

**PRESETT,
Webinar 4: 16.12.2021 at 15.00-15.30
Multidisciplinary learning moduls, transversal
competencies and assessment**

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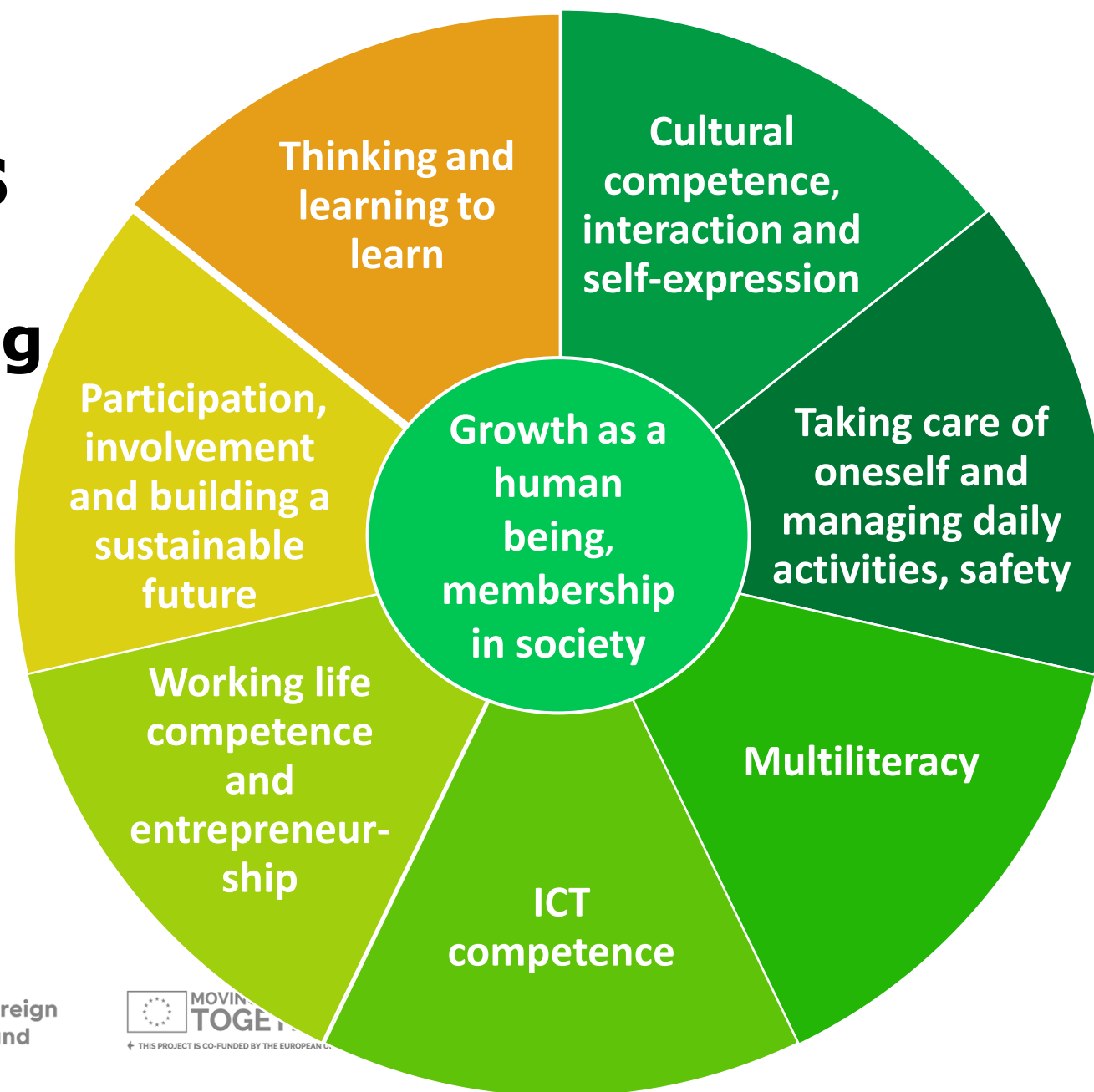
Multidisciplinary learning moduls

