professionally present their work and justify their choices.

Appendix 1. Goutweed pesto

Ingredients

- 2 handfuls of fresh young goutweed leaves
- 1 tbsp fresh hazel buds
- 1–2 garlic cloves
- 40 g sunflower or pumpkin seeds
- 5–6 tbsp olive oil or cold-pressed rapeseed oil
- 1 tbsp lemon juice
- Salt to taste

Preparation

Wash the goutweed leaves and dry them. Finely chop the hazel buds.
Place the goutweed, hazel buds, garlic, seeds and oil into a blender. Blend until a smooth consistency is reached.
Add lemon juice, salt and pepper to taste.
Serve with wholegrain bread, vegetables or as an addition to breakfast bowls.

Lesson plan 5

1.	**The title of the lesson**	**PUMPKIN – A SEASONAL SUPERFOOD FROM GARDEN TO TABLE**
2.	**Annotation (what will be the topic discussed)**	This lesson introduces learners to pumpkins as an important seasonal crop and a valuable component of a healthy, sustainable diet. Learners explore different pumpkin varieties, their nutritional value, culinary uses, and opportunities for reducing food waste by using both the flesh and seeds. Through practical activities, learners prepare a simple pumpkin-based recipe while understanding the importance of seasonal and locally grown foods.
3.	**The lesson structure (plan of the lesson)**	• Introduction to pumpkins as seasonal vegetables and their role in healthy nutrition. • Theoretical explanation of pumpkin varieties, nutritional value and sustainable use. • Practical work – preparing a simple pumpkin-based dish. • Tasting and sensory evaluation of the prepared food. • Discussion about seasonal eating, food waste reduction and local food production. • Conclusions.
4.	**The goals of the lesson**	• Recognise pumpkins as nutritious seasonal vegetables; • Understand the importance of seasonal and locally produced food; • Develop practical food preparation skills; • Encourage full utilisation of food products and reduction of food waste; • Promote sustainable and healthy eating habits.
5.	**The theoretical part of the lesson**	Pumpkins are rich in dietary fibre, beta-carotene, vitamins A and C, potassium and antioxidants. They are versatile vegetables that can be used in soups, salads, breads, desserts and snacks. Because pumpkins store well throughout autumn and winter, they are an excellent example of seasonal food that supports sustainable consumption. Their seeds are also edible and highly nutritious, demonstrating how different parts of one crop can be fully utilised. The lesson introduces the concept of seasonal eating and explains how choosing local seasonal produce can reduce environmental impact while supporting healthier diets.
6.	**The practical part of the lesson (tasks,**	**Practical tasks** identify different pumpkin varieties; observe colour, texture and aroma;

	exercises, tests, workshops)	prepare a simple pumpkin recipe (e.g. roasted pumpkin, pumpkin soup, pumpkin spread or pumpkin muffins); roast pumpkin seeds as a healthy snack; evaluate the finished products using sensory analysis. **Group activity** Each group prepares one pumpkin-based dish and presents: nutritional benefits; seasonal advantages; ideas for reducing food waste. **Reflection** Discuss: Why are pumpkins considered sustainable vegetables? How can all parts of the pumpkin be used? What seasonal vegetables are available in your region during autumn?
7.	**Sources of information**	1. Lithuanian Ministry of Health – Healthy Nutrition Recommendations. https://sam.lrv.lt/lt/veiklos-sritys/visuomenes-sveikatos-prieziura/mityba-ir-fizinis-aktyvumas-2/sveikos-mitybos-rekomendacijos/?utm 2. EAT – Planetary Health Diet https://eatforum.org/eat-lancet/the-planetary-health-diet/?utm 3. VMGonline – Rudens svečias moliūgas: TOP 22 receptų https://www.vmgonline.lt/receptai/rudens-sve%C4%8Dias-moli%C5%ABgas-top-22-vmg-recept%C5%B3?utm
8.	**Methods, tools, approaches**	**Methods** • practical cooking • observation • discussion • group work • sensory evaluation **Tools** • pumpkins • kitchen equipment • knives and cutting boards • baking trays or cooking pots • tasting sheets **Approaches** • experiential learning

		• learning by doing • healthy nutrition education • sustainability education
9.	**Conclusions of the lesson**	After the lesson learners are able to: • explain the nutritional value of pumpkins; • prepare a simple seasonal pumpkin dish; • identify ways to reduce food waste by using different parts of the pumpkin; • recognise the benefits of seasonal and locally grown food; • understand the relationship between healthy nutrition and environmental sustainability.

