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micro forest school

Urban Micro Forest Toolbox

Appendix 4 – workshop 4





Content

| | |
|--|----|
| Introduction to the Tool Box..... | 2 |
| Micro Forest schools | 2 |
| Tools and activities teachers can use for students in grades 3-5: The Urban Micro Forest and the Miyawaki Method | 3 |
| Tool Box / workshop 4 activities | 3 |
| 1. Produce Content and Exchange Online..... | 3 |
| Title..... | 3 |
| Purpose..... | 3 |
| Learning Objectives and Subject Relevance..... | 3 |
| Introduction to the Activity..... | 4 |
| Time and Overall Explanation..... | 4 |
| Section 1: Creative Production..... | 4 |
| Section 2: Digital Sharing and Presentation..... | 5 |
| 2. Voices of the Forest: Music and Storytelling with AI..... | 5 |
| Purpose..... | 6 |
| Learning objectives and subject relevance..... | 6 |
| Time and structure | 6 |
| Activity description..... | 6 |
| Summary and reflection | 7 |
| Optional extra task: Share your forest song with the world | 8 |
| 3. Documentation of the Changing Seasons in the Miyawaki Forest | 8 |
| Introduction..... | 8 |
| Learning Objectives..... | 9 |
| Preparation..... | 9 |
| Timetable for the lesson | 9 |
| Observation Topics Explained for Pupils | 10 |
| Suggested Recording Sheet | 10 |
| Reflection Questions..... | 10 |
| Output and Follow-up Work..... | 11 |
| International collaboration | 11 |



| | |
|---|----|
| 4. Creative Engagement - Storytelling, Poetry and Art Inspired by the Forest | 11 |
| Purpose..... | 11 |
| Duration and Target Group..... | 11 |
| Structure | 11 |
| Materials | 12 |
| Cultural Adaptations | 13 |
| Small Adjustments Along the Way | 13 |
| 5. Comparative Data Collection in the Miyawaki Forest and Another Area | 13 |
| Target Group and Duration..... | 13 |
| Learning Objectives..... | 13 |
| Introduction to the task | 13 |
| Investigation Task | 14 |
| Comparison and Summary | 14 |
| Materials | 14 |
| Extra Activity | 15 |
| 6. Maintenance and Litter Cleanup from Workshop 3 should all be repeated in Workshop 4 as well (will be translated later) | 15 |
| 7. BioBlitz, Insect Hotel and Brushwood Fence could be continued/expanded in Workshop 4 (will be translated later)..... | 15 |

Introduction to the Tool Box

Micro Forest schools

The Urban Micro Forest Toolbox was developed as part of the Micro Forest Schools project, funded by Erasmus+. The Micro Forest Schools project supports the EU Biodiversity Strategy 2030 and the Education for Climate Action, by developing a new teaching material and an eLearning course which combines biodiversity action and community involvement in primary schools, through the establishment and co-creation of micro forests. The Tool Box promotes relevant green skills and mindsets needed to motivate children and youth to take action and gain experience that they can contribute to relevant solutions.



Tools and activities teachers can use for students in grades 3-5: The Urban Micro Forest and the Miyawaki Method

Important! This is a list of different tools and activities that align with the pre, during and post establishing of the Micro Forest. It has to be adopted and personalized by each country, school and teacher. In other words, it's a highly general plan that is also flexible and serves as inspiration.

Structurally, the Tool Box is mainly focused on practical activities - not classic in-class teaching:

1. Four main workshops

- a) each consisting of different activities and tools
- b) highly flexible and adaptable for each school and country
- c) based on the pre-, during, and post-planting phases

2. Seasonal / Additional / Extracurricular activities

In other words, this **Urban Micro Forest Toolbox** provides teachers with **flexible, adaptable and practical** activities and tools designed for **pre-, during, and post-planting phases** of an urban micro forest.

The toolbox is designed to:

- Foster **ecological awareness** and **biodiversity knowledge**.
- Integrate **STEM learning, art, AI tools, and cultural history**.
- Be adaptable to the **cultural and environmental contexts of Greece, Denmark, and Italy** while also providing examples of possible cultural activities.

Tool Box / workshop 4 activities

1. Produce Content and Exchange Online

Title

Forest Stories: Create and Share Your Voice from the Forest

Purpose

Pupils will create creative expressions inspired by their experiences in the micro forest and share them digitally with others. The purpose is to strengthen their ability to express themselves through different media and to understand how their work can live beyond the classroom, both digitally and physically.

