

# RoboScientist - Teachers' Questionnaire

Please reply to the questionnaire on the subject - ROBOTICS methodological materials and activities.

A survey is being conducted within the RoboScientists project to validate the impact of robotics-based learning activities with students. Tool aimed to evaluate the development of computational thinking, learning achievements, challenges during the project activities.

The questionnaire is anonymous and all answers will be used in aggregate form.

Filling time up to 15 minutes.

Thank you for your collaboration!

\* **Nepieciešams**



RoboScientists Erasmus+ KA2 2018-1-PL01- KA201-051129



Co-funded by the  
Erasmus+ Programme  
of the European Union

1. Please indicate the average number of students participating in robotics lesson: \*

*Atzīmējiet tikai vienu variantu.*

- ☐ Less than 10 students
- ☐ 11-14 students
- ☐ 15 -18 students
- ☐ 19 - 22 students
- ☐ More than 23 students

2. What is the age of your students? You can indicate multiple age groups \*

*Atzīmējiet visus atbilstošos variantus.*

- ☐ younger than 13 years
- ☐ 13 years old
- ☐ 14 years old
- ☐ 15 years old
- ☐ 16 years old
- ☐ 17 years old
- ☐ 18 years old
- ☐ older than 18 years

## 3. Please indicate the number of teachers present in lesson: \*

\*The assistant teacher may be counted as a teacher. \*\*Note that there are several activities and the number of teams, students or teachers may vary from one activity to another. Please try to give an average number.

*Atzīmējiet tikai vienu variantu.*

- ☐ 1 teacher
- ☐ 2 teacher
- ☐ 3 teacher
- ☐ 4 teacher
- ☐ 5 teacher

## 4. Please indicate a number which represents how many students were in one team (during one lesson): \*

Please note that there are several activities and the number of teams, students or teachers may vary from one activity to another. Please try to give an average number

*Atzīmējiet tikai vienu variantu.*

- ☐ 2 students in one team
- ☐ 3 students in one team
- ☐ 4 students in one team
- ☐ 5 students in one team

5. Please indicate a number which represents how many teams of students were formed during one lesson:

Please note that there are several activities and the number of teams, students or teachers may vary from one activity to another. Please try to give an average number.

*Atzīmējiet tikai vienu variantu.*

- ☐ 1 team
- ☐ 2 teams
- ☐ 3 teams
- ☐ 4 team
- ☐ 5 teams
- ☐ 6 teams
- ☐ 7 teams

6. Please choose one statement that best describes your experience with educational robotics before you started participation in RoboScientists project: \*

*Atzīmējiet tikai vienu variantu.*

- ☐ Had no previous experience
- ☐ Had minor experience but I haven't worked with students previously teaching educational robotics
- ☐ Had some experience and I have worked with students teaching educational
- ☐ Had sufficient experience in teaching educational robotics
- ☐ Had experience with different educational robotics and I teach students

## 7. At what level did each team succeed in the project "Lighthouse"?

Please tick as much levels as each team developed



Atzīmējiet visus atbilstošos variantus.

	Level 1: The lighthouse blinks	Level 2: The lighthouse blinks only at dark	Level 3: The lighthouse blinks at different rates only at dark and according to the distance of the sailing ships	Level 4: Study of the LED diode characteristics	Students did extend the project scenarios (regardless of the level of the project)
1st team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2nd team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3rd team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 8. At what level did each team succeed in the project "Smart light"?

Please tick as much levels as each team developed

*Atzīmējiet visus atbilstošos variantus.*

	Level 1: The smart light that turns on only when movement is detected	Level 2: The smart light detects movement in the dark	Students did extend the project scenarios (regardless of the level of the project)
1st team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2nd team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3rd team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8th	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

team

9th  
team

☐☐☐

10th  
team

☐☐☐



9. Did the team manage to implement the project "Sunflower"?



*Katrā rindiņā atzīmējiet tikai vienu variantu.*

Students did extend the project scenarios (regardless of the level of the project)		Yes	Almost	No
1st team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3rd team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4th team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5th team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6th team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7th team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8th team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9th team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10th team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## 10. At what level did each team succeed in the project "Theremin"?

