

Matatalab Edu Activity/Lesson Plan:

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Classroom Key Information

Content-Related:

Computer Science Math Art Music
Science ELA Social Study Other _____

Time: 01.12.20 – 09.12.20 Student Age: 3 years

Complexity: ★ ★★ ★★★ ★★★★ ★★★★★
(★ stands for the easiest)

Activity/Lesson Key Information

Project Name: Creative project "Winter Joy"

Big Idea: Joint use of traditional means of child development and robotic kits in the educational process, their harmonious combination.

Concepts: Integration of various educational areas aimed at the needs and interests of the child.

Main Objectives:

- The child develops a cognitive interest in robotics.
- The child forms his skills and abilities in controlling Matatalab lite robots.
- The child gets acquainted with the control panel of the Matatalab robotic kit and movement blocks.
- The child expands his ideas about the world around him (the season is winter, winter holidays).
- The vocabulary in Estonian is expanding.
- The child develops his creativity and communication skills.

Learning Outcomes:

- A child, with the help of an adult, creates costumes for dance robots, finding suitable material from junk items.
- The child knows how to lay out the melody of a Lego song with cubes for the Matatalab Lite robot, correlating the colored rectangles on the sheet with real cubes.
- Can control the Matatalab Lite robot, holds the "turn" button for a long time.
- With the help of an adult, he sets a program for the Matatalab robot, finds the "forward" and "turn" blocks.

- The child knows the main signs of winter and winter holidays.
- The child listens to singing in Estonian, sings along with simple words, understands the meaning of the song, even without knowing the translation of all the words.
- The child sings, dances, plays musical instruments (made by parents' hands) to music with a robot, participates in joint activities.

Key Vocabulary:

Matatalab, MatataBot, Control Tower, Command Board, control button, control panel, motion blocks.

Vocabulary in Estonian – lumememm, lumepall, väike, suur, aisakell.

Notes, bell (bell), tambourine, maraca, sled, Santa Claus, snowman, Christmas tree.

Prior Knowledge:

- Kids are familiar with Matatalab Lite robot control, control mode (forward, backward, turn).
- Children can count up to 5.
- Children are familiar with the Matatalab robotic kit, children know that it is necessary to make a program to move it.
- Children perform rhythmic exercises with claps and musical instruments, lead a round dance, whirl both in pairs and singly.
- Children make simple crafts, know how to use a brush, paints, glue.

Standards(ISTE, CSTA, CCSS, NGSS, etc.):

Matatalab Products & Supplementary Materials


Coding Set Music Add-On Artist Add-On Pro Set
 Animation Add-On Sensor Add-On Lite MATATA Map

Supplementary Materials

Lego bricks, an interactive whiteboard, various craft materials, musical instruments, gnome hats, a surprise box.

Detailed Activity/Lesson Plans

Matatalab Edu classic lesson

	Instructions step by step	Time
<p>Lead in & Guided Activity</p>	<p>1. Solving riddles about winter on an interactive whiteboard (Smart Notebook program). Acquaintance with the signs of winter and the traditions of celebrating winter holidays.</p> <p>2. Learning a song in Estonian "Lumepall". Selection in the group of suitable balls for snowballs (balls from pressed cotton wool for crafts).</p> <p>3. Acquaintance with a musical instrument - a metallophone. Children will learn that it is possible to play music by sheet music, try to extract sounds on a metallophone. They get acquainted with the color designation of notes for Matatalab Lite, the teacher explains to the children that Matata can also play music, but for this he needs to build magic tracks. Children build paths, choosing the colors of the cubes, following the pattern (the teacher compiled a sheet with the melody of the song).</p>	<p>01.12.20 15 minutes.</p> <p>01.12.20 15 minutes.</p> <p>02.12.20 25 minutes</p>
	 <p>Listen to the melody, re-try to sing along to the teacher.</p>	
	<p>4. Consideration of the festive tree in the group and decorations. Watching the video "Tiliseb tiliseb aisakell". Encouraging children to be interested in making a similar movie themselves using robots. The choice of the main characters. The choice of musical instruments for the sound of bells.</p>	<p>03.12.20 25 minutes</p>
	<p>5. Making costumes for robots and decorations for the winter forest. Further revision by the teacher (small details, final revision).</p>	<p>04.12.20 30 minutes.</p>
	<p>6. Repetition of the song in Estonian "Lumepall" with rolling balls (lumps).</p> <p>At the end of the song, children put all the lumps in a box with a surprise (a snowman is hidden in it), when the box is closed, the children say magic words and after opening, a snowman appears instead of snowballs. Snowman and children are having fun. The snowman is spinning (in Matatalab Lite control mode), children are spinning and playing musical instruments to music. Children control the robot and show the concert in turn, the rest are spectators.</p>	<p>07.12.20 30 minutes.</p>
	<p>7. Santa Claus rides on snowy roads. Children, with the help of an adult, compose a program for the Matatalab robot. The number of steps is counted by the cells, the direction of the turn is set, and the necessary blocks are found with the teacher's hint. The teacher puts the blocks of the cycle, explains to the children that Santa Claus has a long road, and these magic blocks help to overcome the long way. The program is saved on the robot control panel.</p>	<p>08.12.20 20 minutes.</p>
	<p>8. Telling a short story that the New Year is coming soon and Santa Claus is in a hurry to the children. The bells are ringing so merrily that everyone around is rejoicing: children, a Christmas tree, a snowman. Everyone is dancing, spinning and playing funny music.</p>	<p>09.12.20 20 minutes.</p>
	<p>Children control Matatalab Lite robots (control mode, press the "turn" button and hold it for a long time), start the Matatalab robot using a pre-compiled program, watch a concert, enjoy the activity.</p>	

Detailed Activity/Lesson Plans

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	Instructions step by step	Time
Independent Activity	<p>A child at the age of 3 is not yet able to completely independently solve a problem or define a plan; he needs the help of an adult.</p> <p>The independent choice of children consisted in the selection of musical instruments that would fit the ringing of the bell, as well as in the choice of material for making costumes (in shape, color, content).</p>	
Feedback & Extension	<p>Children have great fun controlling robots.</p> <p>With the use of robotic kits, children's concentration increases.</p> <p>Children take part in joint activities.</p> <p>Children have knowledge of winter holidays and fun.</p>	

Essential Questions:

- What happens in winter?
- What can be made of snowballs?
- Who comes to the children for the New Year?
- What and to whom do children rejoice in winter?
- What do children do when they are having fun?

Supporting Multimedia Files:

Tiliseb tiliseb aisakell | Jõululaulud | Estonian Christmas Carols

<https://youtu.be/ICHTTfeiXBY>