Appendix 1. Roasted Pumpkin Wedges with Fresh Herbs

Ingredients (4 servings)

- 800 g pumpkin (Hokkaido or butternut squash)
- 2 tbsp olive oil
- 1 tsp dried thyme or 2 tsp fresh thyme
- 1 tsp rosemary, finely chopped
- 1 tsp paprika powder
- Salt and freshly ground black pepper to taste
- 2 tbsp pumpkin seeds
- Fresh parsley for garnish (optional)

Preparation

1. Wash the pumpkin thoroughly. If using Hokkaido pumpkin, there is no need to peel it. Remove the seeds and cut the pumpkin into evenly sized wedges.
2. Place the wedges in a large bowl and drizzle with olive oil.
3. Add thyme, rosemary, paprika, salt and black pepper. Toss until all pieces are evenly coated.
4. Arrange the pumpkin wedges on a baking tray lined with baking paper.
5. Roast in a preheated oven at 200°C for 25–30 minutes, turning halfway through, until the pumpkin is tender and lightly golden.
6. Sprinkle with roasted pumpkin seeds and fresh parsley before serving.

Lesson plan 6

1.	**The title of the lesson**	**Preparing Healthy Bread with Psyllium Husk**
2.	**Annotation (what will be the topic discussed)**	This lesson introduces learners to healthy baking using fibre-rich ingredients and whole-grain products. Learners explore the nutritional benefits of psyllium husk, discuss the importance of dietary fibre in a balanced diet, and prepare homemade bread using simple, wholesome ingredients. The lesson combines practical culinary skills with healthy nutrition and sustainable food choices.
3.	**The lesson structure (plan of the lesson)**	• Introduction to healthy baking and the importance of dietary fibre. • Theoretical explanation of whole grains, bran and psyllium husk, and their nutritional benefits. • Preparation of bread dough using healthy ingredients. • Proofing, baking and observing the bread-making process. • Tasting and evaluation of the baked bread. • Discussion about healthier alternatives to commercially produced bread and conclusions.
4.	**The goals of the lesson**	• Understand the importance of dietary fibre in a healthy diet; • Recognise the nutritional value of whole grains and psyllium husk; • Develop practical bread-making skills; • Encourage healthier food choices using simple ingredients; • Promote sustainable home cooking and reduced consumption of highly processed foods.
5.	**The theoretical part of the lesson**	Healthy bread provides valuable nutrients, including complex carbohydrates, dietary fibre, vitamins and minerals. Whole-grain flour and bran increase fibre intake, which supports digestion and contributes to long-lasting satiety. Psyllium husk is a natural source of soluble fibre that improves the texture of bread while increasing its nutritional value. Preparing bread at home also allows consumers to reduce unnecessary additives and choose high-quality ingredients. The lesson introduces learners to healthy baking principles and demonstrates how simple recipe modifications can improve the nutritional quality of everyday foods.

6.	**The practical part of the lesson (tasks, exercises, tests, workshops)**	**Practical tasks** • Identify the ingredients used in healthy bread; • Compare refined and whole-grain flours; • Prepare bread dough following the recipe; • Observe dough fermentation and baking; • Evaluate the appearance, aroma, texture and taste of the finished bread. **Group activity** Learners work in small groups to prepare one loaf of healthy bread using psyllium husk and whole-grain ingredients. **Reflection** Each group discusses: What makes this bread healthier? Which ingredients increase its nutritional value? How could the recipe be adapted using herbs or seeds from the school garden?
7.	**Sources of information**	1. Lithuanian Ministry of Health – Healthy Nutrition Recommendations. https://sam.lrv.lt/lt/veiklos-sritys/visuomenes-sveikatos-prieziura/mityba-ir-fizinis-aktyvumas-2/sveikos-mitybos-rekomendacijos 2. EAT – Planetary Health Diet https://eatforum.org/eat-lancet/the-planetary-health-diet
8.	**Methods, tools, approaches**	**Methods** • demonstration • practical baking • group work • discussion • sensory evaluation **Tools** • kitchen equipment • weighing scales • mixing bowls • baking trays • oven **Approaches** • learning by doing • healthy nutrition education • experiential learning

