

LESSON 5

Dance Party Algorithms

40 minutes

Pattern Play Without Devices

WHAT THIS LESSON DOES

In this lesson, you'll explore loops through dance coding. Start by revising previous dance sequences, then learn how loops repeat instructions to make code efficient. Follow step-by-step activities to model loops and create your own dance sequences.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Understand the concept of loops as a method to repeat instructions efficiently in coding.
- Apply loops to create and perform dance sequences with repeated steps.
- Develop problem-solving skills by designing original dance routines using loops.
- Collaborate effectively in groups to plan and present creative coding projects.
- Recognise the practical applications of loops in various contexts beyond dance.

BEFORE THE LESSON

- This is unplugged: pupils need no devices. Clear floor space so everyone has room to move safely.
- Have paper and markers ready for the group planning in step 4, one set per group of three or four.
- Have a simple dance sequence ready to display on the board, and the Random Dance Generator open on the classroom screen for step 3.

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HOW THE LESSON RUNS

Introduction

Revise and Model Loops

Loop Dance Challenge

Group Dance Creation

Showcase

Loops in the Real World

TEACHING MOVES

- 1. Introduction. Anchor loops to something they know: repeating a chorus in a song. Clear the floor space now before pupils are on their feet and excited.
- 2. Revise and Model Loops. Model the looped part physically and slowly, counting each repetition out loud. Show that Loop 3 times means the same moves happen three times, not the whole sequence.
- 3. Loop Dance Challenge. Read the generated sequence aloud and demonstrate it yourself first. Have pupils count repetitions out loud as they follow, slow pace first then steady.
- 4. Group Dance Creation. Hold each group to exactly four moves with at least one loop, and insist they write clearly how many times the loop repeats. Keep the ten to fifteen minutes tight.
- 5. Showcase. Ask each group to point out where their loop is before they perform. Keep the closing discussion spoken and quick: which part repeated, and why the loop helped.
- 6. Loops in the Real World. Name concrete examples they will recognise: a robot vacuum checking for dirt, a game character taking each walking step. Link it straight back to their own dances.

WHAT TO WATCH FOR

- Pupils think a loop repeats the whole sequence rather than only the moves selected inside it. Perform a sequence with one move before the loop, like Jump then Loop the clap and spin. Show clearly that the jump happens once and only the looped part repeats.
- Pupils lose count during a loop and stop after the wrong number of repetitions. Have the whole class count the repetitions aloud together as they move, so the number is impossible to miss.

DIFFERENTIATION

- Emerging: Pair a pupil who is unsure with a confident partner in their group and give them the job of counting the loop out loud.
- Developing: Ask them to point to exactly which moves sit inside their loop and say how many times it repeats before they perform.
- Proficient: Challenge them to add a second loop with a different repeat count, or to explain to another group how their loop shortened the code.