



Erasmus+
Programme Your Future



COMPUTATIONAL THINKING - LESSON SCRIPT

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Lesson information:	Subject: Biology
	Duration: 2 x 45 minutes
	Grade: 8
	Age: 14
	Topic: Natural Balance. Competition.
The curriculum specifications and requirements:	The Third Stage of Study, Grade VIII Pupil will be able to: <ul style="list-style-type: none">● Explain the formation of the natural balance in ecosystem, assesses the positive and negative impacts of human activities on the population and changing ecosystems and ways to solve environmental problems
The aims of the lesson:	Pupil: <ul style="list-style-type: none">● Analyses the information provided in charts and tables on the effect of ecological factors on the abundance of organisms● Assesses the importance of intra-and inter-species competition on the example of animals● Can use a computer model to understand natural processes
Previous knowledge:	Pupil: <ul style="list-style-type: none">●
The forms of work:	<ul style="list-style-type: none">● Pairwork● Groupwork● Individual work● Roleplay● Work with the computer model
The methods of work:	<ul style="list-style-type: none">● A mind map● Writing a roleplay● A brainstorming
Teaching aids:	<ul style="list-style-type: none">● Internet-connected computer● Projector● Computers (tablets) for every student

The range of using ICT:

- The presentation and communication of information
 - Working with the web environment
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The course of lesson:

- Teacher activities
- Pupil activities
- The schedule

1. Evocation (10 min)

- Informing the aims and objectives of the lesson
- Watching the topic based video with an attention to the task exercise <http://kultuur.err.ee/609486/kassikohviku-juhataja-kedi-naitab-positiivsemat-poolt-kassielust>

2. Learning (65 min)

- A roleplay *Kuidas lahendada hulkivate koerte probleem linnas? (Naksitrallid)* <https://www.youtube.com/watch?v=9YsykgmksDE>
- **A problem task:**
 - A Brainstorming: *How is the natural balance broken in our home village?*
 - A pairwork: Pick up one problem and form a mindmap (find the possibilities to solve the problem and restore the situation) The solution will be done as a programmed mindmap in Tynker
- Working with the model <http://mudelid.5dvision.ee/kalad/index.htm>
 - For the introduction watch an animation from the salmon's life cycle <https://www.tynker.com/play/l-he-eluring/58f5f62d949b56bc7f8b4571>
 - worksheet *Natural Balance*

3. Reflection (15 min)

- conclusions and summaries: Writing a roleplay *My suggestions to regulate the natural balance of my home village*
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Specific information:

- Programs
 - Links
 - Etc
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Attachments:

- Worksheets
- Programs
- files necessary
- Etc

- Videos
 - <http://kultuur.err.ee/609486/kassikohviku-juhataja-kedi-naitab-positiivsemat-poolt-kassielust>
 - <https://www.youtube.com/watch?v=9YsykgmksDE>
 - A program created by the Tynker on salmon's life cycle <https://www.tynker.com/play/l-he-eluring/58f5f62d949b56bc7f8b4571>
 - (Alice Ütsik and Gertu-Liis Soosaar 2017, VIII)
 - Worksheet *Natural balance* – fish.pdf (in Estonian)
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