Multidisciplinary learning moduls (integrated subjects)

- are the study periods of integrative instruction based on cooperation between subjects
- they show the school's values and conception of learning
- The objectives, contents and implementation methods of multidisciplinary learning moduls are decided in the local level, school curriculum or annual plan (for example local special features).
- schools (local level) can decide how long the period is
- there has to be at least one modul in a year
- the learning material is made in the local level participating also pupils
- **assessing the subjects separetely,**
- the working skills can assess by self, peer or group assessment

Tranversal competences

an entity consisting of knowledge, skills, values, attitudes and will.



● ● Transversal competencies

- **Transversal competencies are not assessed individually**
 - because they are future skills that are needed in all learning
 - they are already contained in different subjects
 - they form part of all activities
 - they are needed in different subjects, the pupil's work, his managing of daily life and his growth as a whole, learning, and development
 - they must be taken into consideration in the teaching of different subjects and integrated subjects

Learning environments

- Well-functioning learning environments promote interaction, participation and communal building knowledge.
- Learning inside the school: like classrooms, library, sport hall, auditorium ...
- Learning outside the school: museums, exhibitions, concerts, theatre, zoo, parks, forest...
- Virtual learning environments: digital learning materials, texts, videos, images, podcasts, group discussions, Thinglink, chat...
- Social learning environments
- Mixing all of them

Pupil centered working methods – student participation

- Information and communication technology (ICT) is a key part of versatile learning environments -> it helps to reinforce the pupil's participation and skills in communal work and support their personal learning path.
- **ICT is an object and a tool of learning.**
- New ICT solutions are introduced to promote and support motivation and learning.

Exploratory learning – pupil centered pedagogy

- Emphasis student involvement and participation in the classroom.
- It encourages the students think creatively, experience key concepts and learn how to reflect together – peer learning.
- The pupils
 - learn new working methods – peer learning
 - learn to set goals and assess their work
 - can share their knowledge and create new knowledge – peer learning
 - learn to make experiments: hypothesis, research questions, exploring the problem, make conclusion and learn something new
 - can make their own questions of the issue - > promotes motivation and learning
 - learn to assess the process and their own work during the process.

Blendid learning

- Blended learning is a hybrid learning approach that combines traditional classroom learning with ICT.
- It gives the learning program participants the freedom and flexibility to customize and pace their learning experience in a way that supports their unique needs and learning objectives.
- Blended learning programs typically consist of three components: 1) in-person classroom activities, 2) online learning materials, and 3) structured study time with peer interaction.
- In the primary school: this kind of working methods should be age appropriate.
- Before starting this kind of working the pupils have to have experiences and **skills of working together** and experiences and skills for versatile working methods: planning, working and assessing together.

Design-oriented pedagogy as a working method- what is it?

- The pupils plan and implement an objective-oriented learning project that follows the curriculum.
- It is based on the pupils' interests and questions.
- The working method involves co-development and co-planning and possibly the use of different technologies together and individually.
- Based on the theme that they have learned, the pupils produce an output, product, their own teaching material: a poster, exercises, a thematic magazine, comic, electronic product (a PowerPoint, film, animation, electronic book etc.).

Design-oriented pedagogy- main questions

- 1. WHAT do we explore?** - > research questions, objectives
- 2. HOW do we explore?** - > how and where do we look for information, an agreement on where and how information is documented
- 3. WHERE FROM** -> documentation of information? -> exploring, fact-finding
- 4. WHAT FOR** -> producing the output? -> producing and presenting the material, assessment (group, peer and self-assessment)
 - output can be a poster, electronic book, printed "book", powerpoint, video, movie, animation...

