

**Informational Books in the Preschool Classroom**  
**Topic of Study: Robots for Work and Robots for Play**

***Robots, Robots Everywhere* by Sue Fliess, Illustrated by Bob Staake**  
***Clink* by Kelly DiPucchio, illustrated by Matthew Myers**  
***Boy + Bot* by Ame Dyckman, Illustrated by Dan Yaccarino**  
***If You're a Robot and You Know It* by David A. Carter**

**Introduction**

In this guide children are engaged in gaining a basic understanding about robots for work and for play; activities that primarily support two domains in the *Arkansas Child Development and Early Learning Standards: Birth through 60 months: Emergent Literacy and Science and Technology*. The **Learning Goals** (with **Strands**) that precede each activity relate to specific areas of development and learning that are the focus of the activities.

Through the featured books and activities children are given opportunities to learn about robots that are designed for work and robots that are designed for play.

**Connecting to Adventures in Learning**

This curriculum guide does not specifically connect to any Adventures in Learning Topic of Study.

**Teacher Notes**

Many preschool children are exposed to robots in their daily lives. They may have a toy robot; they may see robots on TV, both in programs and in advertisements. They may play electronic games that feature robots. Some families may have a robot that cleans their floor, for example.

The most important concept that the developers of this topic want children to understand is that some robots are designed for work and some robots are designed for play.

This topic of study is different from other topics because of the emphasis on reading books with children to help them understand the concept just stated rather than a large variety of activities. When appropriate, involve children in discussing the difference in people and in robots.

Developers will leave it up to preschool teachers to decide if they want to bring in a toy robot to illustrate that some robots are designed for play and that robots need a power source such as a battery. It is recommended that this toy robot be used for demonstration purposes only and not to add to a learning center for these reasons:

- Preschool children may have a difficult time playing cooperatively if there is only one robot available.
- Toy robots may not encourage as much creative play as material that is open-ended and can be used in many ways.
- Toys such as robots that are battery-powered should be closely supervised and children not be allowed to handle batteries.

The following is information about robots that is designed to give teachers an understanding of robots before involving children in the topic:

- A robot is a machine that can do complicated tasks such as building a car or cleaning the floor in a home.
- A robot is task specific, designed to do one job and repeat it over and over again.
- Robots handle tasks that are either dangerous or boring to human beings.
- Some robots are built to resemble a human being or an animal in appearance and behavior.
- Most robots have a battery, plug into a wall, or are controlled by a computer.
- Most robots have a movable body; they have a sense of movement.

## Materials to Collect and Make

### Materials to Collect and Make

- Download the song, “If You’re a Robot and You Know It” by Musical Robot as follows:  
Go to the Scholastic website: [www.scholastic.com/media](http://www.scholastic.com/media)  
Click on If You’re Happy and You Know it, follow the directions to listen to the song and to download it.  
(song is 2.52 minutes)
- Large collection of boxes of different sizes
- Loose parts – open-ended materials that children can easily access and use to create robots
  - Masking tape
  - Glue
  - Clothespins
  - Scissors
  - Cardboard tubes
  - Cardboard – corrugated cardboard
  - Empty and clean containers such as yogurt cups
  - Paint and paint brushes
  - Washable markers
  - Tempera paint
  - Large buttons
  - Nuts and bolts
  - Bottle caps
  - Pie tins
  - Collage materials: shiny paper, scraps of paper, scraps of aluminum foil
  - Paper hearts, squares, circles
  - Large buttons
  - Chenille stems
- Pictures of people and animals
- Prop box with play tools (consider adding real wrenches)
- Sign: **Robot Shop**
- Robot Oil can
- Robot and Not a Robot Pictures – Copy on cardstock, laminate and cut on lines. (See Attachment: [Robot and Not a Robot Sorting Pictures](#))
- Sorting Chart: Robot and Not a Robot (See Attachment: [Robot and Not a Robot Sorting Chart](#))