Please tick as much levels as each team developed

*Atzīmējiet visus atbilstošos variantus.*

	Level 1: Creating a one-hand operated Theremin	Level 2: Creating a two-hand operated Theremin that reproduces sound through the computer	Level 3: Creating a two-hand operated Theremin that reproduces sound (created or imported by the students) through the computer	Students did extend the project scenarios (regardless of the level of the project)
1st team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2nd team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3rd team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6th  
team

7th  
team

☐☐☐☐

8th  
team

☐☐☐☐

9th  
team

☐☐☐☐

10th  
team

☐☐☐☐

## 11. At what level did each team succeed in the project "Weather station"?

Please tick as much levels as each team developed

*Atzīmējiet visus atbilstošos variantus.*

	Level 1: Pressure, temperature and humidity measurements	Level 2: Measurement of dust concentration	Level 3: Visualization of the measurements	Level 4: Interpretation of collected data	Students did extend the project scenarios (regardless of the level of the project)
1st team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2nd team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3rd team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8th  
team

☐☐☐☐☐

9th  
team

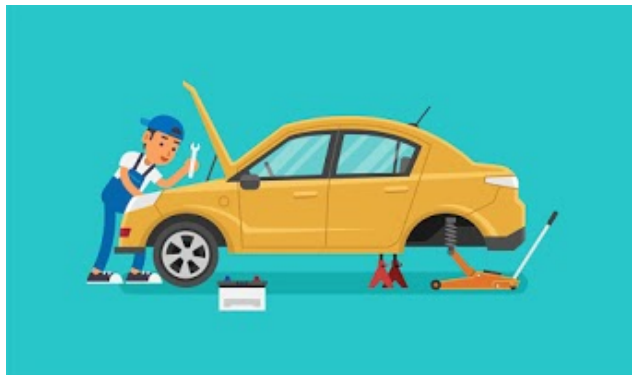
☐☐☐☐☐

10th  
team

☐☐☐☐☐

## 12. At what level did each team succeed in the project "The DIY automobile"?

Please tick as much levels as each team developed

*Atzīmējiet visus atbilstošos variantus.*

	Level 1: A DIY automobile that moves forwards, left, right and backwards	Level 2: A DIY automobile that detects and avoids obstacles	Level 3: A DIY automobile that moves on different angles and/or geometrical shapes	Level 4: Controlling remotely the DIY automobile (optional)	Students did extend the project scenarios (regardless of the level of the project)
1st team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2nd team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3rd team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10th team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





## 13. Did students face any difficulties during the project activities? \*

Please evaluate the statements mentioned below which describe possible problems. During the evaluation please think about the class as a whole

*Katrā rindiņā atzīmējiet tikai vienu variantu.*

	Students didn't have any problems during the projects	Students had almost all the knowledge needed	Students lacked specific knowledge, but they had basic understanding and learned quickly	Extreme lack of knowledge
The knowledge on electric connection principles (background knowledge on electricity)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The knowledge on the characteristics of the electric components and the use of them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The knowledge on basic programming principles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The knowledge and understanding of the importance of sequence in programming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ability to learn and follow the instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ability to plan the project materials, time, activity (Project Management Skills)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ability to split  
responsibilities during  
the activities

---

14. If your students encountered other difficulties which are not mentioned in previous question, please describe them here:  
you can write in any language you prefer

---

---

---

---

---

15. Did you notice students extending the project scenario regardless the level of the project? \*

*Atzīmējiet tikai vienu variantu.*

- ☐ Yes
- ☐ Yes, in some details
- ☐ No



16. Did you face any difficulties during project implementation process? \*

Please evaluate statements mentioned below on possible problems. For example, technical support, lack of equipment, product shortage or unavailability of materials

*Katrā rindiņā atzīmējiet tikai vienu variantu.*

	not at all	some problems existed	it was a problem
The implementation of the project required specific software that was difficult to install on school devices (computers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was difficult to get the necessary components (Arduino, LED, resistors, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was difficult to purchase the necessary materials (cardboard, glues, paper clips, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. If you faced other difficulties which are not mentioned in previous question, please describe them here:

you can write in any language you prefer

---

---

---

---

---



## 18. Please rate the developed competencies by using robotics training materials: \*

During the evaluation process, please think about the class as a whole.

