

# POST QUESTIONNAIRES FOR 10-14-YEAR- OLD TEENS PARTICIPATING IN STEM ACTIVITIES

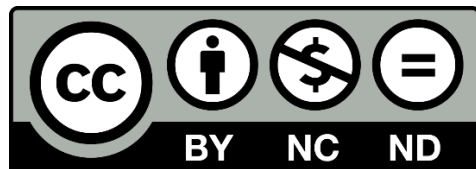
## POST QUESTIONNAIRES FOR TEENS PARTICIPATING IN STEM ACTIVITIES DESIGNED AND USED BY THOMAS MORE UNIVERSITY



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## POST-QUESTIONNAIRE 1

### QUESTIONNAIRE "SELF-EFFICACY IN STEM-ACTIVITIES"

ANSWER THE FOLLOWING QUESTIONS

1. What is your name? \_\_\_\_\_
2. Did the WiWeTeR-sessions fulfil your expectations? To which extent do you agree with the following statements? Place a cross.

	Totally disagree	Disagree	Agree	Totally agree
1. I have learned a lot during the WiWeTeR-sessions.				
2. I liked coming to the WiWeTeR -sessions.				
3. The different sessions were very interesting:				
- session 'ELECTRICITY'				
- SESSION 'CSI'				
- SESSION 'BUILDING BRIDGES'				
- SESSION 'MUSIC'				
- SESSION 'BIGGEST BUBBLE'				
- SESSION 'PROGRAMMING WITH ARDUINO'				
4. I HAD ENOUGH SPACE TO DESIGN AND DISCOVER.				
5. THE EDUCATORS HAD ENOUGH BACKGROUND INFORMATION.				
6. I WILL LOOK UP MORE INFORMATION ABOUT ONE OR MORE SESSIONS.				
7. I AM SATISFIED WITH THE ORGANISATION OF THE SESSIONS.				
8. I WILL FOLLOW ANOTHER STEM-ACADEMY, IF POSSIBLE.				



After the sessions... To what extent do you think you can perform/execute what is described below?

	I am certain that I can't do that	I think that I can't do that	I think I can do that	I am certain that I can do that.
How confident are you that you are able to define a problem that needs to be solved?				
How confident are you that you are able to plan and carry out investigations?				
How confident are you that you are able to program (f.e. Scratch, Arduino ...)?				
How confident are you that you will be successful carrying out an experiment or build a new thing during the sessions?				
How confident are you that you can apply mathematics in daily life problems or in a context different from the class?				
How confident are you that you are able to find evidence that helps you reasoning a phenomenon?				
How confident are you that you are able to build explanations about a phenomenon of design solutions for a problem?				
How confident are you that you are able to obtain, evaluate and communicate information?				





To what extent can you assess yourself?

	Totally disagree	Disagree	Agree	Totally agree
When something doesn't work, I want to find the reason it doesn't work.				
I can work in group.				
I can say what my strong and weak points are.				
I can predict that I can successfully complete a certain task.				
I can predict for which tasks I will need help from others.				
I want to learn more about why things happen.				
I want to learn more about how to invent, design or build things.				

## THE USE OF THE STEAM-SLICK CARDS

### 1. What has changed your opinion about your capacities in doing STEM?

- Doing science in a different way than at school
- Doing science together with my parent
- Experiencing success during the activity
- Doing science with different and new materials
- The chance to create new things
- No, my opinion did not changed
- Other: \_\_\_\_\_





**2. How often did you use the STEAM-slick cards to talk about the sessions with your parents?**

- once                       3 times                       5 times                       Never  
 twice                       4 times                       6 times

**3. What do you think about the use of STEAM-slick cards?**

- Nice to talk about STEM with my parents  
 Fascinating to learn what my parents know about the topic  
 Not nice, I did it because we had to  
 Boring  
 Other: \_\_\_\_\_

**Thank you for filling in the questionnaire! See you next time!**



## POST-QUESTIONNAIRE 2

### QUESTIONNAIRE "SELF-EFFICACY IN STEM-ACTIVITIES"

#### ANSWER THE FOLLOWING QUESTIONS

1. What is your name? \_\_\_\_\_
2. Did the WiWeTeR-sessions fulfil your expectations? To which extent do you agree with the following statements? Place a cross.