● ● THE FOREST

**Multidisciplinary learning module -
design-oriented pedagogy
(exploratory working method)**

The whole project lasted about three weeks, about 2 hours/day (about 30 hours)

● ● Pupil-centered, explorative learning – a project that makes pupils participate and commit for the learning

- It is based on pupils own questions of the area which comes from the curriculum.
- The pupils produce their own learning material – a PowerPoint presentation of forest and swamp.
- Learning environments: the forest, electric platform Flinga, internet, Office: Forms, PowerPoint, Teams, studybooks, peer learning, cooperation, interview, expert.
- The sources for the learning material were the school trip, age-appropriate study books, other books, the internet, and an interview.



Project includes

Multidisciplinary learning module: subjects

- environmental studies (biology), mother tongue, visual art, physical education

Transversal competencies

1. Thinking and learning to learn
2. Cultural competence, interaction and self-expression
3. Taking care of oneself and managing daily life
4. Multiliteracy
5. ICT competence
6. Participation, involvement and building a sustainable future



Project 'Forest'

Grades 3 and 8 plan a joint project

**What can we do together in a forest?
A day spent together in Nuuksio national park
set the tune.**



On the bus on our way to the forest...

We're here, and then into the forest...





Which way?

Playing together: big and small pupils



The pupils take pictures of the forest and the swamp - documentation



The forest and the swamp - documentation



In school, both grades started their own project, planning and implementing a multidisciplinary learning module

- What do I want to know about the forest?**
- What do I want to know about the swamp?**