Learning Objectives and Subject Relevance

Science (Nature/Technology)

1. Increase understanding of ecosystems and biodiversity

Page 3



2. Reflect on the interaction between humans and nature

Language and Literature

1. Develop written and oral communication skills
2. Work with poetic and narrative texts

Technology Literacy

1. Gain experience with digital sharing and platforms
2. Reflect on communication in a digital public sphere
3. Pupils consider their audience when sharing online and practice respectful communication.

Art / Music (optional)

1. Create visual and auditory expressions that support stories

Introduction to the Activity

Pupils create a work (text, image, sound or video) that conveys their experience, story or mood from the micro forest. The work is then shared online so that others can experience the forest through the pupils' perspective.

Possible sharing formats include Padlet, the class website or QR codes placed in the forest.

Time and Overall Explanation

Duration: approx. 60 to 90 minutes spread over two lessons

1. Creative production, approx. 45 minutes
2. Digital sharing and presentation, approx. 30 to 45 minutes

Section 1: Creative Production

Subsection 1: Pupils Create Their Content

Pupils may choose from the following product types:

1. A poem or story from the forest
2. A song (possibly with AI assistance, e.g. Suno)
3. A photo story with text
4. A short video recording (e.g. reading aloud in the forest)
5. A drawing with descriptive caption

The teacher supports pupils in idea development and choice of media format.

Subsection 2: Upload and Prepare for Sharing

1. Pupils upload their product to a shared folder (e.g. Google Drive)
2. The teacher ensures that a high-resolution version is sent to 2030skov



3. The class uploads the works to a shared platform (e.g. Padlet), where pupils can comment on and "like" each other's products

Suggested Reflection Questions

1. What would you like to show or tell others about your forest?
2. How does the format (photo, poem, sound) suit your story?
3. What do you notice in other people's works?
4. How did creating in the forest feel different from creating in the classroom?

Section 2: Digital Sharing and Presentation

Subsection 1: Exhibition and Peer Feedback

Suggested Exhibition Formats:

1. Digital "vernissage" on a large screen in the classroom
2. Physical exhibition in the schoolyard with QR codes
3. Sharing with another class or with parents

Feedback Formats

- Something I liked
- Something that surprised me
- Something I became curious about

Emphasize to the students that feedback is how we grow and learn

Summary:

Conclude with a group reflection:

1. What have we learned about communicating digitally?
2. What happens when others can experience our forest creations?
3. How can we use our voice to speak for nature?

Materials

Bring along your digital explorer kit:

1. Paper, iPads or computers
2. Internet access
3. Access to a sharing platform (Padlet, Google Drive or similar)
4. QR generator (optional)
5. Headphones (for listening to audio works)

2. Voices of the Forest: Music and Storytelling with AI



Purpose

The purpose of this activity is for pupils to develop personal stories and atmospheric expressions about their micro-forest, while also experiencing how artificial intelligence can be used as a creative tool to support learning and communication. Through text, music and technology, pupils train their ability to express themselves, collaborate and reflect on the complexity and beauty of nature.

In general, pupils give their forest a voice through stories and AI-generated music, showing that technology can help us speak for nature. In other words, technology does not have to separate us from nature - it all depends on how we utilize it.

Learning objectives and subject relevance

Science and Technology

1. Understanding the forest ecosystem and the interaction between living organisms.

Language

1. Development of narrative and poetic storytelling forms.
2. Training in oral and written communication.

Music

1. Creation of musical expressions based on mood and theme.

Technology Understanding

1. Use of artificial intelligence for creative and meaningful purposes.
2. Pupils reflect on how AI is a tool to support their creativity, not to replace it

Time and structure

Duration: 60 minutes

First we dream and write, then we make music, then we share.

1. Introduction and idea development (10 min)
2. Writing and feedback (15 min)
3. Music creation with AI (25 min)
4. Presentation and reflection (10 min)

Activity description

Section 1: Preparation and storytelling

Sub-section 1: Idea generation and mood

Pupils work in groups or individually. The teacher inspires with open questions:

1. What happens in your forest?
2. Which creatures live there?

Page 6



3. What is the mood: peace, chaos, mystery or joy?
4. If your forest had a secret, what would it be?

Sub-subsection 2: Write a poem, song lyrics or a story

Pupils write a short text with sensory descriptions and a clear mood. The teacher can provide templates such as:

1. "My forest sounds like"
2. "Here hides"
3. "The forest says to me"

Section 2: AI music with Suno

Sub-section 1: Use AI to transform the text

Pupils use the AI tool Suno to turn their text into music. They choose a genre based on the mood:

1. Calm or magical forest: ambient or classical
2. Chaotic forest: electronic or hip hop
3. Mysterious forest: film music

The teacher assists with the technical aspects and ensures everyone can follow.

