

Animating Characters: Moving and Changing Costumes

40 minutes

Creative Coding Challenges

WHAT THIS LESSON DOES

Get ready to create a lively dance animation! Follow simple steps to make a character dance on stage by changing costumes every second. By the end, you'll have your own exciting dance party animation to share!

WHAT STUDENTS SHOULD BE ABLE TO DO

- Understand how to add characters and backgrounds to a project.
- Learn to change character costumes to create animation.
- Master the use of loops to repeat animations continuously.
- Control the speed of costume changes to create rhythmic dance moves.
- Develop skills to animate multiple characters simultaneously.

BEFORE THE LESSON

- Confirm scratch.mit.edu loads and Create opens on pupil devices through the school filter.
- One charged device per pupil or pair, ready to use in the browser.

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HOW THE LESSON RUNS

Introduction
Create a Scratch Project
Add your Character
Set the Scene
Changing Costumes
Repeat the Dance
Control the Speed of the Dance
Test the Animation
Wrap Up

TEACHING MOVES

1. Introduction. Set the goal clearly: build a dance party animation where a character changes costume every second on a stage.
2. Create a Scratch Project. Get everyone into Create, then delete the cat using the bin on its sprite thumbnail before anything new is added.
3. Add your Character. Steer pupils to Choose a Sprite and pick Anina Dance, Ballerina, Cassy Dance or Champ99 so they have many costumes.
4. Set the Scene. Show Choose a Backdrop, find Concert together, and apply it so the stage looks ready before coding starts.
5. Changing Costumes. Open the Costumes tab first so they see the frames, then stack when green flag clicked with next costume under it.
6. Repeat the Dance. Wrap next costume in forever from Control. Stress the loop keeps dancing until they stop the project.
7. Control the Speed of the Dance. Place wait 1 second under next costume, still inside forever, so costume changes keep a steady rhythm.
8. Test the Animation. Run with the green flag. Early finishers add a second dancer and drag the script onto its sprite list thumbnail to copy it.
9. Wrap Up. Celebrate the dances. Remind them the same forever, next costume and wait pattern works with other characters and backdrops.

WHAT TO WATCH FOR

- The forever loop has no wait, so costumes flash too fast to look like dancing. Check that wait 1 second sits inside forever, directly under next costume, then test again.
- Pupils choose a sprite with only one costume, so next costume appears to do nothing. Open the Costumes tab and switch to a recommended multi-costume dancer if there is only one frame.
- A second sprite is added but stays still because the code was rebuilt or never copied. Drag the working script onto the new sprite picture in the sprite list so the code duplicates.

DIFFERENTIATION

- Emerging: Help them delete the cat and select a recommended dancer, then open Costumes to show the frames. Pair them with a partner who can find Choose a Sprite and the forever block.
- Developing: Ask them to read the stack aloud: green flag, forever, next costume, wait, and move any block left outside the loop. Have them tell you why wait must sit inside forever before they add more.
- Proficient: Add a second dancer and copy the script by dragging it onto the new sprite thumbnail. Try a different wait time and describe how the dance beat changes.