

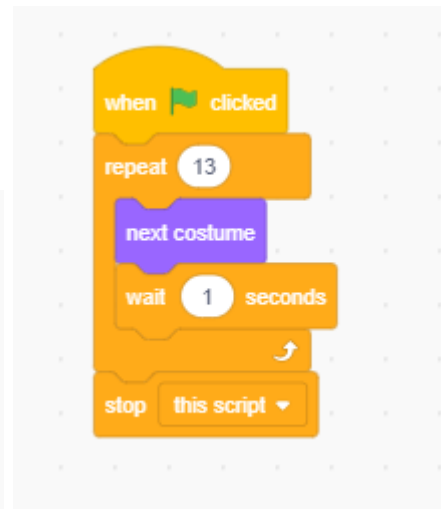
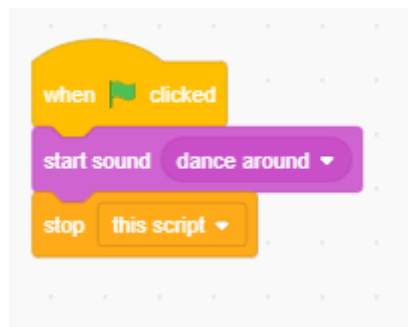
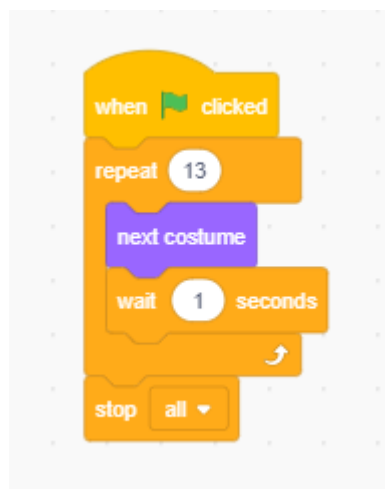
SCENARIO	
Title	Animation with sound
Summary	During the class, students will learn about the sounds and functions of the Scratch environment. The final result will be an animation with sound.
Author/s	Edyta Michaluk Date: 6/11/2019

Didactic objectives	
General objectives: - creating a plan / algorithm - moving the algorithm to the Scratch environment - creating animations with sound Detailed objectives: - sound recording and editing - creating sprites and costumes - inserting sounds into the script	
Physics <input type="checkbox"/> Mathematics <input type="checkbox"/> Information Technology <input checked="" type="checkbox"/> Robotics <input type="checkbox"/> Programming <input checked="" type="checkbox"/>	
Education Level: 10-12 years <input checked="" type="checkbox"/> 12-14 years <input type="checkbox"/>	
Problem Statement	
How to record sound and how to edit it? Is it possible to combine animation with sound?	
BOM (Bill Of Materials needed)	
- computer for each student - Scratch environment installed - multimedia board with a projector for presentation - sheets of paper, rulers, pencils - Internet access - speakers, microphone	
Activity description	
The scenario is planned for 3 lessons. Course of classes: 1. Organization in the classroom, assigning computer workstations to students, creating a folder on the computer disk for saving projects named student's name_class, for example Adam_IIA. 2. Overview of the plan. Planning animations to be performed together - a dance of two sprites. Connecting a set of speakers (headphones) and a microphone to the computer.	

