Lesson 16: Let's Freeze Dance!

Powerful Ideas of Computer Science	Control Structures
Powerful Ideas of Literacy	Literary Devices
PTD	Community Building, Content Creation
Palette of Virtues	Generosity, Fairness, Honesty, Patience, Open-mindedness, Curiosity
Children will be able to…	● Use and adjust the Wait Block in ScratchJr ● Reflect on previous work. ● Create parallel programs in ScratchJr
Vocabulary	● Wait: to stay in place before starting. Waiting refers to the process of staying. ● Pause: to stop in place before restarting. Pausing refers to the act of stopping. ● Parallel Programming: when two or more programs run at one time
Teacher Preparation	● Read lesson plan. ● Open the Freeze Dance Music slideshow to pick any song to play aloud. ● Print one copy per child of the ScratchJr Block Cut Outs and cut. ● Print Lesson 16 Check for Understanding or pull up the Lesson 16 Check for Understanding Slides.

<mark>Warm Up</mark>

- **Freeze Dance (***Suggested Time: 5 minutes)*
  - Using Freeze Dance Music or your preferred classroom music, play Freeze Dance. Freeze Dance is a great game to get children moving and engage their creativity.
  - When the music plays, children dance, and when the music **pauses**, they must freeze immediately. As the teacher, control the music and press pause periodically to make children freeze. Remember to reinforce class norms around safety and being cautious with bodies.
  - Optional: You can mix it up with some fast and slow music to incorporate the ideas from the blocks introduced during the last lesson.

- **What is a Freeze Dance?** *(Suggested Time: 5 minutes)*
  - Discuss how to make a ScratchJr character dance like we were dancing. When we dance, we make lots of different movements at the same time! For example, we can jump and move forward simultaneously or spin and move our hands simultaneously!
    - In ScratchJr, how can we program our characters to make different movements simultaneously? Give the children a chance to brainstorm some ideas.
  - Then discuss the rules and elements of a freeze dance (dancing while music plays, freezing when the music stops)
    - In ScratchJr, how could we program the characters to **wait** when the music stops?

ScratchJr Time

Structure Challenge:

1. **Parallel Programming (***Suggested Time: 5 minutes***)**
   Introduce **Parallel Programming** - This means that two programs are happening at one time. An example of a parallel program would be as follows:

- The above parallel programs allow for the Cat to move right at the same time that the Cat is moving up, so the Cat will move diagonally.

- **Wait Block (***Suggested Time: 5 minutes***)**

- Introduce the Wait block.
- The Wait block programs your character to take a break or pause within the program. The number refers to TENTHS (1/10) of a second, not seconds. So, a Wait block with a 10-number parameter will pause the program for 1 second.

Lesson 16 Check for Understanding: Before starting a project, check your children's understanding of the new concepts they've just learned. Read each question to the children and have the children respond with a thumbs up for "yes" or a thumbs down for "no." Stop and re-explain concepts as needed.

Expressive Explorations:
- **Program Your Own Freeze Dance (***Suggested Time: 15 minutes***)**
  - In pairs or small groups, have children program a freeze dance.
    - Encourage children to use parallel programming to make characters dance in different directions.
    - Remind children that the wait block can freeze characters and then continue dancing.
    - Remind children that it is important that all characters freeze at the same time.
    - Freeze Dance Party: Let children create a program that allows all their characters to dance and stop simultaneously. Promote their creativity and independence, letting them choose music, and the blocks, and fix their bugs.

Closing Tech Circle

- **Share Creations (***Suggested Time: 10 minutes)*
    - ○ Children share their creations. Prompts:
        - ■ What was difficult or easy about this project?
        - ■ If your program was set to music, would it be fast or slow music?
        - ■ What would you do differently if you could go back and edit?

Opportunities for Differentiation

- **Extra Challenge**
    - ○ For children that need more of a challenge or scaffolding, ask them how they can include the Start on Bump, Start on Tap, and Speed blocks in their programs.