



ARTIE: Artificial Intelligence in Education - challenges and opportunities of the new era:
 development of a new curriculum, guide for educators and online course for students
 Project co-funded by European Union under Erasmus+ Programme, 2020-1-HR01-KA201-077800

TITLE: Let's chat!

LEARNING SCENARIO

School:	Duration (minutes):	90
Teacher:	Students age:	10+

Essential Idea:

Create a chatbot that can answer questions about a topic of your choice.

Topics:

- designing, creating and writing in a visual programming language: ideas, stories and solutions to problems of varied complexity
- experimenting with AI
- civilization related implications of AI

Aims:

- design, create and test simple chatbot
- understand the concept of variable, define and use variable it in their programs

Outcomes:

- creating and testing simple program that present chatbot

Work forms:

- individual work, work in pairs, group work

Methods:

- presentation, talk, discussion, interactive exercise

ARTICULATION

The course of action (duration, minutes)

INTRODUCTION





The teacher leads a conversation in which students repeat the commands and skills of working in Scratch and skills to train a model by Teachable Machine.

Can we talk with our computers? How?
Do you use chatbots? How and where?

Try chatbot:

<http://talktothetrex.com> is a good example of the bot. Try to get ideas of how to create your bot.

A chatbot is software that simulates human-like conversations with users via text messages on chat. Its key task is to help users by providing answers to their questions.

Announcement of the goal of the lesson:

Today we are going to create a chatbot using Scratch and Teachable Machine.

MAIN PART

The topic for discussion:

Decide on a topic for your chatbot. Choose something that you know well enough to be able to answer questions about. It could be a place, animal, history, program language, etc.

Think of five things someone might ask about your topic. e.g. for your town, this could be:

- What do owls eat?
- Where in the world do owls live?
- How long do owls live?
- What types of owls are there?
- How big do owls grow?

Instructions (steps):

- Go to <https://machinelearningforkids.co.uk/> in a web browser.
- Click on "Get started".
- Click on "Try it now".
- Click on "Projects" on the top menu bar.
- Click the "+ Add a new project" button.
- Name your project and set it to learn how to recognize "text". Click the "Create" button.
- Click on your new project in the projects list.
- Click the Train button.
- Click the "+ Add new label" button.
- Type in one word that sums up the first of your things from Step 2, then click Add. We used "food" to sum up questions like "What do owls eat?"
- Do that again for all of the things in your list from Step 2. The words you choose don't matter, as long as you understand what they mean.
- Click the "+ Add example" button in one of the buckets.
- Type in an example of how someone might ask that question.
- Click "Add".
- Repeat until you've got five examples of how to ask that question.
- Repeat until you've got at least five examples in every bucket.
- Click on the "< Back to project" link
- Click the "Learn & Test" button



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- Click the “Train new machine learning model” button. As long as you’ve collected enough examples, the computer should start to learn how to recognize questions from the examples you’ve given to it.
- Wait for the training to complete. This might take a couple of minutes. It’s finished once you see the “status” change to “Available”.
- Click the “< Back to project” link.
- Click the “Make” button.
- Click “Scratch 3”.
- Click the “Open in Scratch” button.
- Open the Owls project template. Click Project templates and find Owls in the list of templates.
- Create this little snippet of a script but don't attach it to anything yet. Make sure you choose "owl says" for the orange block.
- Duplicate it four times and join them all together. Right-click on it, and click “Duplicate”.
- Fill in each copy of the block. Drag the label for one of your questions into the top space, and type the answer to the question into the bottom space.
- Drag this new block into the Green Flag block prepared for you. Remove the “Sorry. I haven't been taught anything yet.” block and replace it with your new chunk of the script.
- Draw your chatbot. You need to draw your character. If you provide different costumes, you can animate your character while it talks.
- Test your chatbot! Click the green flag and try asking a question.
- Present your project to the students in the class. Discuss. Peer evaluation.
- Save your work to the class e-portfolio.

CONCLUSION

A chatbot is software that simulates human-like conversations with users via text messages on chat. Its key task is to help users by providing answers to their questions.
We can create a chatbot using Scratch and Teachable Machine.

Methods

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

Work forms

individual work
work in pairs
group work
frontal work

interview
demonstration
role playing

Material

- Scratch
- <https://mitmedialab.github.io/prg-extension-boilerplate/create/>
- <https://teachablemachine.withgoogle.com>





Literature

- <https://dancingwithai.media.mit.edu>

PERSONAL OBSERVATIONS, COMMENTS AND NOTES