## Story Presentations

### Learning Goals:

**CD2.4 Holds and manipulates information in memory** (*short-term and working memory*)

**LD1.1 Understands and responds to language (in child's home language)** (*vocabulary and language comprehension*)

**LD2.1 Uses increasingly complex vocabulary, grammar, and sentence structure (in child's home language)** (*expressive vocabulary*)

**EL1.1 Shows interest in literacy experiences** (*engagement in literacy experiences, variety of interests*)

**EL1.2 Engages in read-alouds and conversations about books and stories** (*story comprehension*)

**EL3.1 Responds to features of books and print** (*book knowledge*)

**Book:** *Robots, Robots Everywhere* by Sue Fliess, illustrated by Bob Staake

- Prepare to read the book, *Robots, Robots Everywhere*
- Invite children to look at the cover and describe what they see. Ask what they think the book is about.
- Give the title, author and illustrator. Explain that the author is the person who writes the words and the illustrator is the person who draws the pictures.
- Invite children to talk about what they know about robots. Some may have toy robots or a robot that cleans the floor in their home. (*See Teacher Notes below*)
- Read the story so all children can see the pictures in the book. (*See Teacher Note below*)
- Follow up the reading by showing each page and reading the words, allowing children time to look at the illustrations and discuss what they see.
- Give them prompts if necessary. For example, after reading "Rescue robots seek and find." invite children to look at the illustrations and describe what they see (boy being rescued, his campfire and cooking utensil). After reading "Robots pump and load and lift. Mix and measure, sort and sift." Ask children what the robots are doing (making donuts, packaging them in boxes, adding sprinkles and chocolate icing to some).
- Say to children that the robots in this story are robots that do work.
- Explain to children that there will be some materials in the block center and the art center they might want to use to create a robot.

### Teacher Notes:

- *By inviting children to talk about their experience with robots, you will be better able to build upon what they already know.*
- *Consider reading this book to a small group of children because of size of pages. Also the small illustrations offer so many opportunities for observation and discussion.*
- *Developers suggest that this book be kept with teacher materials because of the binding which makes it easy for the book to be damaged when handled frequently.*
- *Join children in the library area and read and discuss this book with them if they seem interested.*

**Book:** *Clink* by Kelly DiPucchio, illustrated by Matthew Myers

- Prepare to read the book, *Clink*.
- Show the cover, give title, author and illustrator. (Explain that the author is the person who writes the words and the illustrator is the person who draws the pictures).
- Remind children that you previously read the book, *Robots, Robots Everywhere*, and invite them to recall some of the things that robots did in that story.
- Say to children, "In this book we are going to learn about a robot named Clink who was not able to do very much."
- Read the story so all children can see the pictures in the book.
- Explain words that may be unfamiliar to children. For example, retractable arms: arms of a robot that can be pulled back into the body. Disastrous: something that was unsuccessful, that didn't work. Blush: a person's face turns red when she is embarrassed.
- Follow up the reading by showing the pages and inviting children to help retell the story.
- Call attention to some of the illustrations and what children might have missed or not understood. For example, retractable arms, Blade's attachments, the children seeming to reject Clink's burned toast when they are waiting in line for Penny's chocolate chip cookies.
- Ask children if they have retractable arms like the robot at the top of the second page.
- Invite children to discuss what they would do if they had an old robot like Clink who had lots of problems.
- Explain that the book will be in the Library Center for children to look at independently or with other children.