Sub-subsection 2: Listen and adjust

When the song is generated, pupils listen and assess how the music supports the mood of their text. They can adjust and compare with other works. Pupils can also compare the AI's music with their own vision of the forest and discuss what fits and what doesn't.

Sub-section 3: Rehearse and try out your story or song

Before presenting, pupils have time to:

1. Practise reading aloud with different tones and moods
2. Move as their forest, for example "like the wind" or "like an owl"
3. Sing along with the AI song or add sound effects

Pupils perform for each other in groups and give positive feedback.

Summary and reflection

Joint presentation

Pupils present their AI song and talk about the process, either through reading aloud, presenting, audio clips or physical performance. The focus is on courage and creativity rather than perfection.

Reflection questions

1. How did it feel to perform your forest story?

Page 7



2. What did the AI do well, and what would you change?
3. How can music and mood help us understand nature?
4. How did using AI change the way you thought about your story?

Optional extra task: Share your forest song with the world

Pupils can end the activity by sharing their work at the micro-forest.

How to do it:

1. Upload the AI song or poem to a platform (e.g. Google Drive, Padlet, SoundCloud)
2. Use a free QR generator to create QR codes for each file
3. Print and laminate the codes
4. Place them at the micro-forest, e.g. on stones, sticks or signs

Purpose:

1. To communicate children's nature experiences to the local community
2. To practise digital communication and creative technology use
3. To make the forest a living and interactive learning space

Materials

1. Computers or tablets with internet access
2. Access to Suno (or similar AI music tool)
3. Paper or writing templates
4. Headphones (optional)

Teacher tips

1. Create a safe and playful atmosphere and participate as a co-creator
2. Emphasise the process over the product
3. Use pupils' own nature experiences as a starting point
4. Be ready to assist with technical aspects so everyone can join in

The Voices of the Forest project combines imagination, nature understanding and technology into a creative whole, giving children the opportunity to express themselves and to experience how artificial intelligence can be used for more than just information. It can also give a voice to the forest.

3. Documentation of the Changing Seasons in the Miyawaki Forest

Introduction

Teaching Material for Year 5.

Outdoor activity combined with recording and reflection.

Page 8



Duration: 2 hours

Target group: Year 5

Learning Objectives

1. Pupils should be able to observe and describe changes in nature over the course of a season.
2. Pupils should learn to use simple tools to record weather, plants, and wildlife.
3. Pupils should develop their observation skills and be able to communicate their experiences in writing and visually.

Preparation

1. Select three to five fixed observation points around or within the Miyawaki forest, for example the north, south, east, and west sides. Also select another place at the school as a reference point if possible.
2. Print observation sheets (see suggestion in point 5).
3. Bring a tablet or mobile phone with camera, thermometer, and metal rod if available.
4. Divide pupils into groups of three to four.

Timetable for the lesson

15 min. - Introduction in the classroom

1. Brief presentation about the significance and variation of the seasons.
2. Review of the observation sheet and observation points.
3. Division into groups and distribution of materials.
4. Engaging with students by starting with a question like: "What is your favourite season and why?"

1 hour - Observation in the field

1. Each group goes to their assigned observation point.
2. Pupils record the five main topics:
 1. Plant life
 2. Trees
 3. Animals and insects
 4. Weather and soil
 5. Light and sound
3. Groups take one photo per point and make quick sketches or notes.

30 min. - Summary in the classroom

1. Each group gives a short presentation of two to three minutes.



2. Pupils compare what they observed at the different points.

15 min. - Reflection and logbook

1. Pupils answer three reflection questions (see point 6).
2. Collection of sheets for the class's shared logbook or wall display.

Observation Topics Explained for Pupils

1. **Plant life:** Do you see buds, flowers, fruit, or withered leaves? Is anything sprouting or decaying?
2. **Trees:** What do the leaves look like? Are they green, yellow, or have they fallen? What does the bark feel like?
3. **Animals and insects:** Can you hear birds? See insects? Are there holes in the ground or tracks?
4. **Weather and soil:** Is the soil dry, wet, hard, or muddy? What clothes are you wearing? Is it cold, warm, or windy?
5. **Light and sound:** How high is the sun? How long are the shadows? What sounds do you hear?

