Lesson Title: CSta Fiesta Dance Party!

Standards Addressed: PA Science and Technology and Engineering Education Standards:3.4 <u>Elementary</u>, <u>Secondary</u>

Real-World Problem: How do computers know what to do? What is an algorithm?

What skills will students use or learn? Process skills, communication

Objective(s): Students will: become familiar with the idea of sequence. learn to express a complex activity using simple instructions.

Materials or Resources Needed: Pencil, Paper, Fun Dance Moves, Video recording device (optional), <u>Code.org Dance Party</u> (optional)

Instructional Procedures/Learning Tasks (grades K-5):

- Create a hand motion dance sequence! (Examples: Snap, clap, fist bump, X. It can be ANY move!)
- Practice the moves in the order you want them - put them to music if you can! (Optional: Make a video of yourself.)
- 3. Write specific step-by-step instructions for each move in

List Questions for Higher-Order Thinking (Webb's DOK) that students could process throughout (optional):

- How would you organize your instructions to describe the hand motions?
- If you could change the task and demonstrate the motions, what might change?

- order. (Use symbols for younger children)
- 4. Get a volunteer! A caregiver or family member in quarantine with you?
- 5. Read each step you may
 ONLY use words to describe
 the dance sequence. (Do not
 change your original
 sequence.)
- 6. Allow practice time, and if you have music, use it!
- 7. When complete, compare the original dance with the programmed dance.(Optional: Video your volunteer when you are done explaining the steps.)
- 8. Go to Code.org Dance Party
 Activity and challenge your
 caregiver or any adult to
 complete the lesson!
 (Optional: Video your adult
 learning to code and post it
 here on FlipGrid!)

Instructional Procedures/Learning Tasks (grades 6-8):

Choose a dance move!
 (Examples: Go old school with Macarena or Hokey Pokey. Try to get your

List Questions for Higher-Order Thinking (Webb's DOK) that students could process throughout (optional):

 How would you organize your instructions to describe the dance without motion?

- caregiver to learn Savage! It can be ANY move!)
- Practice the moves.
 (Optional: Make a video of yourself.)
- 3. Write specific step-by-step instructions for each move in order.
- 4. Get a volunteer! A caregiver or family member in quarantine with you?
- 5. Read each step you may
 ONLY use words to describe
 the dance sequence. (Do not
 change your original
 sequence.)
- 6. Allow practice time, and if you have music, use it!
- When complete, compare the original dance with the programmed dance. (Optional: Video your volunteer when you are done explaining the steps.)
- 8. Go to Code.org Dance Party
 Activity and challenge your
 caregiver or any adult to
 complete the lesson!
 (Optional: Video your adult
 learning to code and post it
 here on FlipGrid!)

 What are the potential design flaws of your step-by-step dance instruction?

Instructional Procedures/Learning Tasks (grades 9-12):

- Choose a dance move!
 (Examples: Go old school
 with Macarena or Hokey
 Pokey. Try to get your
 caregiver to learn Renegade!
 It can be ANY move!)
- Practice the moves.
 (Optional: Make a video of yourself.)
- 3. Write specific step-by-step instructions for each move in order.
- 4. Get a volunteer! A caregiver or family member in quarantine with you?
- 5. Read each step you may
 ONLY use words to describe
 the dance sequence. (Do not
 change your original
 sequence.)
- 6. Allow practice time, and if you have music, use it!
- When complete, compare the original dance with the programmed dance. (Optional: Video your volunteer when you are done explaining the steps.)
- 8. Go to Code.org Dance Party Activity and challenge your caregiver or any adult to

List Questions for Higher-Order Thinking (Webb's DOK) that students could process throughout (optional):

- How would you organize your instructions to describe the dance without motion?
- What are the potential design flaws of your step-by-step dance instruction?

complete the lesson!
(Optional: Video your adult learning to code and post it here on FlipGrid!)

Content Extension

Mathematics: Create a budget for an epic Cinco de Mayo party (include decorations, food, a DJ, a party room rental fee, etc). How much would the most amazing dance party cost?

Science: Redesign and "experiment" with another dance! What was one problem, based on your feedback and observations, with your original sequence you could solve with a new one? Make it a Cinco de Mayo celebration dance!

Social Studies: Research the origin of the Cinco de Mayo holiday.

English: Write a fictional short story about the most epic Cinco de Mayo dance party ever!

Other: Music - create a playlist for a Cinco de Mayo epic dance party
Art - sketch out a Cinco de Mayo themed party room (include decorations, food, etc.)

Student Reflection (optional):

- 1. Describe if it easy or difficult to direct your volunteer to complete the dance?
- 2. Were you tempted to use more than words? Why?
- 3. Explain how close your original dance sequence was to the final volunteer product.
- 4. Would you change your original sequence of instructions? Why or why not?
- 5. Was it difficult for your adult to complete the coding lesson? Were you able to help them with your coding skills?