		• sustainable food preparation
9.	**Conclusions of the lesson**	After the lesson learners are able to: • explain the importance of dietary fibre in everyday nutrition; • prepare healthy bread using simple ingredients; • identify healthier alternatives to refined bakery products; • evaluate the quality of baked products using sensory criteria; • understand how homemade food contributes to healthier and more sustainable eating habits.

Appendix 1. Healthy Bread with Psyllium Husk

Ingredients (1 loaf)

- 500 g mixed flour (wholemeal and wheat flour can be combined)
- 50 g mixed bran
- 12 g dry yeast
- 2 tsp salt
- 1 tsp sugar
- 350 ml warm water
- 2 tbsp vegetable oil
- 3 tbsp psyllium husk powder

Preparation

1. In a large bowl, combine the flour, bran, dry yeast and sugar.
2. Pour in approximately one-third of the warm water and mix gently. Leave for 10–15 minutes to activate the yeast.
3. Add the remaining warm water, salt, psyllium husk powder and vegetable oil.
4. Mix until a soft, sticky dough forms. Do not add extra flour—the dough should remain sticky.
5. Cover the bowl and leave the dough to rise for about 1 hour in a warm place.
6. Line a baking tray or loaf tin with baking paper and transfer the dough.
7. Bake in a preheated oven at 200°C for 30–35 minutes, until the loaf is golden brown and sounds hollow when tapped.
8. Allow the bread to cool before slicing.

Lesson plan 7

1.	**The title of the lesson**	**Eco-Conscious Living: Health, Planet & Plant-Based Choices**
2.	**Annotation (what will be the topic discussed)**	This lesson introduces participants to the principles of Zero Waste and the importance of an eco-friendly, plant-based lifestyle. It combines a short theoretical overview with a hands-on practical activity to help learners understand how everyday food choices impact both health and the environment. Participants explore the 5R concept, compare animal-based and plant-based products, and learn about sustainable alternatives such as vegetable and fruit powders.
3.	**The lesson structure (plan of the lesson)**	Structure of the lesson: • Introduction (3-5 minutes) • Theory (5–7 min) • Practical part (25–30 minutes) • Analysis and main result (3–5 minutes)
4.	**The goals of the lesson**	**Introduction** (3-5 minutes) Goal: set the context and engage participants **Discussion**: What is Zero Waste? Why is an eco-friendly approach important today? Brief introduction to concepts: Zero Waste Plant-based diet and how to grow microgreens Mini-discussion: “What habits do we already have?”
5.	**The theoretical part of the lesson**	**Theoretical part** (5–7 minutes) Goal: provide a knowledge base • Zero Waste principles 5R: Refuse, Reduce, Reuse, Recycle, Rot • Eco-friendly approach and the impact of diet Carbon footprint of food products

		• Difference between animal-based and plant-based products • Plant-based alternatives What are freeze-dried products and powders? Examples: Fruit powders Vegetable powders Their advantages: Long shelf life No waste High concentration of nutrients
6.	**The practical part of the lesson (tasks, exercises, tests, workshops)**	**Practical part** (25–30 minutes) Goal: apply knowledge Main task: “Replace & Create” Participants work in groups or individually: • Replacing common products Replace: Flour → vegetable powders (e.g., broccoli, pumpkin) Dairy products → plant-based mixes Sugar → berry powders • Creating a product Come up with and prepare: A drink (smoothie / functional drink) A dessert A healthy snack • Conditions: Zero waste approach Plant-based ingredients Minimal packaging or eco-friendly packaging **Analysis and main result** (3–5 minutes) Goal: reinforce the material Presentation of the results