What we already know about forests or swamps – preconceptions on a mind map





The first question

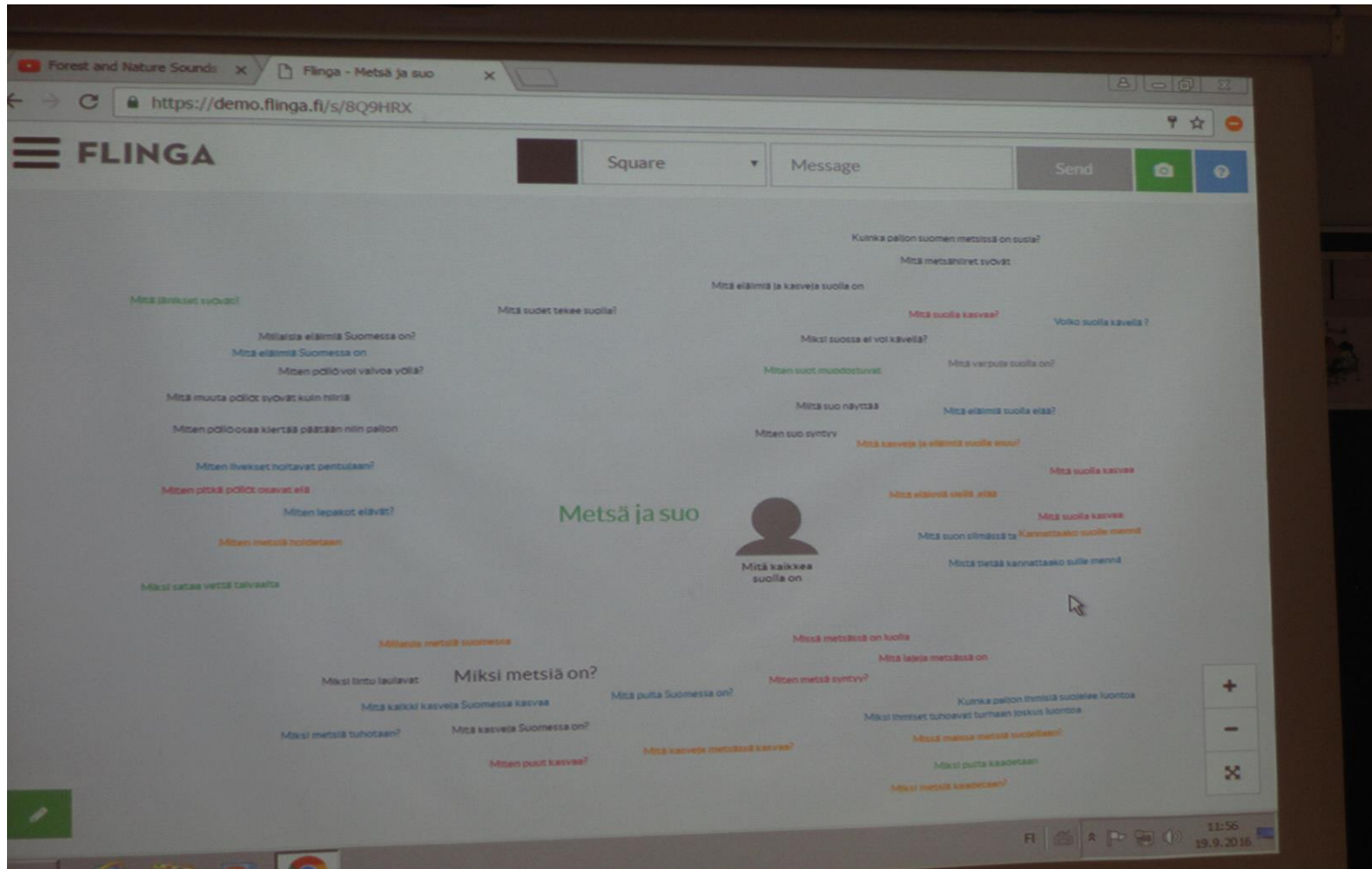
1. WHAT do we explore? ->

research questions, objectives

Writing questions on an electronic platform (Flinga) based on interesting things



All the questions are on the electronic platform – classifying the questions together with the pupils



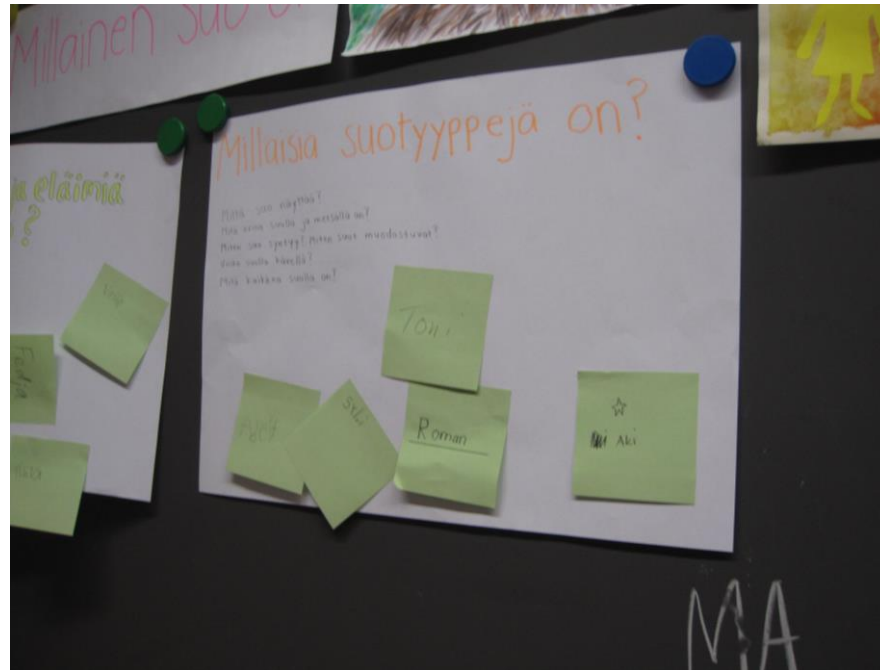
The main research question:

What are the Finnish forests and swamps like?

