Learning Scenario

Workshop 1: GBL and unplugged activities

Learning Scenario Title	Rhythmic and dance structures / Folk dance selected from the native region
Course/ Grade	Physical Education 4th grade of primary school
Learning Outcomes	***Learning outcomes focused on general subjects*** • Develop nerve-muscular motion control with an emphasis on the development of coordination, flexibility and rhythm • Dance homeland folk dance „Crikvenički tanac" • Identify the cultural heritage of their homeland ***Learning outcomes focused on algorithmic thinking*** • Realize the repetitive parts of the dance • Link the melodic parts of a tune with specified parts of the dance • Convert the structural parts of the dance into a sequence of commands • Display the dance structures in the proper order using coded labels
Aim, Tasks and Short Description of Activities	Learn a few dance structures of Crikvenica's traditional dance by watching a YouTube video and using algorithmic thinking. Students will first listen to the music background by analysing melody and rhythm of the tune. Then the parts of the song will be labelled with the agreed marks. The following step is learning of the dance structures and finally labelling the entire dance performance with the agreed marks in a way that each dance structure is connected with the corresponding part of the music background. If there is time left, the students will create a new dance with different order of dance structures for the same music background with the help of coded characters. Students will be introduced to the term algorithm/loop as a series of commands that repeat a particular number of times.
Keywords	Loop, dance structure, repeat, rythm, algorithm, command, folk dance
Correlation and Interdisciplinarity	Physical Education, Music, Informatics
Duration of Activities	60 minutes
Learning and Teaching Strategy and Methods	Active learning method, collaborative learning, problem solving, using dialog, watching and demonstration methods, solving worksheet, practical work, dance, dramatization
Teaching Forms	Frontal teaching Work in pairs Group work

Tools	-
Resources/materials for the Teacher	Youtube, Canva, photos of the dance, ingredients and tools for preparing a sandwich
Resources/materials for the Students	A4 paper sheet for introductory part, worksheets, felt pen, pencil

Teaching summary		Duration
	Motivation-Introduction The teacher demonstrates an already prepared sandwich, which consists of a bun in which the ingredients have been put according to the following order: a layer of cucumbers, a layer of cheese, a layer of ham, a layer of cheese, and a layer of tomatoes. The students are divided into four groups consisting of four members. Each group has to design an order of commands within 5 minutes so that the teacher/robot can make a sandwich identical to the demonstrated one (unsliced bun, cheese, ham, vegetables in one piece, which will require certain pre-activities in order to prepare the sandwich). Each group writes down a set of commands and one student from the group reads aloud the order of commands. The teacher/robot carries out the commands through dramatization, which leads to a more or less successful goal. The winner is the group that creates the most precise set of commands for making a sandwich. After the successfully competed task students are introduced to the term „algorithm" as a series of commands leading to the solution. The students discover the meaning of the word „algorithm" on a concrete example. They notice an organised conduction of a series of commands in order to achieve the goal. Moreover, they realise that some commands are repeated (cheese) – the term „loop".	15 min
	Implementation A lesson of the dance structures of the traditional dance „Crikvenički tanac" is announced. The students first listen to the music background of the dance from Youtube (0.08 – 2.30). They notice rhythmical-melodic recurring patterns (loops), and also the oscillation in the tempo. The first task is to recognize the pattern of the recurring change of the tempo. When the tempo is slower, the students have to slowly walk around the hall, and when the tempo quickens, the students jump. They notice that the two kinds of tempo are alternatively constantly repeated and are therefore labelled with the letter „B" (quick part) and with the letter „P" (a transition between the two quicker parts). With the repeated listening it can be noticed that each of the two tempos is repeated five times, usually one after the other starting with the „P" part.	

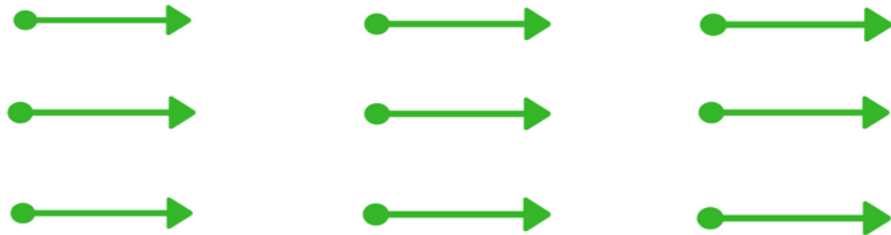|		
	The students are divided into eight pairs followed by learning dance structures watching a video from Youtube. The teacher demonstrates and helps the students if needed. Students learn part by part of the dance in order as shown in the video. The dance consists of ten shorter parts, five quicker marked with the letter „B" and five parts of a slower tempo marked with the letter „P" during which six simpler dance structures alternate. The students immediately notice that some dance structures repeat. While rehearsing all six dance structures, they notice that three dance structures belong to the „P" part, and three to the „B" part. One pair of students demonstrates three dance structures from the „P" part which are marked as „P1", „P2" and „P3". The same is repeated with the „B" part.	35 min
	Reflection and evaluation The students work in existing pairs. Every pair gets worksheets, in which the labels of all six dance structures are stated and a small photo is put next to each structure as additional help in recognition. While watching the video from YouTube the students have to write down the exact order of dance structures/commands (algorithm) for the set dance. The students who conduct this activity faster get a task to create a new algorithm of commands with the existing labels („P1", „P2", „P3", „B1", „B2", „B3"), for the same music background, and to demonstrate it through dance.	10 min
Annexes	Worksheets, photos of dance structures with labels	
Examples and game references	Video „Crikvenički tanci" (0.08 – 2.30). Available online: https://www.youtube.com/watch?v=PPNbH1shbJI (30.7.2018) Photos of dance structures – https://www.google.hr/search?q=tradicijski+plesovi&hl=hr&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjDn7G178TaAhXMDOwKHYzlApAQ_AUICigB&biw=1280&bih=650 (30.7.2018)	

„Crikvenički tanac" dance

Task - Convert the structural parts of the dance into a sequence of commands using the given labels (P1, P2, P3, B1, B2, B3)

Algorithm – „Crikvenički tanac" dance

FAST PART 1

B1

FAST PART 2

B2

FAST PART 3

B3

TRANSITION 1

P1

TRANSITION 2

P2

TRANSITION 3

P3

Algorithm – „Crikvenički tanac" dance

P 1 ⟶ B 1 ⟶ P 1 ⟶

B 2 ⟶ P 2 ⟶ B 1 ⟶

P 3 ⟶ B 3 ⟶ P 3 ⟶

B 3