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abacusan STÚDIÓ
WE TEACH ROBOTICS

Sense organs

Year	Field of study, subject	Subject connections
3	Natural Science and Geography Environmental Studies	Hungarian language and literature, singing and music, visual culture, digital culture

The purpose and didactic tasks of the lesson

Preparing, processing, and organizing new knowledge With teacher guidance, the student should be able to:
To observe the perceptible properties of materials and objects that occur in the environment and are easily observable, To verbally describe what is observed, To separate the senses while playing games

The effect of the clock

Establishing scientific literacy. We make the child aware of the senses and the properties that can be perceived with them. They gain experience in the basics of acquiring knowledge in natural sciences. The relationships between the living world and the environment, interdependence; (ability to cooperate with others) objective knowledge, recording experiences. The robotics task promotes the development of fine motor skills, direction perception and digital competencies.

Tools and resources used

	State curriculum, local curriculum, textbooks
	Objects and foods that can be perceived with different senses
	VINU robot and worksheet, VINU robot track (A3 size)

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Occupation plan

2 minutes	**Attunement, goal setting**	• • Motivation, communication • Frontal work
5 minutes	**Group formation**	• You have to look for sensory organ pictograms in the room, whoever finds one will be placed in that group. • Activity, individual work • Equipment: sensory pictograms: ears, eyes, nose, mouth-tongue, hands-skin hidden in the room, in a number corresponding to the number of children
10 minutes	**Group work - sensory exercises**	• Smell, hearing, touch, taste, sight: each group gets acquainted with the different senses according to the rules of the game explained by the teacher. • Activity problem solving, explanation, discussion, game • Group work • Equipment: Robot track in A3 size, VINU robot, worksheet
10 minutes	**Creating a robot track**	• Creating and testing a robot track, using the VINU robot to practice what they have previously experienced • Practicing knowledge, problem-solving thinking • Equipment: Empty robot track in A3 size, colored pencils, VINU robot
10 minutes	**Creating a mind map**	• The groups create a mind map of what they have learned and experienced about the sensory organs. • Developing the ability to organize • Teamwork, cooperation, helping each other • Tools: paper, photos, images, drawing tools
8 minutes	**Sharing the experiences of groups**	• The groups take turns presenting their completed tasks to the other students. • Evaluation, self-evaluation. Development of social competencies. Respect and acceptance of the work of other students. • Guided conversation, frontal work

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Group tasks

Csoport	Cél	Eszközök
Group 1 **SMELL** Sorting scents and odors into 2 groups Group members determine by smelling the substances placed in a glass whether the substances have a scent or odor.	Teaching the technique of smelling Materials can be grouped by property	Teaching the technique of smelling Materials can be grouped by property
Group 2 **HEARING** A student takes tools from a closed box, the group members are blindfolded, and they determine what tool or object it is based on the sound. The "show child" is always changing	compliance with the rules of the game	musical instrument, bunch of keys, dice, crumpling a piece of paper (instructions on the piece of paper) having a snack
Group 3 **TOUCH** Comparison of the properties of frozen and non-frozen fruits and vegetables cold-not cold wet-dry hard-soft smooth-rough	A lot of information can be gained about a given object by touch, except for its color.	**frozen and fresh fruits and vegetables**
Group 4 **TASTING** Tasting different substances and foods sweet sour bitter salty (umami)	Students need to realize that a taste is missing based on the materials tasted (bitter). Umami is not yet very widespread in Hungarian vocabulary,	different flavored foods
Group 5 **SIGHT** Pairing images small-large colored-colorless near-far dark-light	The eye, as a sensory organ, is capable of perceiving several properties	Pictures in an envelope

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Methodological advice

To practice the senses learned in group work, the groups create a VINu robot track.
Below is a sample track.
Differentiation options:

- With the different programming modes of the VINU robot, different skills can be developed (fine motor skills, directions, algorithmic thinking, etc.)
- By saying out loud the senses and perceived properties, linguistic competence can be strengthened.

Find pairs with VINU!

Task description

Guide VINU along the track so that it visits the matching pairs in sequence!

You will need:

1 robot track sheet

How to use VINU:

1.  Open this application!
2.  Select the following settings. BE CAREFUL: the green button in the upper left corner determines whether you can follow a previous route (cross it) or not. In the form shown in the picture (default setting), you cannot. If you click on it, it will switch and a circle will appear in the upper corner of the button. This allows you to cross a route multiple times.
3. By clicking on the dots, you can specify how far to go to the intersection, when to turn, etc. Set the route so that it follows the correct order in the food chain. You can cross your route twice, but you can only pass through a living creature once!
4. Once you have entered all the commands for the correct route, click on the blue play button at the top and VINU will set off.

The track:

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SWEET

SALTY

SOUR

STARTING POINT OF VINU

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