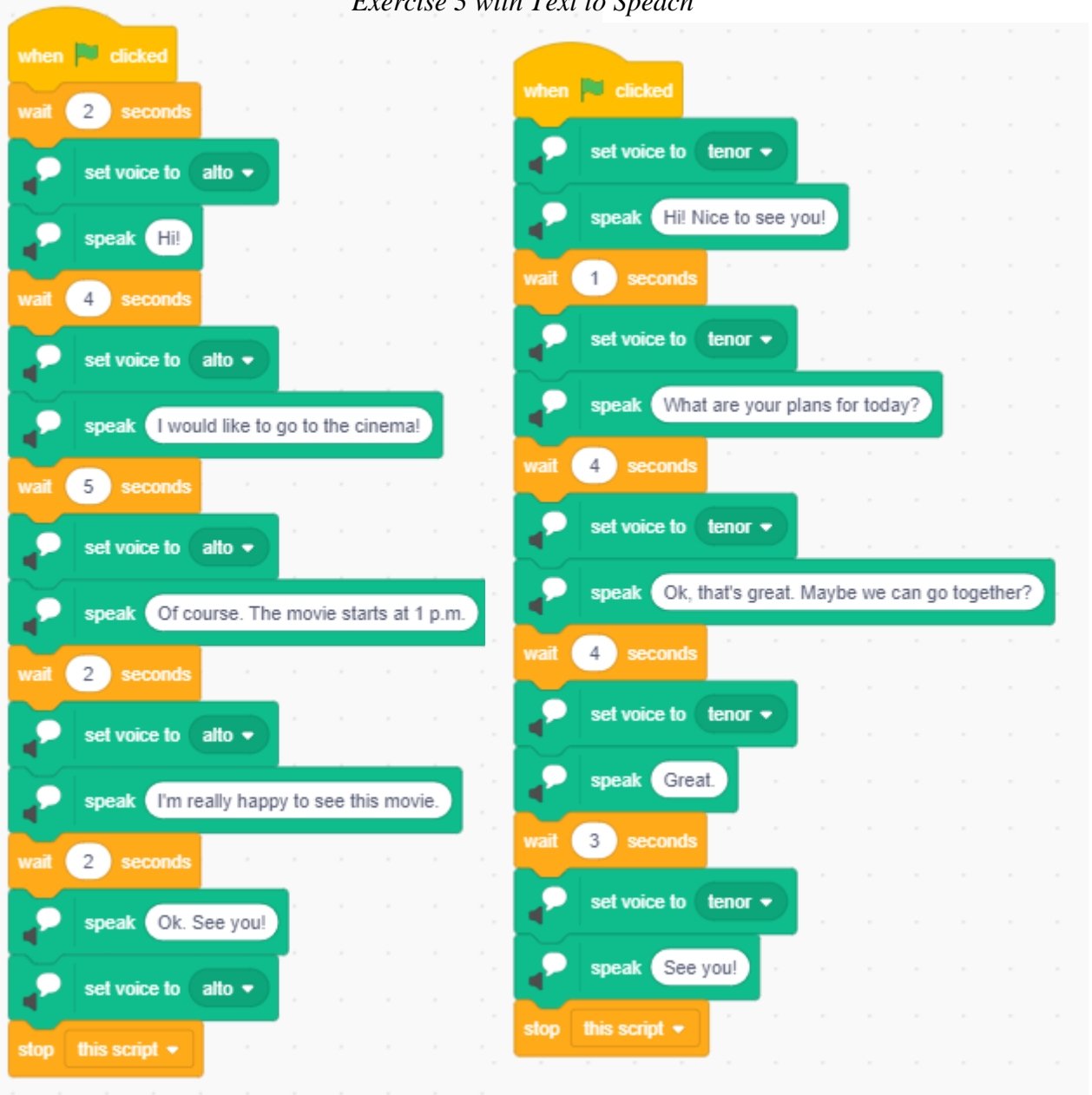
3. Exercise 1. Animation with two sprites and a default sound
 - a. adding two sprites - Cassy Dance, Annie Dance,
 - b. choosing any background for sprites,,
 - c. creating two algorithms with changing the costumes for sprites,
 - d. go to the Sounds tab, discuss the tools from the tab, try out functions,
 - e. choosing the sound from the available in the application, for example Dance around,
 - f. creating an algorithm for the sound,
 - g. save the project as project1.
4. Exercise 2. Record your own sound in Scratch - practice in pairs.
Students should record a dialogue between two sprites and save the records. Each sprite should have five recordings. Student should edit recordings, cut them, change the volume, change the speed of speech, etc.
5. Exercise 3. Inserting recorded sounds into the algorithm.
 - a. selection background,
 - b. choosing two sprites - the ability to create your own,
 - c. creating algorithms using previously recorded sounds, pay attention to the number of seconds at the wait ... s command according to the length of the recordings,
 - d. presenting for students Text to Speech tool and the possibility of creating a dialogue also using this tool,
 - e. the project should be saved as a project2.
6. Summary of the classes. Self-evaluation of students.

Resources

Exercise 1.



Exercise 3 with Text to Speech



The image shows two Scratch scripts side-by-side, both starting with a 'when clicked' event. The left script consists of 14 blocks: 'when clicked', 'wait 2 seconds', 'set voice to alto', 'speak Hi!', 'wait 4 seconds', 'set voice to alto', 'speak I would like to go to the cinema!', 'wait 5 seconds', 'set voice to alto', 'speak Of course. The movie starts at 1 p.m.', 'wait 2 seconds', 'set voice to alto', 'speak I'm really happy to see this movie.', 'wait 2 seconds', 'speak Ok. See you!', 'set voice to alto', and 'stop this script'. The right script consists of 14 blocks: 'when clicked', 'set voice to tenor', 'speak Hi! Nice to see you!', 'wait 1 seconds', 'set voice to tenor', 'speak What are your plans for today?', 'wait 4 seconds', 'set voice to tenor', 'speak Ok, that's great. Maybe we can go together?', 'wait 4 seconds', 'set voice to tenor', 'speak Great.', 'wait 3 seconds', 'set voice to tenor', 'speak See you!', and 'stop this script'.

Students' Evaluation

Evaluation tools:

- observation of students' work and their activities,
- students' self-assessment - what I have learned, what I can, what I would like to know, what algorithm I can create,
- program feasibility.

„InnoExperiment – Innovative Approach to Teaching through Experiment”

Project Leader: Zespół Szkolno – Przedszkolny w Goniądzu (ZSP)

Bibliography

<https://scratch.mit.edu/>

R. Kulesza, S. Langa, D. Leśniakiewicz, P. Pełka „Młodzi giganci programowania. Scratch” wyd. Helion

Scalability

An extension of the exercises may be a combination of the dialogue created thanks to the recordings with other activities, e.g. sprites could change their position on the stage using the Motion tools or Costumes (animation).

More information

Scenario was created as part of the project "InnoExperiment - Innovative Approach to Teaching through Experiment" carried out under Key Action 2. Erasmus +. The scenario will be made available on the project platform.

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