Suggested Recording Sheet

Observation sheet for each group (A4 with space for text and drawings)

Front page

1. Group number:
2. Date:
3. Time:
4. Weather type (sun, rain, clouds, snow, wind):
5. Temperature (estimated or measured):

Page 1: Observations per point

Columns for:

1. Plant life
2. Trees
3. Animals and insects
4. Weather and soil
5. Light and sound

Page 2: Space for illustrations

1. One box per point (for example "Draw a leaf, track, or insect you saw")
2. One box for describing what you heard

Reflection Questions

1. What has changed since the last observation or since the last season?

Page 10



2. What was the most surprising thing you saw or heard?
3. What would you like to investigate next time?
4. How did today's weather affect what you saw or heard?

Output and Follow-up Work

1. Each group hands in their sheets and photos.
2. The teacher compiles the material into a shared logbook, digital or physical.
3. The class creates a seasonal wall with photos, quotes, and drawings.
4. The activity is repeated in the next season so that data can be compared over time.

International collaboration

Additionally, it might be nice to encourage schools to compare their seasonal observations across countries (Denmark, Italy, Greece). Even just swapping a few photos or sketches could make seasonal differences visible and interesting.

4. Creative Engagement - Storytelling, Poetry and Art Inspired by the Forest

Purpose

The purpose is to strengthen pupils' personal and sensory relationship to a biodiverse and natural forest, provide space for immersion, imagination and variety in expression as well as turn the forest into a living storyteller that pupils can engage in dialogue with through words and images.

Duration and Target Group

The activity lasts 60 minutes and is aimed at pupils in Years 4 to 5. It covers subject areas such as Danish and language, visual arts and environmental education. The theme focuses on how pupils express their connection to nature through creative production.

Structure

The lesson is divided into three phases: inspiration in nature (10 to 15 minutes), creative production (35 to 40 minutes) and sharing and reflection (5 to 10 minutes).

Each phase builds on the other - first noticing, then creating, then sharing.

1. Inspiration in Nature

About the Miyawaki Forest

The forest is approximately one year old and therefore not yet large. It is important to emphasise to pupils that even small trees and life forms can provide great experiences and inspiration. If a pupil has difficulty finding inspiration in the young forest, guide their gaze towards details such as leaves, shadows, sounds and insects.



Alternative Inspiration

If images, sound recordings or another nearby forest are used, emphasise that biodiversity is important. Avoid images of production forests and monocultures, use instead images from mixed, wild and species-rich forests. If a pupil cannot immediately see the difference, it can be a good idea to talk about why variation in trees, soil and animals provides more life.

Variation means life - the more different trees, soils and animals, the more stories the forest can tell

Suggested Activity

Ask pupils to find one thing they would like to remember, such as a sound, an insect, a leaf or a scent. Use sound files or images as support if necessary. If a pupil has difficulty getting started, a short guided sensing or joint observation can provide a safe start.

2. Creative Expression

Storytelling

Write a short story inspired by the experience in or by the forest. The pupil can write in first person, for example as a tree, a beetle or the wind. If the pupil does not know where to start, offer a joint sentence such as “I woke up today with dew on the leaves”.

Poetry

Write a sensory poem of 3 to 6 lines. Use sensory impressions, rhythm and imagery. If the pupil is unsure of the form, they can write three sentences with “I see”, “I hear”, “I feel”.

Visual Art

Create a drawing, collage or painting based on inspiration from the forest. Use leaves, twigs and soil if possible. If the pupil does not feel “good at drawing”, emphasise that it is mood and expression that are in focus, not technique.

4. Sharing and Reflection

Share in small groups or in plenary. Some prefer to read aloud, others prefer to show their image. Use discussion questions such as: What did you imagine you were? What mood did you try to capture? What in the forest made the greatest impression? If a pupil does not want to share, that is perfectly fine. A joint exhibition in the classroom can also be a quiet way to share.

Ask students: What surprised you about your own work once you finished it?

Materials

Use writing and drawing paper, colours, pencils as well as natural materials such as leaves, bark and stones if possible. Include sound files and images only of biodiverse and natural forest as well as notebooks for keywords or sketches.