		Discussion: What worked well? Which substitutions were challenging? How does this impact health and the environment?
7.	**Sources of information**	1. https://link.springer.com/article/10.1007/s44274-024-00177-4?utm 2. https://www.mdpi.com/2072-6643/15/3/692?utm 3. https://pmc.ncbi.nlm.nih.gov/articles/PMC10001513/?utm Video: 1. https://youtu.be/eE993Vs7j8s?is=csviHHzwlVbSCL7g 2. https://youtu.be/ASbMTwD1VKk?is=MHEuWX6Z-O9Z2Fxp
8.	**Methods, tools, approaches**	Ingredients: • Vegetables: batates, beetroots , carrots, pumpkins, cabbages. • Fruits and berries: apples, bananas, raspberries, pineapples. • Plant-based milk alternatives- oat, almond, soy. Zero Waste materials: • Reusable bowls, cups, spoons • Glass containers • Beeswax wraps / paper alternatives • Compost bin (if available) Kitchen tools/equipment: • Measuring cups and spoons • Mixing bowls • Scales (optional but useful) • Freeze dryer (lyophilized) • Vacuum pump • Freezing system (pre-freezer or built-in freezer) • Temperature and pressure control system Optional supporting tools (for food preparation): • Food slicers or cutters (for uniform pieces) • Blenders or mixers (for puree products before drying) • Packaging machines (vacuum sealing, moisture-proof packaging) • Hygrometers (to measure moisture content after drying) Visual aids: • “5R” poster (Refuse, Reduce, Reuse, Recycle, Rot)

		• Food carbon footprint comparison chart • Examples of plant-based products
9.	**Conclusions of the lesson**	Participants learned the basics of the Zero Waste concept and the 5R principles, as well as how food choices affect the environment and carbon footprint. They explored plant-based alternatives and powder-based products and understood how these can replace conventional ingredients. In the practical part, participants applied their knowledge by creating products using zero-waste and plant-based ingredients. Main result: development of a more conscious attitude toward food and understanding that an eco-friendly lifestyle can be easily applied in everyday practice.

Lesson plan 8

1.	**The title of the lesson**	**Healthy Lunch Plate Using Greenhouse Products**
2.	**Annotation (what will be the topic discussed)**	This lesson introduces learners to healthy nutrition and sustainable food choices by linking greenhouse-grown products with everyday meal planning. Learners analyse how vegetables and herbs grown in the school greenhouse can be used to create a balanced lunch plate following planetary diet principles. The lesson combines nutritional knowledge, sustainability awareness, and practical meal design.
3.	**The lesson structure (plan of the lesson)**	• Introduction to healthy nutrition and the principles of the planetary diet. • Theoretical explanation of a balanced meal and sustainable food choices. • Practical work – selecting greenhouse products and designing a healthy lunch plate. • Presentation and discussion of the prepared meal ideas. • Reflection on how local and seasonal food contributes to personal health and environmental sustainability. • Conclusions.
4.	**The goals of the lesson**	• Understand the principles of a balanced healthy lunch; • Connect greenhouse-grown products with daily nutrition; • Introduce planetary diet principles through practical food choices; • Strengthen meal planning skills; • Promote sustainable eating habits.
5.	**The theoretical part of the lesson**	A healthy lunch plate should contain vegetables, a source of protein, whole grains or other complex carbohydrates, and healthy fats. Vegetables and herbs provide vitamins, minerals, fibre, and natural flavour. The planetary diet encourages increasing plant-based foods and reducing highly processed products. Locally grown vegetables from the school greenhouse represent sustainable food choices because they reduce transport impact and support seasonal eating. The lesson also introduces the idea that herbs can improve flavour naturally and reduce the need for excessive salt or artificial additives.

