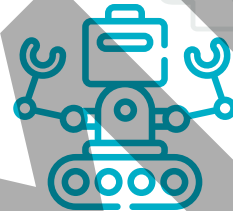


A GUIDE BY

WOZED

STEM

SCIENCE TECHNOLOGY ENGINEERING MATH



EXPLORING ROBOTS TEACHER'S GUIDE

ROBOTICS | PRESCHOOL

TABLE OF CONTENTS

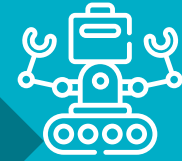
OVERVIEW

Students will explore robots and how they sense and react to what they sense. This will be compared to the students' five senses. Students will build and create robots using Sense and ACT Cubelets and learn how robots can help us.

SECTION	PAGE NO.
WEEK 1	3
WEEK 2	7
WEEK 3	11
WEEK 4W	14

SAMPLE

WEEK 2



RESOURCES NEEDED	VOCABULARY	CENTER ENRICHMENT	
<p>Books:</p> <ul style="list-style-type: none"> • “Robot Rumpus” by Sean Taylor • “Boy and Bot” by Ame Dyckman <p>Reference Books:</p> <ul style="list-style-type: none"> • “Robots, Robots Everywhere” by Sue Fliess • “Clink” by Kelly DiPucchio and Mathew Myers <p>National Geographic Readers:</p> <ul style="list-style-type: none"> • “Robots ” by Melissa Stewart 	<p>Sight</p> <p>Hear</p> <p>See</p> <p>Sound</p> <p>Touch</p> <p>Feel</p> <p>Bright</p> <p>Dark</p> <p>Distance</p> <p>Far</p> <p>Close</p>	<p>Art: Drawing and creating robots using shapes. Have precut circles, squares, rectangles, and triangles of different sizes for students to use. Ask students what shapes they are using.</p>	<p>Math: Coding Loops or Algorithms You will need clickable bricks for this activity. Use pattern handouts for students to follow.</p>
		<p>Sand/Water: Possible ideas - nuts and bolts, keys, tinsel.</p>	<p>STEM: Cubelets Battery Cubelet Sense: Distance and Brightness Cubelet ACT: Drive, Rotation, and Flashlight Cubelet</p>
		<p>Science: Five Senses-Hearing Use some of the following items: telephones, seashells, bells, shaker toys, stethoscopes, instruments. Talk to students about how they hear and the different levels of noise.</p>	<p>Blocks: Wooden blocks students can use to create robots.</p>

QUESTION OF THE WEEK: What is a robot?

DAY 1 PLAN - MORNING CIRCLE TIME

MATERIALS

- Book – “Robot Rumpus” by Sean Taylor
- Song – “Let’s Do the Robot”: https://wozed.link/RO_LP_M_W2_R1

PROCEDURE

1. Read “Robot Rumpus” to students.
 - a. Review the definition of a robot. (a robot is a machine that can sense, think, and act)
2. Ask students:
 - a. “What did the robot in the story do? How did it sense? How did it think? How did it act?”
3. Tell students, “Today we are going to explore the clear ACT cubes.”

DAY 2 PLAN - MORNING CIRCLE TIME

MATERIALS

- Book – “Robot Rumpus” by Sean Taylor
- Song – “Let’s Do the Robot”: https://wozed.link/RO_LP_M_W2_R1

PROCEDURE

1. Read “Robot Rumpus” to students.
2. Sing “Let’s Do the Robot” with students. During the song, encourage students to move like the robot in the book.
3. Discuss the actions that the Cubelets can do.
 - a. Show students the Rotate, Drive, and Flashlight Cubelets and tell the name of each. Ask a student to stand up and demonstrate what each block would look like if they were acting it out. Flashlight may be hard, but they could open and close their hands to demonstrate a light going on and off.
 - b. Ask students how they can use the ACT Cubelet with the Sense Cubelet.
4. When students are at the STEM center, ask these questions:
 - a. Show the clear cube with wheels.
 - i. “What does this cube do?”
 - ii. “What would happen if you added two cubes with wheels?”
 - b. Show the clear cube with the light.
 - i. “What did this cube do?”
 - ii. “How did you get it to light up?”

- c. Show the clear cube with the black rotating disc.
 - i. “What did this cube do?”
- d. Tell students, “All the clear cubes are ACT cubes. They are called output cubes. They do something with the information given from the input cubes.”

DAY 3 PLAN - MORNING CIRCLE TIME

MATERIALS

- Book – “Boy and Bot” by Ame Dyckman
- Song – “Let’s Do the Robot”: https://wozed.link/RO_LP_M_W2_R1

PROCEDURE

1. Before reading the story, ask students:
 - a. “How are humans different from robots?”
 - b. “How are humans and robots similar?”
2. Read “Boy and Bot” to students.
3. After reading the story, ask students:
 - a. “What did the Boy and Bot have in common?”
 - b. “What was different between the Boy and Bot?”
 - c. “What else did you notice in this story?”
4. Now compare the robot in the story to the Cubelets robot.
 - a. “How is Bot similar to Cubelets?” (both are robots: both use batteries [on/off switch])
 - b. “How is Bot different from Cubelets?” (Cubelets can be taken apart. Cubelet batteries can be charged. Bot looked like a robot. Cubelets don’t.)

DAY 4 PLAN - MORNING CIRCLE TIME

MATERIALS

- Book – “Boy and Bot” by Ame Dyckman
- Song – “Let’s Do the Robot”: https://wozed.link/RO_LP_M_W2_R1

PROCEDURE

1. Read “Boy and Bot” to students.
 - a. Ask students to remind you of some of the similarities and differences that you went over last time.
2. Tell students that they are going to sort the Cubelets from what they have learned so far in the STEM center.
 - a. Holding up each Cubelet, ask students, “Is this a Sense, ACT, or Think Cubelet?” They should know that the Clear Cubelets are ACT Cubelets from the activities they have done this week. They should be able to guess or assume that all black Cubelets are Sense Cubelets. They may struggle with the Battery Cubelet as well as the Red, Green, and Orange Cubelet. Hold off on these since they have not had a chance to use them. The Battery Cubelet is considered a Think Cubelet.
3. Add sorting sheets from the Teacher Guide to STEM center.

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