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 recycle together!

LEARNING SCENARIO	
School:	***Duration (minutes):*** 90
Teacher:	***Students age:*** 10

Essential Idea:	**Let's create an AI project with Scratch using the Teachable Machine train model.**

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 and create simple programs
- understand the concept of variable, define and use variable it in their programs
- test models related to recognition

Outcomes:

- teaching a model to recognize glass vs. paper vs. plastic in your webcam
- creating and testing simple program that use Teachable Machine model and Video Sensing Extension

Work forms:

- individual work, work in pairs, group work

Methods:

- presentation, talk, discussion, interactive exercise

ARTICULATION
The course of action (duration, minutes)
INTRODUCTION

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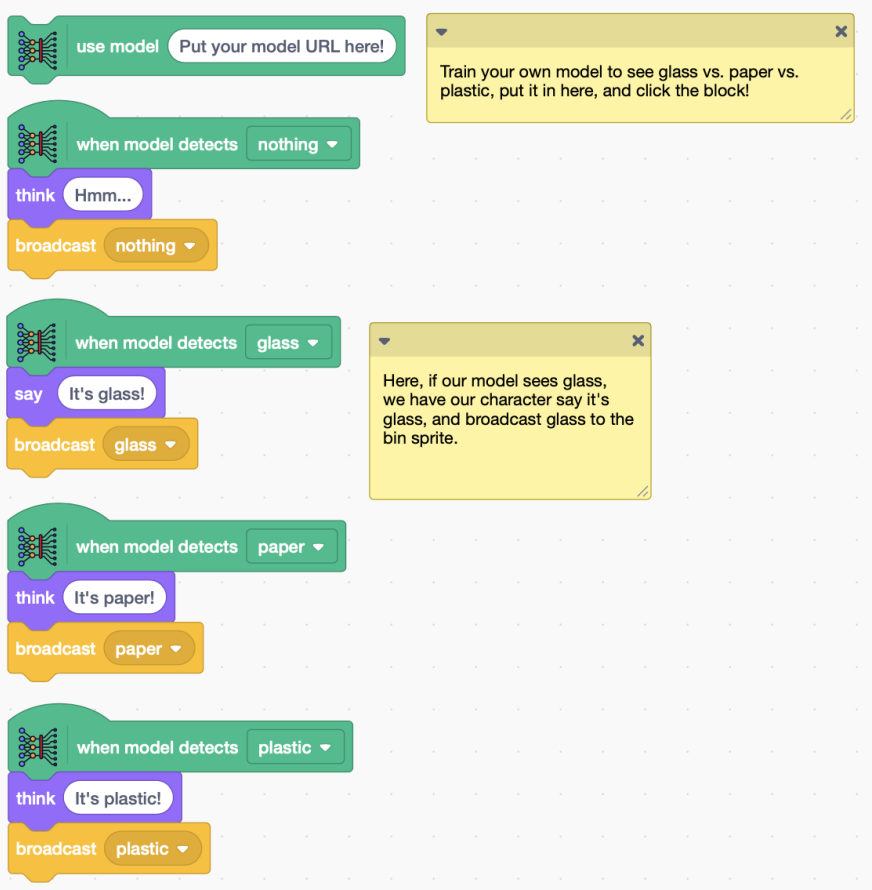
The teacher leads a conversation in which students revise the commands and skills of working in Scratch and skills to train a model by Teachable Machine.

Announcement of the goal of the lesson:
Careful waste management is one of the necessary habits needed by every inhabitant of the Earth.
Today we are going to create a recycling assistant using Scratch and Teachable Machine.

MAIN PART

The teacher shows, explains and guides the students in the first practical task:

1. Go to: https://teachablemachine.withgoogle.com
2. Teach a model to recognize glass vs. paper vs. plastic in your webcam.
3. Create a New project in Scratch.
4. Add Video Sensing Extension.
5. Add a sprite (assistant) and associated blocks:
6. Copy and paste the URL of your model.



7. Add a new sprite and associated blocks:

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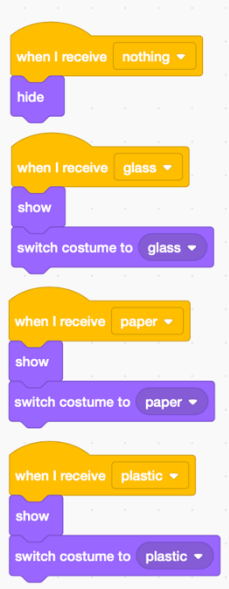

Based on the previous example, students design their practical work individually and/or in pairs:

Interactive exercise 2:

1. Go to: https://teachablemachine.withgoogle.com
2. Teach a model to recognize 2 or 3 objects in your webcam.
3. Create a New project in Scratch.
4. Add Video Sensing Extension.
5. Create your project.
6. Test and save your project.
7. Present your project to the students in the class. Discuss. Peer evaluation.
8. Save your work to the class e-portfolio.

CONCLUSION

We can build and use a recycling assistant using Scratch and Teachable Machine.

Methods

presentation
talk/discussion
work on the text
graphic work
interview
demonstration
role playing
interactive exercise /simulation on the computer

Work forms

individual work
work in pairs
group work
frontal work

Material

- Scratch

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

Literature

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

PERSONAL OBSERVATIONS, COMMENTS AND NOTES