6.	**The practical part of the lesson (tasks, exercises, tests, workshops)**	**Practical tasks:** • identify vegetables and herbs available from the greenhouse; • group ingredients according to healthy plate sections; • discuss seasonal food combinations. **Group exercise:** Learners design one **healthy lunch plate** using greenhouse products. Each group must include: • vegetables from the greenhouse; • one protein source; • one grain or starch component; • herbs for flavour. **Group presentation:** Learners explain: • why the meal is healthy; • which products come from the greenhouse; • how the plate reflects planetary diet principles. **Optional practical workshop:** Prepare a simple lunch plate or salad using available ingredients.
7.	**Sources of information**	1. The Planetary Health Diet – EAT A science-based overview of the Planetary Health Diet and its key principles. https://eatforum.org/eat-lancet/the-planetary-health-diet/?utm 2. The EAT-Lancet Commission on Healthy Diets from Sustainable Food Systems. The landmark report introducing the Planetary Health Diet and explaining how healthy eating can support environmental sustainability. https://eatforum.org/knowledge/diets-for-a-better-future/2019-eat-lancet-commission/?utm 3. Lithuanian Ministry of Health – Healthy Nutrition Recommendations. https://sam.lrv.lt/lt/veiklos-sritys/visuomenes-sveikatos-prieziura/mityba-ir-fizinis-aktyvumas-2/
8.	**Methods, tools, approaches**	**Methods:** • practical meal planning • group discussion • guided food analysis • presentation **Tools:** • food cards or ingredient samples • worksheets

		• plate model visuals • greenhouse products (if available) **Approaches:** • learner-centred learning • practical nutrition education • sustainability-oriented teaching
9.	**Conclusions of the lesson**	After the lesson learners are able to: • describe the structure of a healthy lunch plate; • use greenhouse products in meal planning; • explain the link between food choices and sustainability; • identify healthy alternatives in everyday nutrition; • understand practical application of planetary diet principles.

Appendix 1. Healthy Greenhouse Salad

Ingredients (4 servings)

- 2 handfuls fresh spinach
- 1 small head of lettuce
- 6–8 radishes
- 3 spring onions
- A handful of fresh herbs (parsley, dill and chives)
- 2 tbsp pumpkin or sunflower seeds (optional)
- 2 tbsp olive oil
- 1 tbsp lemon juice
- Salt and freshly ground black pepper to taste

Preparation

1. Wash all vegetables and herbs thoroughly.
2. Tear the lettuce into bite-sized pieces.
3. Slice the radishes and spring onions.
4. Chop the fresh herbs.
5. Combine all vegetables in a large bowl.
6. Sprinkle with pumpkin or sunflower seeds.
7. Mix olive oil with lemon juice, salt and pepper to prepare the dressing.
8. Pour the dressing over the salad and gently toss before serving.

CONCLUSIONS

The “Schoolgarden” project has shown that sustainable food education is most effective when knowledge is connected with practical experience. Working with real products, growing plants, preparing food and discussing the choices behind everyday meals makes sustainability a concrete and understandable part of learning rather than an abstract concept.

One of the most important lessons from the project is that meaningful change does not always require major investments or completely new educational programmes. Existing lessons, school facilities and everyday activities can provide many opportunities to introduce new approaches. A small herb garden, seasonal vegetables, the creative use of food leftovers, a plant-based recipe or a simple discussion about where food comes from can become a starting point for developing students’ awareness and skills.

The project experience also showed the value of learning across subjects. Planetary diet and sustainable food practices are not limited to cooking lessons. They can be connected with gardening, plant studies, floristics, food technology, hospitality, health education and other areas. This makes it possible for students to see sustainability from different perspectives and understand that food choices are connected with nature, health, resources, culture and everyday life.

Another important outcome is the growing confidence of teachers to experiment with new ideas. The activities presented in this Guide demonstrate that teachers can adapt the project principles to their own subjects, students and available resources. There is no single model that has to be followed. The most valuable approach is to encourage curiosity, experimentation and reflection, allowing students to discover sustainable solutions themselves.

The project has also highlighted the importance of local knowledge and resources. School gardens and locally available plants can become valuable educational resources, while traditional ingredients and culinary practices can be combined with new approaches to healthy and sustainable food. This creates a link between environmental responsibility and local food culture rather than presenting sustainability as something separate from everyday life.

The materials collected in this Guide are therefore not intended as a fixed set of instructions. They are a starting point for further activities, adaptation and experimentation. Teachers can use the recipes, lesson plans, practical tasks and examples as they are or modify them according to their own educational context. The experiences gained during the project suggest that the greatest impact comes when sustainable practices become a natural and regular part of school life.

Ultimately, the “Schoolgarden” project has demonstrated that education can influence not only what students know, but also how they think about food and the choices they make. By giving learners opportunities to grow, prepare, taste, create and reflect, schools can help develop a more conscious relationship with food and natural resources.