The following sub-questions were formed – the objective is to learn:

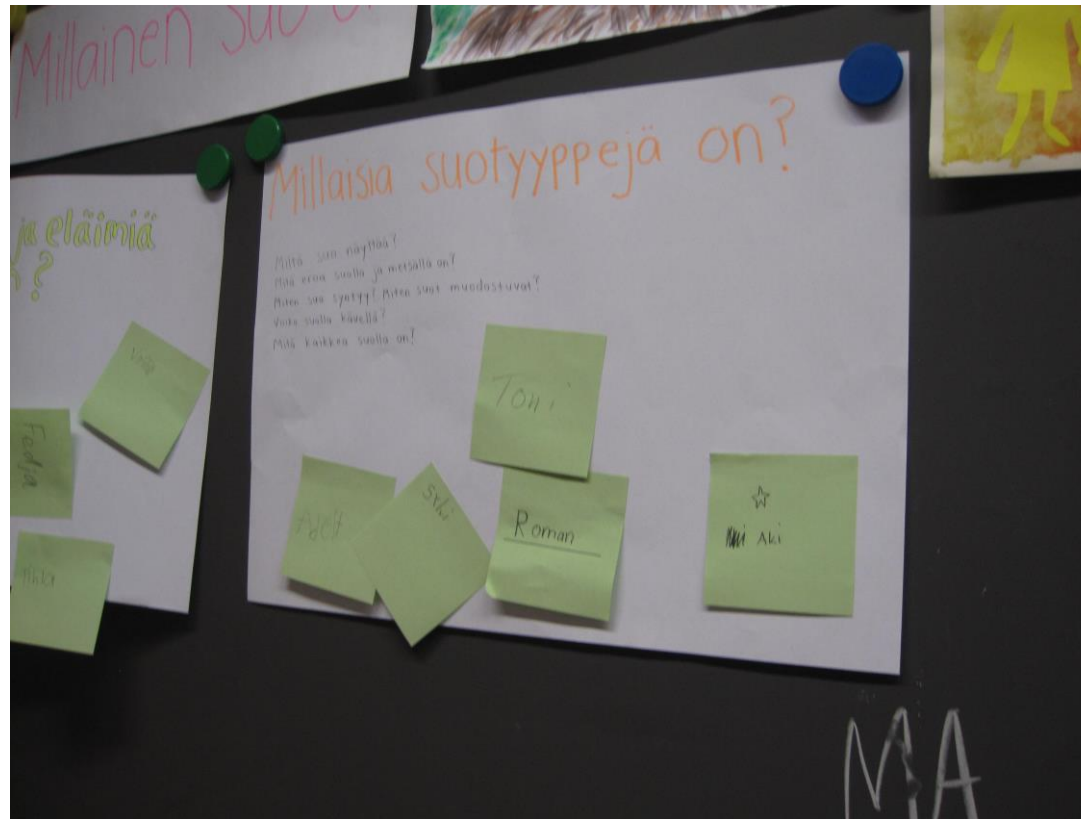
- What types of forests does Finland have?
- What trees and plants grow in the forests of Finland?
- What kinds of animals inhabit Finland's forests?
- How are forests protected?
- What types of swamps are there?
- What plants and animals live in marshes?

The pupils read the research questions and think about what interests them.



Everybody marked what they

- ● wanted to explore with a piece of paper.



- ● The groups were formed based on the interest of each pupil.





The second question

2. HOW do we explore? ->

How and where do we look for information? An agreement on where and how information is documented.

● ● The groups agreed

- The groups agreed together on how to find information: from books, the internet and interviews.
- The groups agreed on together that the product of the project will be a PowerPoint presentation. We agreed that the teacher teaches this skill.

● ● The third question

- **3. WHERE FROM** – documentation of information? -> - exploring, fact-finding...
- Information was found from age-appropriate study books and other books, the internet and an expert interview.

Working



Working



Working



The pupils were taught how to reference and about media criticism.



