EXPLORING THE FOREST WITH STUDENT-CENTRED LEARNING!

Why student-centred learning?

The benefits of student-centred learning are commitment to learning, motivation, enthusiasm, being heard, and shared development and learning. In this way, students feel like the learning process is their own and commit to it.

This material provides tools for planning a trip to the forest where students can learn about the woods and hiking in an exciting way so that everyone has an active and engaging role.

Student-centred learning is not a burden when you set boundaries for choices.

How to plan a trip to the forest in a student-centred way?

1. **Let the students think about what interests them in forests**
   - Make a trip to the forest where students can explore and think about what they would like to learn about the forest. Collect pictures and questions on various topics. You can do this by taking photographs and writing on an electronic platform or on paper.

   - Alternatively, you can explore the forest in the classroom by using pictures and maps and thinking about what you want to know and what kinds of places you could visit there.

2. **Choose and verbalise your learning objectives together.**
   - Define and collect your goals in one list. Each learner can choose their goals from the list, or the goals can be shared by everyone. The trip instructor can also name shared goals where everyone tries to reach at least certain minimum objectives. When goals are verbalised, it is easier for learners to observe their own progress and how goals are being reached overall.

   - Example: Forest trip goals
   I can read a map.
   I can plan a suitably long route for a trip to the forest.
   I know how to look for different animal tracks and droppings.
   I can identify 10 different plant species.
   I can observe birds.
   I know what a natural forest is like.
   Our group works well together, and each one does their task.
   My own goal:_____

3. Build on students' interests

- Figure out together what kinds of routes you would like to take and what you would like to see during your trip.
- Take advantage of existing assignments and materials to answer students' questions; you don't need to come up with everything yourself.
- Figure out where you might find information. Ask an expert, for example, if you don't know something or know how to do something.
- Remember that it is okay not to have an answer to every question.
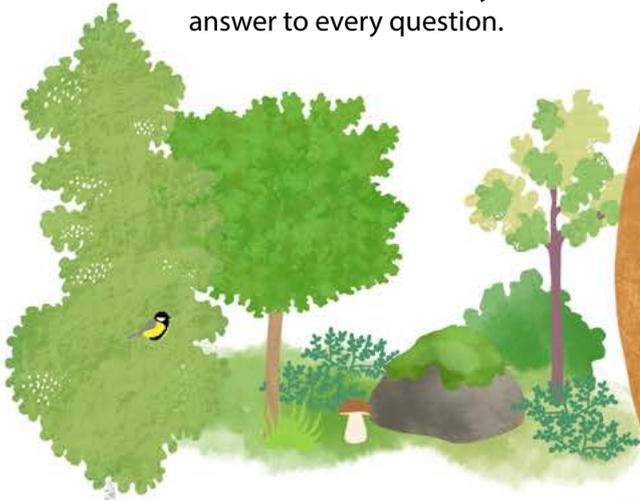
4. Give freedom of choice

- There are many levels of implementing student-centred learning. You can start with a subject that motivates students and by learning with methods that the students have chosen and find exciting. When you have chosen your topic, there are existing assignments in the Mappa.fi material bank, for example.
- At best, everyone gets to learn in their preferred way on a student-centred hike.
- To ensure method optionality, you can have different assignment options of the same topic.

5. Take advantage of cooperation

- Have conversations in a way where everyone's thoughts can be heard.
- For group assignments, assign clear roles, such as clerk, binocular user, bird book reader and teamwork manager. This reduces free-rider mentality in learning and increases everyone's participation.

6. Gather feedback on the trip in a way where everyone can give their opinion

- What was the most fun thing?
- What did you learn?
- What was the nicest assignment?
- Which assignment made you learn the most?
- What did you see in the forest?
- How did it feel like in the forest? (How did it feel like before going on the trip?)

