

5th grade robotics and coding

Objective:

Students will program a robot to complete a sports/arts activity.

Tasks:

1. Explore the robots and their possibilities
 - a. Notetaking ideas
2. Select an activity and robot
 - a. Compare the needs of the activities to the abilities of the robot
 - b. Write a plan for the activity
3. Program robot
4. Test/adjust/test
5. Create a video presentation about the activity that will be shared with other schools
 - a. Name of robot
 - b. Program used
 - c. Explain activity
 - d. Show robot run
 - e. Explain the problems/solutions
 - f. Tell what as hard or easy
 - g. Create a challenge for the viewer

Robots and possible programs

Sphero: Lightning Lab, Draw and Drive

Dot and Dash: Blockly, Xylo

Ozobots: Ozoblockly online, Ozogroove, Ozobot

BeeBot

Kibo

Code a pillar

Activity Choices

Sports: Basketball, Soccer, Volleyball, Football

Arts: Music, Art, Storytelling, Dance

ISTE Standards:

1. Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.
2. Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.
4. Students use a variety of technologies within a design process to identify and solve

problems by creating new, useful or imaginative solutions.

5. Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

6. Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

7. Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.