Species identification was also incorporated into the project





The fourth question

4. WHAT FOR – producing the output? ->
producing and presenting the material,
assessment

Preparing the PowerPoint presentation



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● ● Preparing the PowerPoint presentation



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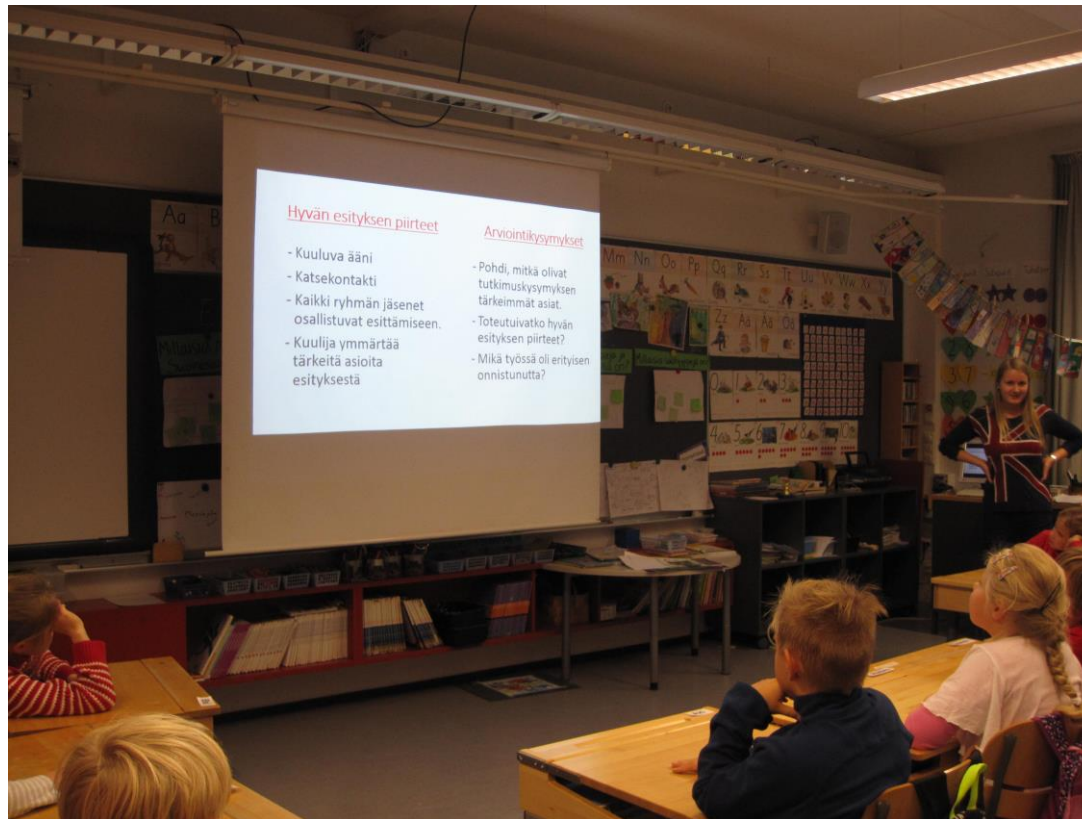
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The groups' presentations

- Each research group practiced how to present and teach their own PowerPoint product to the other groups. The central findings and concepts were brought forward in the presentation.
- The objective was that everybody taught everyone else.
- After presenting, the listeners could ask the group questions related to the theme.

● ● What is a good presentation like?