The opportunity to give feedback and listening to everyone increases the experience of engagement. Based on the feedback, you can improve the next learning event together.
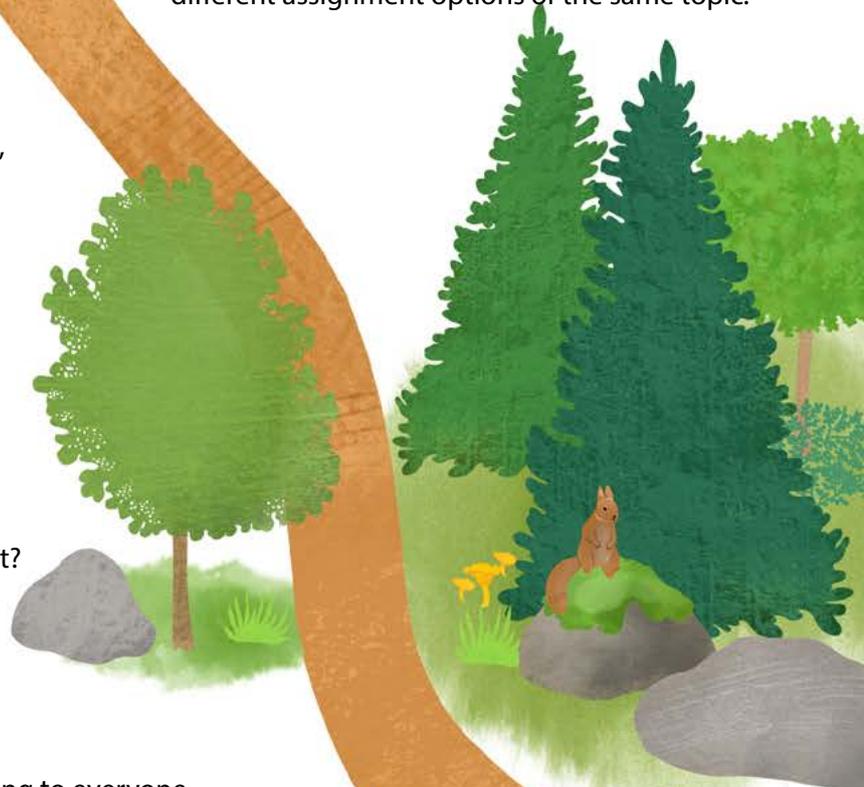
7. Use what you have learned; plan the next trip and work on how you can make it even more suitable and interesting for everyone.

Student-centred assignments when exploring nature

Student-centred assignments during nature explorations are based on the learner's starting level and emphasise the improvement of nature observation and exploration skills as well as sharing your observations and skills with others.

Example assignments

1. Planning a route together

- Limit an area on the map where participants can choose a route. If necessary, the instructor may define e.g. one place they need to route through.
- You can also use a string of a certain length to plan the route to have the route be the desired length. For example, 4 km in scale 1:25 000 would be a 16 cm long string.
- Taking it further: learning how to orient a map using a compass and calculating the length of the route using the scale of the map.
- Each group shares their plan or, for example, shares the highlight of their route using just one word. Vote on the options or choose a route together that combines every group's wishes.

2. Game: Plant detectives

- PA pair or a group writes down the distinguishing features of a plant, such as leaf shape, stem position, colour of flower and/or berry. For evidence, take a picture of a plant. Switch clue sheets with another group and look for their plant based on the provided features. Take a picture as evidence. Compare pictures and see if it was possible to find the same plant using the clues. Goal: learning how to describe and identify plants using distinguishing features. Optionally, you can continue by naming the plants.
- Tip! On Haltia's Nature School site, you can load a ready-made plant detective card for this assignment.

3. Could this species live in this forest?

A pair or group is given a species card with information on the habitat requirements of a species and the nutrients/food it needs, and for an animal, the tracks it makes. The group inspects the surrounding forest to find out if the things a species needs are there. The discoveries are shared with all groups. If a versatile selection of species is represented, work together to create a comprehensive idea on what important habitat factors there are in the forest.

4. Ant coding

- First, observe some ants. Follow the ants and look at their routes; can you find an anthill? What do the ants look like? Make up questions: what would you like to know about ants? Later in the classroom, you can search for answers to your questions. Build the structure of an ant on materials you can find in nature, such as leaves, sticks, pine cones and spruce cones that have fallen to the ground.

- Code instructions for an ant robot. You need groups of 3 to 5 students for this exercise depending on how many legs the robot will have. Depending on the size of the group, take the following roles:
  - 1 student as the robot or 3 students as the robot forming a six-legged ant
  - A coder acting as the scribe
  - Code tester who reads the instructions to the robot

- Work together to write a code to make the ant leave its imaginary anthill, fetch a branch and add it to the hill. The aim is to code a programme to make the ant move (e.g. 2 steps on the left, 3 steps straight, crouch, pick up the branch etc.). Test the code by reading it to the robot who follows the instructions. Fix the code if it does not work on the first try. Finally, transform the steps of the ant robot to actual measurements (cm or m). For this, you need a measuring tape to measure the length of one step. How far will the ant travel using your code?

