


**TITLE: micro:bit – output Smiley**

LEARNING SCENARIO	
<b>School:</b>	<b>Duration (minutes):</b> 90
<b>Teacher:</b>	<b>Students age:</b> 11

<b>Essential Idea:</b>	<b>micro:bit – output Smiley accompanied by a sound</b>
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**Topics:**

- Pupils begin to understand how coding is always a mathematical problem-solving exercise and how it can lead to ethical issues.

**Aims:**

- Pupils design and program software that prints values that include numbers, icons or texts.

**Outcomes:**

- Pupils check the correctness of the code and detect and correct errors.
- Pupils learn to predict outcomes, test and explain existing programs.

**Work forms:**

- individual work
- work in pairs
- group work

**Methods:**

- presentation
- discussion
- interactive exercise



## ARTICULATION

### Course of action (duration, minutes)

### INTRODUCTION

The teacher explains and starts a discussion with the pupils:

What is a micro: bit?

What can we do with the micro: bit?

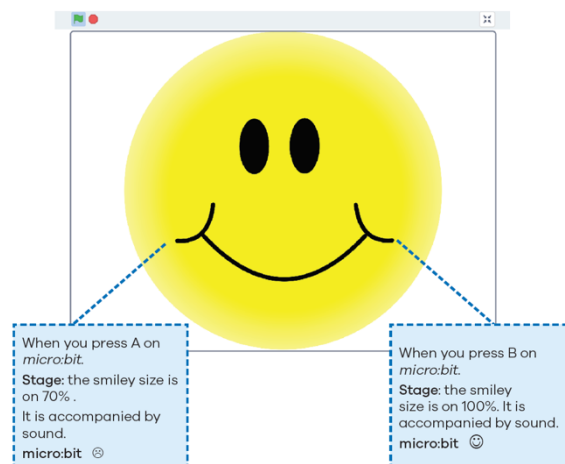
How can we create a program for the micro: bit?

How do we transfer a program from the computer to the micro: bit?

### MAIN PART

#### Topics for discussion

How we can solve a following task:



#### Task

1. Load a sprite from your computer (beware of copyright).
2. Drag the when button pressed the block and choose A.
3. Drag the display block and click on the areas in the drop-down menu to show the sad smiley.
4. Drag the start sound block and choose 'Drum Boing'. Drag the sdt size to block and type 70%.
5. Connect the blocks in the correct order so that by pressing B you can see the smiley on the micro:bit playing the Cheer sound and set its size on the stage to 100%.

#### Exercise

Design and create a program for micro: bit.

When you press the A button, it executes the first set of commands.

When you press button B, it executes the second set of commands.



The teacher explains and gives instructions on how to solve tasks.  
Pupils solve tasks and present their solutions.  
Pupils and teachers discuss and evaluate the presented solutions.

### CONCLUSION

Button A and button B are two different triggers for executing commands.

#### **Methods**

*presentation*  
*discussion*  
*work on the text*  
*graphic work*  
*interactive exercise /simulation on the computer*

#### **Work forms**

*individual work*  
*work in pairs*  
*group work*  
*frontal work*

#### **Material:**

- computer, micro:bit, Make Code editor: <https://makecode.microbit.org/>

#### **Literature**

- <https://microbit.org>

### PERSONAL OBSERVATIONS, COMMENTS AND NOTES