*Katrā rindiņā atzīmējiet tikai vienu variantu.*

	Not at all	Partly	For sure
Communication - the ability to communicate with a teacher and with peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaboration with peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creativity in robotics activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital literacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Systematic information search	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem solving skills in robotics activities (formulating problems and their solutions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promoting learning of STEM subjects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motivation to learn new skills and find out new information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning the basics of programming principles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote the understanding of algorithm design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote the development of algorithm thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promoting presentation skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. If your students developed other competencies which are not mentioned in previous question, please describe them here:  
you can write in any language you prefer


---

---

---

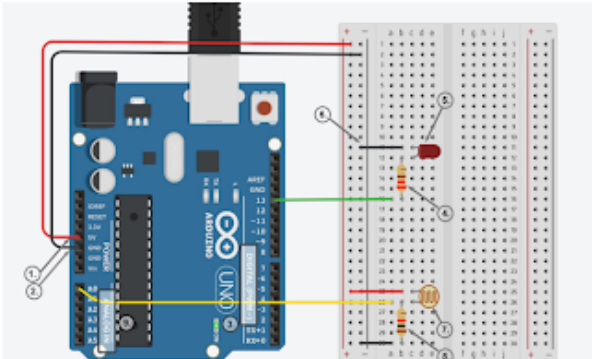
---

---



## The Lighthouse project

Level 2: The lighthouse blinks only at dark



- Use 5V (1) and Ground/ GND (2) pins to respectively provide 5V power and ground to your breadboard
- Use one of the digital pins (3) (pin 13 in the example) to connect the anode of your LED (5) through the resistor (4).
- Connect the cathode of your LED to ground (6) in order to create a closed circuit.
- Connect one of photoresistor's (7) legs to power (5V), and the other to one of the analog pins (9) (pin A0 in the example), as well as to ground through the 10K resistor (8).

Notes:

---

---

---

20. Please rate the developed materials for teachers by evaluating the statements below \*

*Katrā rindiņā atzīmējiet tikai vienu variantu.*

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
It was easy to understand step-by-step information provided	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There was enough visual information included (photos, diagrams, videos)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The material gives all the information needed to get projects started successfully	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The material provides answers to questions that may arise during the working process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It helps to understand how to solve problems if such arise during the implementation of projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. If you think that something more should be mentioned about the material, please use the space below:  
you can write in any language you prefer

---



---



---



---



---

## 22. How the worksheets were used? \*

*Katrā rindiņā atzīmējiet tikai vienu variantu.*

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The worksheets are well structured and the information is presented step by step	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The worksheets are useful at the end of the project to assess the pupils' knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Filling the required answers in the worksheets requires too much writing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer classroom discussions and hands-on activities instead of written answers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The lack of supporting information in the worksheets has some drawbacks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 23. If you think that something more should be mentioned about the worksheets, please use the space below:

you can write in any language you prefer

---



---



---



---



---





24. Did you have enough time to implement the project during your lessons? \*

Please choose one statements which best describes your situation

*Atzīmējiet tikai vienu variantu.*

- ☐ Yes, we had time for everything
- ☐ There was not enough time to support the students individually
- ☐ There was not enough time to let the students look for a solution of the problem by themselves
- ☐ There was a significant shortage of time to acquire, understand and consolidate knowledge
- ☐ The project was not implemented because it was not enough time

25. How much time did you, as a teacher, needed to prepare before starting the RoboScientist activities – projects in the classroom? \*

*Atzīmējiet tikai vienu variantu.*

- ☐ About 2 hours
- ☐ About 4 hours
- ☐ About 6 hours
- ☐ About 8 hours
- ☐ About 10 hours
- ☐ More than 10 hours

## 26. How much time was spend for the first project "Lighthouse"? \*

(lessons - 40 / 45 min) Please select an answer below:

*Atzīmējiet tikai vienu variantu.*

- ☐ We did not implement this project due to lack of time
- ☐ We did not implement these projects due to lack of time (limitations of distance learning created by COVID)
- ☐ We implemented this project in remote learning mode and it is difficult for me to determine the exact time because the students worked independently
- ☐ 1 lesson 40 / 45 min
- ☐ 2 lessons 80 / 90 min
- ☐ 3 lessons 120 / 135 min
- ☐ 4 lessons 160 / 180 min
- ☐ 5 lessons 200 / 225 min
- ☐ 6 lessons 240 / 270 min
- ☐ 7 lessons 280 / 315 min
- ☐ 8 lessons 320 / 360 min
- ☐ 9 lessons 360 / 405 min
- ☐ 10 lessons 400 / 450 min
- ☐ approximately 15 lessons 600 / 675 min
- ☐ approximately 20 lessons 800 / 900 min
- ☐ we were not able to manage this

## 27. How much time was spend for the second project "Smart light"? \*

(lessons - 40 / 45 min) Please select an answer below:

