

Ozobot Dancing Around the Christmas Tree

Materials Needed:

Ozobots

Device to connect with Ozoblockly

Optional- Christmas tree (we used small paper cutouts)

Day 1: Individual Coding

Objective:

Students will learn the basics of coding Ozobots using Ozoblockly and create an individual code for their Ozobot to perform a dance around an imaginary Christmas tree.

ISTE Standards:

- ISTE Standard 5: Computational Thinker
 - 5a: Students formulate problem definitions suited for technology-assisted methods.
 - 5d: Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

I Do (Teacher-led Instruction):

Introduction (15 minutes):

- Briefly discuss the concept of coding and its applications.
- Introduce the Ozobots and explain the task of creating a dance around a Christmas tree.
- Demonstrate Ozoblockly, showcasing how to drag and drop code blocks to control the Ozobot's movements.

We Do (Guided Practice):

2. Individual Coding Activity (45 minutes):

- Guide students in accessing Ozoblockly and assist as they create a simple code for their Ozobot's dance.
- Encourage them to experiment with different movements and colors.

You Do (Independent Practice):

3. Reflection and Sharing (15 minutes):

- Ask students to reflect on their individual dances and share insights with a partner.

- Facilitate a class discussion about the coding process and discoveries made.

Day 2: Group Dance Project

Objective:

Students will work in small groups to combine their individual dances into a cohesive group dance around the Christmas tree using Ozobots.

ISTE Standards:

- ISTE Standard 6: Creative Communicator
 - 6a: Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.
 - 6b: Students create original works or responsibly repurpose or remix digital resources into new creations.

I Do (Teacher-led Instruction):

Review and Warm-Up (20 minutes):

- Review basic Ozobot coding concepts.
- Have students run their individual dance codes to warm up and showcase their work.

We Do (Guided Practice):

2. Group Dance Planning (40 minutes):

- Divide students into groups, providing each with an imaginary Christmas tree prop.
- Instruct groups to plan and discuss how to combine individual dances into a cohesive group performance.
- Emphasize communication, teamwork, and the creative use of Ozoblockly.

You Do (Independent Practice):

3. Group Dance Coding (40 minutes):

- Allow groups to use Ozoblockly to code their group dance, ensuring each student's contribution is incorporated.
- Circulate the room, providing guidance and support.

Group Dance Rehearsals (20 minutes):

- Give groups time to practice and refine their group dance, emphasizing timing, spacing, and synchronization.

Final Performances and Reflection (20 minutes):

- Have each group perform their dance for the class.
- Facilitate a class discussion on the challenges and successes of collaborative coding.

Rubric: Group Dance Project

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Creativity	Demonstrates exceptional creativity in coding movements and patterns.	Shows creativity in coding movements and patterns.	Shows some creativity in coding movements and patterns.	Demonstrates minimal creativity in coding movements and patterns.
Collaboration	Actively collaborates with team members, effectively communicates ideas, and respects others' contributions.	Collaborates with team members, communicates ideas, and respects others' contributions.	Collaborates with some team members, communicates ideas, and occasionally respects others' contributions.	Struggles to collaborate with team members, lacks effective communication, and does not respect others' contributions.
Technical Proficiency	Demonstrates a high level of proficiency in coding Ozobots, creating smooth and well-timed movements.	Shows proficiency in coding Ozobots, creating mostly smooth and well-timed movements.	Demonstrates basic proficiency in coding Ozobots, with some rough or poorly-timed movements.	Shows limited proficiency in coding Ozobots, resulting in frequent rough or poorly-timed movements.

Overall Presentation	Presents a polished and well-rehearsed group dance that meets the 1-minute length requirement.	Presents a good group dance, meeting the 1-minute length requirement.	Presents a satisfactory group dance, with minor deviations from the 1-minute length requirement.	Presents a group dance that is significantly below the 1-minute length requirement.
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Note: Adjust the time allocations based on your class schedule and the pace at which your students work. Feel free to adapt the lesson plan to suit the specific needs and dynamics of your classroom.