

Lesson Plan for Activity: Dance Party

Subject: Creativity

Length of Lesson: 60 minutes

Concept or Skill Focus: This lesson introduces the core CS concepts of coding and event programming (using blocks).

Objectives/Outcomes:

- Develop programs that respond to timed events
- Develop programs that respond to user input
- Create dance animations with code

Vocabulary:

- **Code** - (v) to write code, or to write instructions for a computer.
- **Event** - An action that causes something to happen.
- **Program** - An algorithm that has been coded into something that can be run by a machine.
- **Measure** - Used to count time in music.
- **Property** - Properties describe things (like the dancer's position on the screen, the dancer's size, and the dancer's color).

Activities and Timeline (Introduction, Middle, Conclusion)

Introduction (5 minutes)

- What's your favorite way to be creative?
 - Encourage students to share the ways they express creativity, such as with art, dance, music, writing.
- Explain that today we're going to be creative with "code", which just means a set of instructions that a computer can understand. Choosing what code you write and how people interact with it can be an opportunity to express creativity too!
- Announce to the class that today we're going to see how we can combine coding with dancing in a creative way. Ask the kids to floss, dab, or do a creative dance move of their own for 10 seconds to get them in the mood. You can play a song from this [Spotify Playlist \(all ages\)](#) to help kick things off.

Activity (50 minutes)

- Open a browser (Chrome, Firefox, Safari, IE, Edge)
- Navigate to <https://studio.code.org/s/dance-2019> (Students will be asked to enter their age). A login is only required if a student wants to save their progress.
- There are 10 mini challenges to build understanding and learn how to create a dance party using dancers, events, and properties. Students should “Run” their program after coding each level and make observations about the behavior. After a few seconds, students will get a “Congratulations” message (if they successfully coded the level).
 - Level 1: Warm-up Video (2:47) and **Make** a new Dancer with a Location
 - Level 2: Events Video (1:43) and Create an **Event**
 - Level 3: **Make** Two Dancers each with a Different **Event**
 - Level 4: Measures Video (1:44) Get the Dancers **Moving in Time** with the Music
 - Level 5: Measures (continued) – Add another **Measure** with a Different parameter
 - Level 6: **Make** a group of smaller backup dancers

- Level 7: Properties Video (2:51) and Explore Dancer **Properties**, like size
- Level 8: Explore Dancer **Properties**, like tint (color)
- Level 9: Add a **“Loop” Event** that is triggered over and over (by measure or second)
- Level 10: Party On! Video (1:25) Get your groove on and create a dance of your own

Conclusion (5 minutes)

- Ask the students “What is the connection between creativity and computer science?”
- Students can choose to Share their Dance Party by texting a link to their project to their cell phones and/or can print out a certificate.

Materials

- Computers/tablets with at least 15 Mbit/sec Internet connection (2 students per computer/tablet). Recommended smallest screen size 1024 x 728 px.
- Installed compatible browser from any of the following:
 - Chrome 33.x and higher
 - Safari 7.0.x and higher
 - Internet Explorer 11 and higher
 - Microsoft Edge
 - Firefox 25.x and higher
- Headphones or earbuds (if there is a concern with hearing various music and videos)

Additional Notes

- Consult with your school or district’s IT department to ensure the following sites are allowed and not blocked:
 - <https://code.org>
 - https://*.code.org