

TECHNOLOGY



Be my robot

BOX NOTICE

Name of the activity	Be my Robot
Activity duration	1,5 h
Material needed	Be my Robot box, scissors, pencils(crayons), A4 sheet of paper , glue
Number of pupils involved (per box)	Two pupils per box

FOR SEQUENCE 1

Step 1: Preparation

Ask the students what prior knowledge they have of computers, programs, coding, etc. Give them time to think about it and formulate their thoughts. Make sure that all the students have had a chance to express themselves.

Introduce the robots from Movie Robots (2005)

<https://www.youtube.com/watch?v=zyLI71Z0RF4>

Conduct a discussion about what pupils saw, what these robots can do, what they were made of, how they move, etc.

Step 2: Discover the box

Pupils discover the content of the box. Give them time to think about what is coming next.



Co-funded by
the European Union

MY BOX OF STEAM (project nr. 2022-2-EE01-KA220-SCH-000099273) is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

TECHNOLOGY

Step 3: Storytelling

Read the story Be My Robot.

Lead a discussion about what pupils heard, what this robot looks like, and what it was made of.

After the discussion, give pupils a worksheet from the box. Let them think about questions they see on the paper:

- How is your robot?
- Does it have an insect or human form?
- What does your robot do? Is he just there to play with you, or does it have a job (working in a hospital, for example)?
- A robot that endures heavy work, even work on Mars? Is it capable of painting and playing an instrument?

And give them time to draw their own robots.

Step 4: Working with the symbols

When the table is completed, go and verify the results. If each table is correct, ask the pupils to glue the symbols.

Step 5: Practice activity. First meeting with the code

Ask pupils to put their hands on the table, show the first symbol and say START. Pupils follow the code and move their hands as the code shows.

Comment: Do it twice or until nobody makes mistakes. Or show another code and practice it.

Step 6: Practice activity. First meeting with the code

There must be enough space for the “robots” to move hands and for pupils to sit.



Co-funded by
the European Union

MY BOX OF STEAM (project nr. 2022-2-EE01-KA220-SCH-000099273) is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

TECHNOLOGY

Prepare Your own codes with symbols from the box or use the example from the document „Creation of elements“.

Step 7: Practice activity. Make your own symbols

Pupils take the sheet of paper from the envelope and draw their own symbols, following the example.

Pupils work in pairs. Let them decide who draws the symbols for the left hand and who for the right hand.

Step 8: Practice activity. Coding the Robot

The students, in pairs, discuss and design their own symbols for hand gymnastics. Then, each pupil writes their own code. The codes can vary depending on their capability, but there should be at least five symbols in a row.

There must be enough space for the “robot” to move hands and for students to sit. The robot must be told when to start by saying “start.” Other commands must be performed in silence.

POTENTIAL ISSUES

When robots start moving, it can be very noisy. It is better to supervise pupils not to start their "robots" at the same time.



Co-funded by
the European Union

MY BOX OF STEAM (project nr. 2022-2-EE01-KA220-SCH-000099273) is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

TECHNOLOGY

FOR SEQUENCE 2

Disclaimer: The previous steps are the same as in Sequence 1

Step 3: Correct definitions for words used during the activity

Program - a series of instructions that can be put into a computer in order to make it perform an operation.

Programmer - a person whose job is to produce computer programs.

Code - a language used to program (= give instructions to) computers.

Robot - a machine controlled by a computer that is used to perform jobs automatically.

Step 4 Searching information on the Internet, making posters

For this step, you will need computers connected to the Internet. Ask the students to use the correct words to search for results and give them examples of how to obtain information quickly.

Example of Question: "The Most In-Demand Programming Languages"

NB! Quotation marks will give a quicker answer.

Ask them to be critical of the results.

You can search for information about different programming languages, programming companies, famous programmers, etc. The themes can vary.

To create the posters, students can use infographic tools like Canva.

Step 5: Storytelling

It's best if the students read the story themselves. Give them instructions to make comments from the end of the story. Let them think about how the robot guided the girl out of the forest.



Co-funded by
the European Union

MY BOX OF STEAM (project nr. 2022-2-EE01-KA220-SCH-000099273) is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

TECHNOLOGY

Step 6: Working with the symbols. Sequences.

First, You can give some examples of sequences

For example, the sequence for making raspberry jam:

1. Pick the raspberries.
2. Put the raspberries in a pot.
3. Add the required amount of sugar.
4. Let stand at room temperature.
5. When the raspberries have released their juice, boil for 15-20 minutes.

The pupils can imagine the exit from the forest to create sequences. Let them draw the exit first and ask them to think about the distance as well.

When the students open the envelope containing the symbols, ask them to think about their meaning. Then, give them a blank sheet of paper, let them stick all the symbols on it, and write the meaning of each symbol next to it.

Once they have done this, ask the students to use their symbols to create the code explaining how the robot guided the girl out of the forest. This code should be based on the drawing they made earlier.

Step 6: Presentation of the sequences

The pupils, in pairs, present their drawings and the sequences based on the drawings and show how the code works.



Co-funded by
the European Union

MY BOX OF STEAM (project nr. 2022-2-EE01-KA220-SCH-000099273) is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.