Easy and engaging conversation methods

1. Arm barometer
The instructor says a statement and participants respond by raising their arm high, low or in between. The instructor tells everyone to answer only according to their own thoughts. If needed, everyone can be asked to close their eyes while answering. "In between" can mean the midpoint of a scale, or it can signify "I don't know". Depending on the question, the values of the scale can vary, e.g. yes–no, a lot – a little, long–short.

2. Small and big circle
First, discuss a given topic in pairs. Then, one of the two goes in the inner circle and the other goes to the outer circle. The people in the inner circle turn to talk with each other on a given topic while the people in the outer circle listen. After, change places and roles. One can continue the same topic with the new inner circle or give them another topic or perspective to discuss. The idea is to learn to share one's ideas and to listen to others.

3. Talking knot
Big knot and a small knot. Everyone in the circle holds the rope with two hands and passes the rope on. When the big knot lands in someone's hand, they can say STOP and comment on something regarding the subject that's been agreed (the instructor gives the topic, or the group decides). When the small knot lands in someone's hand, they can ask a question.

Instructor checklist for student-centred trip

1. Plan your trip and learning objectives together with your participants.
2. Find out what the participants are interested in and choose assignments accordingly.
3. Build the assignments on the participants' existing knowledge and skills.
4. Choose functional assignments where everyone can participate regardless of starting level.
5. Don't leave anyone out or without a task.
6. Reflect with everyone on what went well and what could be improved; what was fun and what everyone learned.
7. Work on being instructive and supporting learner's engagement.

ABC's of outdoor life

You should make and agree on rules before the trip. A good starting question for making the rules is: "What would feel good to us and be good for nature during our hike; what kinds of rules do we need?"

Remember everyman's rights! Revise here, for example:
www.nationalparks.fi/everymansright
Tips and hints for hiking:
www.nationalparks.fi/hikinginfinland

Don't leave a trace!

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Student-centred = In student-centred outdoors learning, students have the opportunity to learn in ways that suit them. The objective is that everyone learns their own strengths, increasing self-direction and therefore improving motivation for studying. Another central aspect is reflecting on your actions and study methods. The teacher's task is to teach in an individual and encouraging way. In longer projects, a student-centred method enables the cooperation of the entire group, building shared knowledge resources and engages everyone. At its best, student-centred outdoor learning includes processing matters such as the feelings and experiences related to being in nature.

Cooperation = Learning in a way where each group member has a specific role. Each learner is responsible for the group's shared goal according to their role. Cooperation takes advantage of everyone's knowledge. Learning happens in small groups.

Participation = Consists of three parts: having an influence (i.e. autonomy), being necessary (i.e. feeling that you are capable) & belonging (being a member of a social group)

Constructivism = Learning is built on the learner's internal motivation and their earlier skills; encouraging self-direction and reflectiveness. There is an emphasis on learning how to learn and how to act in a group setting.

Further reading on the subject:

Online

Haltia's Nature School's support for independent excursions: www.haltia.com/en/haltia-s-nature-school/independent-excursions/

Handbook for Learning and Play in the Forest. Vilhar, U., & Rantaša, B. (Eds.), Gozdarski inštitut Slovenije, Založba Silva Slovenica, 2017. doi.org/10.20315/SilvaSlovenica.0008

MAPPA - Materials for Outdoor, Environmental and Sustainability Education www.mappa.fi

Nurturing Affinity to Nature through Outdoor Learning in Special Places - Erasmus+ -project's website: www.nanol.org

Real World Learning -model for Outdoor Learning for Sustainability: www.rwlnetwork.org/rwl-model.aspx

Reviewing for different ages. Roger Greenaway. reviewing.co.uk/articles/reviewing-for-different-ages.htm

Reviewing with ropes. Roger Greenaway. reviewing.co.uk/articles/ropes.htm

Teach & Learn, materials by the Finnish Forest Association: smy.fi/en/teach-learn/

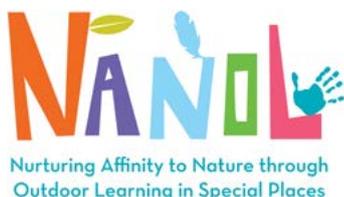15 Approaches to Student-Centred Learning. www.rubicon.com/student-centered-learning/

8 Things to Look for in a Student-Centred Learning Environment. www.gettingsmart.com/2017/08/8-things-look-student-centered-learning-environment/

Books

Last Child in the Woods. Richard Louv, 2010.

Sharing Nature with Children, 20th Anniversary Edition. Joseph Cornell, 1998.

HALTIA
THE FINNISH NATURE CENTRE

NANOL
Nurturing Affinity to Nature through
Outdoor Learning in Special Places

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