	Totally disagree	Disagree	Agree	Totally agree
1. I have learned a lot during the WiWeTeR-sessions.				
2. I liked coming to the WiWeTeR -sessions.				
3. The different sessions were very interesting:				
- session 'YTONG'				
- SESSION 'SECRET AGENT'				
- SESSION 'CODE'				
- SESSION 'BIBBERBOT'				
- SESSION 'ELECTROMAGNET'				
- SESSION 'STEW'				
4. <i>I HAD ENOUGH SPACE TO DESIGN AND DISCOVER.</i>				
5. <i>THE EDUCATORS HAD ENOUGH BACKGROUND INFORMATION.</i>				
6. <i>I WILL LOOK UP MORE INFORMATION ABOUT ONE OR MORE SESSIONS.</i>				
7. <i>I AM SATISFIED WITH THE ORGANISATION OF THE SESSIONS.</i>				
8. <i>I WILL FOLLOW ANOTHER STEM-ACADEMY, IF POSSIBLE.</i>				



After the sessions... To what extent do you think you can perform/execute what is described below?

	I am certain that I can't do that	I think that I can't do that	I think I can do that	I am certain that I can do that.
How confident are you that you are able to define a problem that needs to be solved?				
How confident are you that you are able to plan and carry out investigations?				
How confident are you that you are able to program (f.e. Scratch, Arduino ...)?				
How confident are you that you will be successful carrying out an experiment or build a new thing during the sessions?				
How confident are you that you can apply mathematics in daily life problems or in a context different from the class?				
How confident are you that you are able to find evidence that helps you reasoning a phenomenon?				
How confident are you that you are able to build explanations about a phenomenon of design solutions for a problem?				
How confident are you that you are able to obtain, evaluate and communicate information?				





To what extent can you assess yourself?

	Totally disagree	Disagree	Agree	Totally agree
When something doesn't work, I want to find the reason it doesn't work.				
I can work in group.				
I can say what my strong and weak points are.				
I can predict that I can successfully complete a certain task.				
I can predict for which tasks I will need help from others.				
I want to learn more about why things happen.				
I want to learn more about how to invent, design or build things.				

### **THE USE OF THE STEAM-SLICK CARDS...**

#### **1. What has changed your opinion about your capacities in doing STEM?**

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- Doing science together with my parent
- Experiencing success during the activity
- Doing science with different and new materials
- The chance to create new things
- No, my opinion did not changed
- Other: \_\_\_\_\_





**2. How often did you use the STEAM-slick cards to talk about the sessions with your parents?**

- once                       3 times                       5 times                       Never  
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**3. What do you think about the use of STEAM-slick cards?**

- Nice to talk about STEM with my parents  
 Fascinating to learn what my parents know about the topic  
 Not nice, I did it because we had to  
 Boring  
 Other: \_\_\_\_\_

**Thank you for filling in the questionnaire! See you next time!**



## POST-Questionnaire 3

### QUESTIONNAIRE “SELF-EFFICACY IN STEM-ACTIVITIES”

**ANSWER THE FOLLOWING QUESTIONS**

1. What is your name? \_\_\_\_\_
2. Did the WiWeTeR-sessions fulfil your expectations? To which extent do you agree with the following statements? Place a cross.

	Totally disagree	Disagree	Agree	Totally agree
1. I have learned a lot during the WiWeTeR-sessions.				
2. I liked coming to the WiWeTeR -sessions.				
3. The different sessions were very interesting:				
- session ‘ <b>RELISH OF SCIENCE</b> ’				
- <b>SESSION ‘BLOCKLY &amp; OZOBOT’</b>				
- <b>SESSION ‘1000 BOMBS AND GRENADES’</b>				
- <b>SESSION ‘BUMBLEBEES’</b>				
- <b>SESSION ‘STACK ON COLOR’</b>				
4. <b>I HAD ENOUGH SPACE TO DESIGN AND DISCOVER.</b>				
5. <b>THE EDUCATORS HAD ENOUGH BACKGROUND INFORMATION.</b>				
6. <b>I WILL LOOK UP MORE INFORMATION ABOUT ONE OR MORE SESSIONS.</b>				
7. <b>I AM SATISFIED WITH THE ORGANISATION OF THE SESSIONS.</b>				
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How confident are you that you will be successful carrying out an experiment or build a new thing during the sessions?				
How confident are you that you can apply mathematics in daily life problems or in a context different from the class?				
How confident are you that you are able to find evidence that helps you reasoning a phenomenon?				
How confident are you that you are able to build explanations about a phenomenon of design solutions for a problem?				
How confident are you that you are able to obtain, evaluate and communicate information?				

To what extent can you assess yourself?

	Totally disagree	Disagree	Agree	Totally agree
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I can work in group.				
I can say what my strong and weak points are.				
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- Doing science with different and new materials
- The chance to create new things
- No, my opinion did not changed
- Other: \_\_\_\_\_



**2. How often did you use the STEAM-slick cards to talk about the sessions with your parents?**

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**3. What do you think about the use of STEAM-slick cards?**

- Nice to talk about STEM with my parents  
 Fascinating to learn what my parents know about the topic  
 Not nice, I did it because we had to  
 Boring  
 Other: \_\_\_\_\_

**Thank you for filling in the questionnaire! See you next time!**