*Atzīmējiet tikai vienu variantu.*

- ☐ We did not implement this project due to lack of time
- ☐ We did not implement these projects due to lack of time (limitations of distance learning created by COVID)
- ☐ We implemented this project in remote learning mode and it is difficult for me to determine the exact time because the students worked independently
- ☐ 1 lesson 40 / 45 min
- ☐ 2 lessons 80 / 90 min
- ☐ 3 lessons 120 / 135 min
- ☐ 4 lessons 160 / 180 min
- ☐ 5 lessons 200 / 225 min
- ☐ 6 lessons 240 / 270 min
- ☐ 7 lessons 280 / 315 min
- ☐ 8 lessons 320 / 360 min
- ☐ 9 lessons 360 / 405 min
- ☐ 10 lessons 400 / 450 min
- ☐ approximately 15 lessons 600 / 675 min
- ☐ approximately 20 lessons 800 / 900 min
- ☐ we were not able to manage this

28. How much time was spend for the third project "Sunflower"? \*

(lessons - 40 / 45 min) Please select an answer below:

*Atzīmējiet tikai vienu variantu.*

- ☐ We did not implement this project due to lack of time
- ☐ We did not implement these projects due to lack of time (limitations of distance learning created by COVID)
- ☐ We implemented this project in remote learning mode and it is difficult for me to determine the exact time because the students worked independently
- ☐ 1 lesson 40 / 45 min
- ☐ 2 lessons 80 / 90 min
- ☐ 3 lessons 120 / 135 min
- ☐ 4 lessons 160 / 180 min
- ☐ 5 lessons 200 / 225 min
- ☐ 6 lessons 240 / 270 min
- ☐ 7 lessons 280 / 315 min
- ☐ 8 lessons 320 / 360 min
- ☐ 9 lessons 360 / 405 min
- ☐ 10 lessons 400 / 450 min
- ☐ approximately 15 lessons 600 / 675 min
- ☐ approximately 20 lessons 800 / 900 min
- ☐ we were not able to manage this

29. How much time was spend for the fourth project "Theremin"? \*

(lessons - 40 / 45 min) Please select an answer below:

*Atzīmējiet tikai vienu variantu.*

- ☐ We did not implement this project due to lack of time
- ☐ We did not implement these projects due to lack of time (limitations of distance learning created by COVID)
- ☐ We implemented this project in remote learning mode and it is difficult for me to determine the exact time because the students worked independently
- ☐ 1 lesson 40 / 45 min
- ☐ 2 lessons 80 / 90 min
- ☐ 3 lessons 120 / 135 min
- ☐ 4 lessons 160 / 180 min
- ☐ 5 lessons 200 / 225 min
- ☐ 6 lessons 240 / 270 min
- ☐ 7 lessons 280 / 315 min
- ☐ 8 lessons 320 / 360 min
- ☐ 9 lessons 360 / 405 min
- ☐ 10 lessons 400 / 450 min
- ☐ approximately 15 lessons 600 / 675 min
- ☐ approximately 20 lessons 800 / 900 min
- ☐ we were not able to manage this

30. How much time was spend for the fourth project "Weather station"? \*

(lessons - 40 / 45 min) Please select an answer below:

*Atzīmējiet tikai vienu variantu.*

- ☐ We did not implement this project due to lack of time
- ☐ We did not implement these projects due to lack of time (limitations of distance learning created by COVID)
- ☐ We implemented this project in remote learning mode and it is difficult for me to determine the exact time because the students worked independently
- ☐ 1 lesson 40 / 45 min
- ☐ 2 lessons 80 / 90 min
- ☐ 3 lessons 120 / 135 min
- ☐ 4 lessons 160 / 180 min
- ☐ 5 lessons 200 / 225 min
- ☐ 6 lessons 240 / 270 min
- ☐ 7 lessons 280 / 315 min
- ☐ 8 lessons 320 / 360 min
- ☐ 9 lessons 360 / 405 min
- ☐ 10 lessons 400 / 450 min
- ☐ approximately 15 lessons 600 / 675 min
- ☐ approximately 20 lessons 800 / 900 min
- ☐ we were not able to manage this

31. How much time was spend for the fourth project "DIY automobile"? \*

(lessons - 40 / 45 min) Please select an answer below:

*Atzīmējiet tikai vienu variantu.*

- ☐ We did not implement this project due to lack of time
- ☐ We did not implement these projects due to lack of time (limitations of distance learning created by COVID)
- ☐ We implemented this project in remote learning mode and it is difficult for me to determine the exact time because the students worked independently
- ☐ 1 lesson 40 / 45 min
- ☐ 2 lessons 80 / 90 min
- ☐ 3 lessons 120 / 135 min
- ☐ 4 lessons 160 / 180 min
- ☐ 5 lessons 200 / 225 min
- ☐ 6 lessons 240 / 270 min
- ☐ 7 lessons 280 / 315 min
- ☐ 8 lessons 320 / 360 min
- ☐ 9 lessons 360 / 405 min
- ☐ 10 lessons 400 / 450 min
- ☐ approximately 15 lessons 600 / 675 min
- ☐ approximately 20 lessons 800 / 900 min
- ☐ we were not able to manage this



32. Does the structure of the activity in levels helped you adapting the project to your class needs? \*

*Atzīmējiet tikai vienu variantu.*

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly agree

33. Which activities students liked the most in robotics lessons? \*

Please select 3 activities which students mostly liked

*Atzīmējiet visus atbilstošos variantus.*

- ☐ Programming
- ☐ Brainstorming of ideas
- ☐ Planning
- ☐ Search for information online
- ☐ Working with electrical components
- ☐ Crafting
- ☐ Problem solving
- ☐ Choosing different solutions and difficulty levels
- ☐ Presenting the team's work

34. Which software (Snap4Arduino or Arduino IDE) the students used? \*

*Katrā rindiņā atzīmējiet tikai vienu variantu.*

	All teams	Half of the teams	One team	No one
Snap4Arduino	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Arduino IDE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35. With what subjects did you manage to join RoboScientists activities? \*

You can select the subjects from the list below or add some new which are not listed here

*Atzīmējiet visus atbilstošos variantus.*

- ☐ math
- ☐ geometry
- ☐ art/design
- ☐ programming
- ☐ informatics
- ☐ physics
- ☐ music
- ☐ history
- ☐ language

Citas: ☐ \_\_\_\_\_

36. Did you observe some aspects which showed that students' motivation to learn raised during the project? What kind of aspects can you name?

you can write in any language you prefer

---

---

---

---

---

37. Do you have any suggestions about, how could we develop and improve the curriculum of the teacher training course?

you can write in any language you prefer

---

---

---

---

---

### RoboScientist - FINAL PROJECT - Teachers' Questionnaire

Please fill in the information in the questionnaire on the subject - ROBOTICS methodological materials and activities (training, pilot period).

A survey is being conducted within the RoboScientists project to validate the impact of robotics-based learning activities with students. The tool is aimed to evaluate the whole project results and challenges during the project activities.

The questionnaire is anonymous and all answers will be used in aggregate form.  
Filling time up to 30 minutes.

Thank you for your collaboration!

### RoboScientist - FINAL PROJECT - Teachers' Questionnaire

38. How do you rate your confidence level when working with robotics activities in the classroom after RoboScientists project?

*Atzīmējiet tikai vienu variantu.*

	1	2	3	4	5	
low level of confidence due to lack of knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	high level of confidence because the necessary knowledge has been acquired

39. Do you plan to continue carrying out the RoboScientists learning intervention in schools after RoboScientist project? \*

*Atzīmējiet tikai vienu variantu.*

☐ Yes, for sure

☐ Maybe, I will

☐ No, I do not feel confident doing that

☐ Citas: \_\_\_\_\_

40. Your satisfaction level of the training offered (C1, C2, C3 and C4)

*Katrā rindiņā atzīmējiet tikai vienu variantu.*

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied	Did not participate or training did not take place
Training C1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training C2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training C3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training C4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

41. What do you consider to be the main strength of training meetings?

you can write in any language you prefer

---

---

---

---

---

42. Were there any weak points in training activities?

you can write in any language you prefer

---

---

---

---

---

43. Please rate your satisfaction level of support during the pilot periods.

*Atzīmējiet tikai vienu variantu.*

	1	2	3	4	5	
Not enough	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Enough and supportive

## 44. Please evaluate support during the piloting periods

*Atzīmējiet tikai vienu variantu.*

- ☐ I didn't need support because I knew everything
- ☐ I needed support and I got the answers
- ☐ I needed support, but I didn't know who to ask
- ☐ I needed support, but didn't get answers to my questions