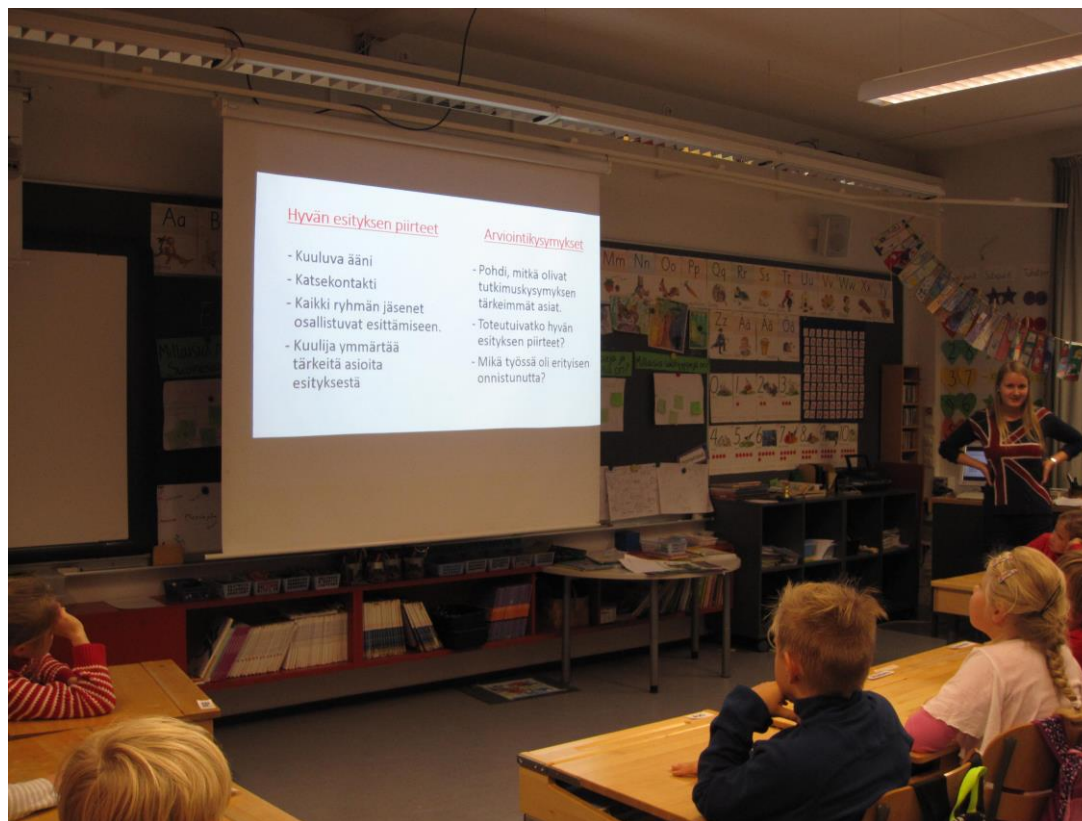
The PowerPoint presentations



Feedback from the presentation to the group –

● ● How well did we get information?

What was the presentation like?



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Forest expert - interview

After all the presentations, a lower secondary school biology teacher visited the class and she was asked additional questions and those questions that were not selected as the object of exploration in the initial stage.

The lower secondary school biology teacher Elina as the expert





Saving the project

- Each pupil received the PowerPoint presentations of all the groups on their own digital platform (Microsoft Office 365 Teams). -> The pupils had to learn the contents at home.

The art classes were held in a forest near the school. We made mandalas from natural materials there.



What a display of autumn colours!



The forest is wonderful!



● ● Assessing the project –group, peer and self assessment

Group assessment

- At the end of the project, we returned to the mind maps that were prepared at the beginning of the project – what do I know about forests and swamps? False information was deleted from the mind map and the central concepts learned were added.
- Each group gave feedback to the other groups of their powerpoint presentation
- The group also assessed their own work and learning in the form of self assessment:
 - How did the group work together? Was the work equal?
 - What went well? What didn't go well?
 - What did we learn?
 - How did I learn as a member of the group?

● ● Assessing the project –group, peer and self assessment

Peer assessment:

The visual art work in the forest was assessed by peers.

- design, colours and output

● ● Assessing the project –group, peer and self assessment

Self-assessment

- How did I learn as a member of the group?
- How did I work as a member of the group?
- How did I behave as the member of the group?

● ● Assessing the project – an exam

An exam on the content area – pupils studied the content from Teams where all the presentations were

- Each group made questions about their own content area (Office, Forms).
- The teacher compiled the questions into an exam using Office365, Forms.
- The exam was completed in pairs. The teacher assessed it.

● ● The forms of assessment

1. In the beginning : objectives, goals for the project were made together with the pupils
2. Self-assessment – How did I work? What did I learn? Did I achieve the objectives?
3. Peer assessment (from group to group) – How was the presentation?
4. Group assessment – How did we work as the group? What did we learn? Did we achieve the objectives?
5. Test at the end – What did the pupil learn about forests and swamps?