# RoboScientists - Student Questionnaire

You have had a great opportunity to participate in the RoboScientists project and learn something new about robotics, and now we would like to know your opinion. About your success in this project, what are your thoughts on robotics and learning opportunities in the field of STEAM.

Your opinion is very important to us, so we invite you to answer some questions

The questionnaire is anonymous and all answers will be used only in aggregate form. The questionnaire filling time is up to 15 minutes.

Thanks!

\* Nepieciešams



| 1. | 1. l am:   |
|----|--|
|    | Atzīmējiet tikai vienu variantu.                                   |
|    | Female   |
|    | Male   |
|    | Prefer not to say  |
|    | Citas:   |
|    |  |
|    |  |
| 0  |  |
| 2. | Please indicate your age:  |
|    | Please select the option which is closer to your age at the moment |
|    | Atzīmējiet tikai vienu variantu.                                   |
|    | 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 country where you live and study at the moment:        |
|----|--|
|    | Atzīmējiet tikai vienu variantu.   |
|    | Poland   |
|    | Greece   |
|    | Latvia   |
|    |  |
|    | owledge vould like that you evaluate your knowledge in the questions below |

4. Please evaluate statements about different knowledge by choosing the answer that describes your opinion about the level of knowledge on particular topics:

Katrā rindiņā atzīmējiet tikai vienu variantu.

|   | I fully<br>understand it<br>and can use it in<br>my activity | I know the meaning, but I<br>don't know how it works. I<br>would like to learn | I know the meaning,<br>but I do not<br>understand how it<br>works | I don't know<br>anything about this<br>topic, but I wish to<br>learn | I don`t know anything<br>about this topic. Not<br>interested to learn |
|---|--|--|---|--|---|
| Electric<br>connection<br>principles<br>(background<br>knowledge on<br>electricity) |  |  |   |  |   |
| Comprehension<br>of electrical<br>circuit (Ohm's<br>law)                            |  |  |   |  |   |
| Properties of resistors and importance of their use                                 |  |  |   |  |   |
| The characteristics of the electric components and the use of them                  |  |  |   |  |   |
| Basic   |  |  |   |  |   |

| programming<br>principles   |  |  |  |
|---|--|--|--|
| The importance of sequence in programming and flow of control in the script |  |  |  |
| Types of actuators and principles of their functions                        |  |  |  |
| Types of sensors and principles of their functions                          |  |  |  |
| How<br>lighthouses<br>work  |  |  |  |
| How smart<br>lighting works   |  |  |  |
| What "software"<br>means  |  |  |  |
| What is an<br>"Arduino"   |  |  |  |
| What the role that "bread   |  |  |  |

| board" plays               |  |  |  |
|----------------------------|--|--|--|
| Properties of<br>LED diode |  |  |  |

#### Motivation

Motivation to learn new skills and find out new information

<sup>5.</sup> Please evaluate the statements below on the factors which motivates you to learn NEW knowledge

Katrā rindiņā atzīmējiet tikai vienu variantu.

|  | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|--|----------------|-------|---------|----------|-------------------|
| I clearly understand the task  |                |       |         |          |                   |
| I can achieve the learning aims                                      |                |       |         |          |                   |
| My classmates' achievements and success in reaching leaning aims     |                |       |         |          |                   |
| Teacher believes in my success                                       |                |       |         |          |                   |
| The feedback given by teacher on the progress of the task            |                |       |         |          |                   |
| I start to understand concepts which were not clear to me previously |                |       |         |          |                   |
| The support from teachers during learning process                    |                |       |         |          |                   |
| The support from my peers during learning process                    |                |       |         |          |                   |
| The robot/program works  |                |       |         |          |                   |
| I can feel fun during the learning                                   |                |       |         |          |                   |
| I can create something by myself                                     |                |       |         |          |                   |

### Problem solving skills

### 6. Please evaluate how you deal with a difficult situation in learning process

Katrā rindiņā atzīmējiet tikai vienu variantu.

|   | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|----------------|-------|---------|----------|-------------------|
| I solve learning problems by myself                             |                |       |         |          |                   |
| I think that teacher should help me solving problems            |                |       |         |          |                   |
| I look for extra information needed for learning                |                |       |         |          |                   |
| I look for information on the internet to resolve the situation |                |       |         |          |                   |
| I ask for support of my classmates                              |                |       |         |          |                   |
| I ask for support of the teacher                                |                |       |         |          |                   |
| I search for the information in the learning materials provided |                |       |         |          |                   |

Collaboration and work on sessions

7. Please evaluate the statements how would you describe your favorite learning process \*

Katrā rindiņā atzīmējiet tikai vienu variantu.

|  | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|--|----------------|-------|---------|----------|-------------------|
| I like to cooperate with my classmates in preparing projects   |                |       |         |          |                   |
| I like to work individually on preparing the projects  |                |       |         |          |                   |
| I would like to do more work towards robot construction  |                |       |         |          |                   |
| I like when there are different activities<br>during the robotic projects (theory, work with<br>electrical components, programming, artistic<br>activities - crafting, etc.) |                |       |         |          |                   |
| I like when I can do something active in robotics session  |                |       |         |          |                   |
| I like when I can make something creative  |                |       |         |          |                   |
| I like when there are particular instructions on every learning step   |                |       |         |          |                   |
| I like to search for the information by myself   |                |       |         |          |                   |
| I like when teacher helps me to find the information   |                |       |         |          |                   |

## Creativity

|  | Strongly agree        | Agree       | Neutral      | Disagree | Strongly disagree |
|--|-----------------------|-------------|--------------|----------|-------------------|
| I can come up with some creative solutions in developing robotics  |                       |             |              |          |                   |
| I like when my peers make creative solutions<br>for robotics but I do not like to do it by<br>myself         |                       |             |              |          |                   |
|  |                       |             |              |          |                   |
| I think that I can come up with some creative  |                       |             |              |          |                   |
| I think that I can come up with some creative solutions in finding the ways how to decorate developed robots |                       |             |              |          |                   |
| solutions in finding the ways how to decorate developed robots  TEAM   | veryday life, society | and the glo | bal environn | nent     |                   |
| solutions in finding the ways how to   |                       |             |              |          |                   |

| 10. | Do you understand how these products are programmed?                               |
|-----|--|
|     | Atzīmējiet tikai vienu variantu.   |
|     | Yes, completely understand it  |
|     | I have some understanding  |
|     | I have no idea   |
|     |  |
| 11. | Do you wish to understand how these products work?                                 |
|     | Atzīmējiet tikai vienu variantu.   |
|     | I think that I have learnt how these products work                                 |
|     | Yes, I would love to learn it  |
|     | Maybe some concepts can be learnt  |
|     | I do not think that it is needed   |
|     |  |
| 12. | Do you think that programming and robotics will be an integral part of the future? |
|     | Atzīmējiet tikai vienu variantu.   |
|     | Yes, I am sure that it will be so  |
|     | Maybe  |
|     | I think that the role of robotics is overrated                                     |

| Do you think that every person should understand programming?  |
|--|
| Atzīmējiet tikai vienu variantu.   |
| Yes, I am sure that everyone should understand how it works  |
| I think that only people who learn programming should understand how it works  |
|  |
| I would like to continue my studies at university level in an area that is related to Science, Technology, Engineering and/or Maths? |
| Atzīmējiet tikai vienu variantu.   |
| Strongly agree   |
| Rather agree   |
| Neither agree or disagree  |
| Rather disagree  |
| Strongly disagree  |
|  |
| nk you!  |
|  |

Uzņēmums Google nav šī satura autors un to neatbalsta.