45. Please rate. As a whole, during the project implementation the number of designed and built robots by students.

*Atzīmējiet tikai vienu variantu.*

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

☐ 6

☐ 7

☐ 8

☐ 9

☐ 10

☐ 11

☐ 12

☐ 13

☐ 14

☐ 15

☐ 16

☐ 17

☐ 18

☐ 20

☐ 21

☐ 22

☐ 23

☐ 24

- ☐ 25
- ☐ 26
- ☐ 27
- ☐ 28
- ☐ 29
- ☐ 30
- ☐ More than 30
- ☐ More than 40

46. Do you have any suggestions, how could we develop and improve the curriculum of teacher training course?

you can write in any language you prefer

---

---

---

---

---



47. Did the students successfully presented their developed robotics projects?

*Atzīmējiet tikai vienu variantu.*

- ☐ Yes, everyone did very well, presentation skills were developed
- ☐ Despite the remote learning mode, the presentation of the students projects was good
- ☐ Unfortunately, the presentation was difficult to carry out due to the remote learning mode, I believe that in classroom (face to face) students would done better
- ☐ The presentation phase of the projects developed by students was not implemented because of reasons caused by Covid-19 restrictions.
- ☐ The presentations were not done because students didn't prepare them
- ☐ Citas: \_\_\_\_\_

48. How do you rate the impact on your teaching/professional development during this project?

*Atzīmējiet visus atbilstošos variantus.*

	Agree	I partially agree	Neutral	Partly disagree	Disagree
Positively, I have acquired new knowledge and I will definitely use it to motivate students to learn some STEAM subjects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Positively, I have gained experience, met partners from other countries and to some extent I will apply the knowledge gained in my professional activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Positively, I want to continue to learn about this type of STEAM inclusion in the learning process, I have gained a lot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neutral, in my opinion, under the influence of Covid-19 the project failed to fully implement and I do not feel that I improved my professional knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In a neutral way, for a variety of reasons, I don't feel well enough mastered these robotics curricula	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On the negative side, I have wasted time and gained neither knowledge nor good experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

49. Please evaluate in what level you think that you will use educational robotics methodology and learning materials developed in the project in your future work

*Atzīmējiet visus atbilstošos variantus.*

- ☐ more than 50%
- ☐ more than 80%
- ☐ 100%

50. In your opinion did your students' became more motivated to STEAM learning subjects?

*Atzīmējiet tikai vienu variantu.*

- ☐ These activities strongly supported development of motivation towards STEAM
- ☐ These activities partly supported development of motivation towards STEAM
- ☐ These activities didn't support development of motivation towards STEAM

51. In your opinion did your students' became more interested in STEAM learning subjects?

*Atzīmējiet tikai vienu variantu.*

- ☐ These activities strongly supported development of interest to STEAM
- ☐ These activities partly supported development of interest to STEAM
- ☐ These activities didn't support development of interest to STEAM

52. How do you rate - To what extent educational resources for teachers and students were well prepared

*Atzīmējiet tikai vienu variantu.*

- ☐ Materials were well prepared
- ☐ Materials were prepared in quite a good level but some improvements can be suggested
- ☐ Materials were not prepared to be used in activities with students

53. How do you rate - To what extent there was improvement in interaction among students' teams

*Atzīmējiet tikai vienu variantu.*

- ☐ In very high level
- ☐ Improved moderately
- ☐ Didn't improve

54. If your students developed new robotics project ideas, prepared great presentations or did something else which showed their improved competence in educational robotics, please share with us some examples

you can write in any language you prefer

---

---

---

---

---

COVID-19

## 55. How do you assess the situation with project activities during COVID - 19 restrictions?

Check as many boxes as apply.

*Atzīmējiet visus atbilstošos variantus.*

- ☐ Positively, I have acquired new skills knowledge how to work in such circumstances and I will definitely use it to motivate students to learn more STEAM subjects
- ☐ Positively, I have gained experience, had an opportunity to meet partners online from other countries and to some extent I will apply the knowledge gained in my professional activities.
- ☐ Positively, I want to continue to learn about this type of STEAM inclusion in the learning process remotely, I have gained a lot
- ☐ Neutral. In my opinion, under the influence of Covid-19 the project failed to be fully implemented and I do not feel that I improved my professional knowledge to work in remote mode
- ☐ I don't feel well enough mastered the robotics curricula because of Covid restrictions
- ☐ I have wasted time and gained neither knowledge nor good experience

## 56. Do you have any other comments regarding the progress of the project implementation and the impact of Covid-19 to the success of project?

you can write in any language you prefer

---

---

---

---

---



Thank you for taking the time for this questionnaire and for sharing your experience in the project activities!

---

Uzņēmums Google nav šī satura autors un to neatbalsta.

Google Veidlapas