Cultural Adaptations

In Greece and Italy, inspiration can be drawn from local species such as olive, pine and cypress. In Denmark from beech, oak, rowan and the forest's small animals. Use local myths and legends if possible, for example dryads, nymphs or trees as protectors.

Ask students: What trees or animals are part of stories in your culture? Could they appear in your forest tale?

Small Adjustments Along the Way

If a pupil has difficulty getting started, begin jointly. If a pupil finishes quickly, offer an extra challenge such as "What happens the next day in your tree life?" If a pupil has difficulty writing, dictation or visual storytelling can be alternatives.

5. Comparative Data Collection in the Miyawaki Forest and Another Area

Target Group and Duration

The activity is aimed at Year 5 pupils and lasts 2 lessons (approximately 90 minutes). It covers the subject of science/technology and focuses on observation, data collection and comparison of natural conditions.

Learning Objectives

The purpose is to enhance pupils' ability to conduct simple investigations in nature, collect and compare data on plants and their surroundings as well as gain insight into the significance of biodiversity and growth conditions.

Introduction to the task

Explanation of the Miyawaki Forest

The teacher briefly explains what a Miyawaki forest is: a dense, biodiverse forest that grows quickly and supports many species.

Importance of Investigation

The class discusses why it is important to investigate the conditions of plants and their surroundings to understand the health of nature.

Ask pupils: How do we know if an area of nature is healthy? What clues can we look for?

Today's Task

Pupils will collect and compare data from the Miyawaki forest and another nearby area, such as a lawn, shrubbery or schoolyard.



Investigation Task

Organisation

Pupils work in groups of 3 to 4 and are given a data collection sheet. Each group investigates two areas: the Miyawaki forest and another chosen area.

Light Conditions

Pupils record the level of light in each area: full sun, partial shade or shade.

Soil Moisture

Pupils assess whether the soil feels dry, moist or wet.

Remind pupils that scientists always write down both numbers and words (e.g. 18°C, moist soil).

Temperature

If thermometers are available, pupils measure soil temperature 10 cm below the ground and air temperature 1 metre above the ground in both areas.

Number of Different Plant Species

Pupils count the number of different plant species in their observation area.

Signs of Wildlife

Pupils note signs of wildlife, such as ants, beetles, bird sounds or holes in leaves. They may take photos or make small sketches for documentation.

Encourage pupils to listen as well as look - bird songs and insect sounds also count as wildlife signs

Comparison and Summary

Plenary Session

The groups gather and compare their data in plenary.

Discussion Questions

The teacher asks: What was different between the two areas? Which area seemed most alive, and why? What might explain the differences?

Joint Conclusion

The class collectively formulates a conclusion, which the teacher writes on the board or in a digital summary.

Materials

Data collection sheets (printed for each group), pencils, clipboards or hard surfaces, thermometers for air and soil if available, magnifying glasses as well as tablets or phones for photos if possible.



Extra Activity

If time allows, pupils can create a small poster or presentation with their data and images. Groups can make mini infographics combining numbers, sketches and photos.

Data Collection Sheet:

Title: Investigating Nature - Comparing Two Areas

The purpose is to investigate and compare the Miyawaki forest with another nearby area to assess which area has the most life, the most plants and the best conditions for nature.

Procedure

Go out in groups with your sheet, pencil and optionally a magnifying glass or thermometer. Choose two areas: the Miyawaki forest and another area (lawn, shrubbery or similar). Use the sheet to record your observations. You may take photos or draw something on the sheet. When finished, return to the classroom and compare your results.

Sheet Content

The sheet includes the following points for both areas:

- **Light conditions:** Mark full sun, partial shade or shade.
- **Soil moisture:** Mark dry, moist or wet.
- **Soil temperature** (optional): Note the temperature in degrees Celsius.
- **Air temperature:** Note the temperature in degrees Celsius.
- **Number of different plants:** Count the number of different plant species.
- **Signs of wildlife:** Mark yes or no and note what you see (e.g. ants, beetles, bird sounds).
- **Drawing or photo:** Provide two boxes for drawing something you see.

Final Discussion

In the classroom, discuss: What did you find out? Which area had the most life, and why? What differences did you notice?

6. Maintenance and Litter Cleanup from Workshop 3 should all be repeated in Workshop 4 as well (will be translated later)

7. BioBlitz, Insect Hotel and Brushwood Fence could be continued/expanded in Workshop 4 (will be translated later)



ΔΙΕΥΘΥΝΣΗ
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