**Teacher Note:** *Join children in the Library Center and read the story again if they request it.*

**Book:** *Boy + Bot* by Ame Dyckman, illustrated by Dan Yaccarino

- Prepare to read the book, *Boy + Bot*.
- Practice talking like a robot, in a slow and mechanical or robotic voice, and use that voice when reading what the robot says in the story. For example, use that voice when Bot asks boy "Did-you-malfunction?" or says "I-must-help-him."
- Show the cover, give title, author and illustrator. (Explain that the author is the person who writes the words and the illustrator is the person who draws the pictures.)
- Read the story so all children can see the pictures in the book. Read in a slow and mechanical or robotic voice the words said by Bot.
- Explain words that may be unfamiliar to children. For example, affirmative means yes. Malfunction is when something does not work or operate correctly, or like it should.
- Follow up the reading by showing the pages and invite children to describe what is happening on each page.
- Pose questions as you show some of the pages; questions such as "What happened when the robot rolled down and a rock bumped the robot's power switch?" (robot turned off). "What happened when the door bumped Bot on his power switch?" (Bot turned on) "Does the boy have a power switch that turns him on and off?"
- Pose additional questions such as "Do you think Bot was able to eat the applesauce the boy fed him or listen to the story the boy read to him?"
- Invite children to state some of the differences in Bot and the boy:  
Boy is a living thing that eats and moves and grows and sleeps, Bot is a machine that only moves when its power switch is on.  
Bot has a power switch that turns him on and off, boy does not.  
Bot has a battery, boy does not.  
Boy can eat applesauce and Bot cannot.  
Boy can listen to a story, Bot cannot.
- Ask children what their favorite part of the story was and why it is their favorite.

## Additional Language and Literacy Activities

### Learning Goals:

**EL3.1 Responds to features of books and print** (*print knowledge*)

**CA2.1 Explores, manipulates, creates, and responds to a variety of art media** (*exploration of art*)

### Activity: **Creating a Book: Jobs I Would Like My Robot to Do**

- Create a cover page as follows:
  - Title the book: Jobs I Would Like My Robot To Do
  - Add the author and illustrator: Ms. Laurie's Pre-K Class
- Take the cover page to the book reading area and invite children to join you.
- Invite children to discuss jobs that their parents or teacher ask them to do that they do not like to do.
- Give prompts if children seem to need them. For example, say "I wish I had a robot to unload the dishwasher for me." Ask children if there are jobs someone in their family complains about having to; mow the grass or fold clothes, for example.
- Show the cover page to children and explain that they are going to help write a story about those jobs that they would like a robot to do for them and that each child will have a page
- Remind children that each book has an author and illustrator and they will be both author and illustrator for their special book.
- Explain to children that each one will have an opportunity to dictate the words to go on their individual page, and to draw a picture to go with their words. Let children know where and when you will be able to take their dictation.
- Suggest that children write their name on their page.

### Teacher Notes:

- *Consider allowing several days for this activity so that each child who chooses to will have an opportunity to contribute to the story.*
- *Put the cover and pages together to create a book.*
- *Read the story with the children.*
- *Suggest that children share the story with their families.*

### Learning Goals:

**CD2.4 Holds and manipulates information in memory** (*short-time and working memory*)

**LD1.1 Understands and responds to language (in child's home language)** (*vocabulary and language comprehension*)

**EL1.1 Shows interest in literacy experiences** (*engagement in literacy experiences, variety of interests*)

**EL3.1 Responds to features of books and print** (*print knowledge*)

### Activity: **Playing Together**

- Take the book, *Boy and Bot*, a marker board or chart sheet and markers to the story reading area and invite children to join you.
- Show the pages and recall with children some of the things Boy and Bot did together: walked on a log, threw rocks into the water, rolled down a hill, drew pictures, played in the wading pool.
- Invite each child in turn to tell you one thing he or she would enjoy doing with his or her robot. Encourage them to say things other than what is in the story or that another child says.
- Record what each child says.
- Continue this until each child who chooses to have added something to the list.
- Read the list back to children.
- Add pictures to illustrate the list.
- Post the list where children can see it.

### Playing Together

Play baseball

## Learning Environment

### Block Center

#### Learning Goals:

**SE1.2 Interacts with peers** (*stages of play, social skills*)

**CD1.1 Shows curiosity and a willingness to try new things** (*exploration and investigation*)

**CD3.1 Uses reasoning and planning ahead to solve problems and reach goals** (*problem solving*)

**MT3.1 Participates in exploratory measurement activities and compares objects** (*comparison*)

**ST1.1 Engages in the scientific process to collect, analyze, and communicate information** (*investigation and hypothesis testing, data analysis and communication*)

**ST3.2 Uses tools and engineering practices to explore and solve problems** (*engineering practices and thinking*)

#### Activity: Building a Robot

- Develop a prop box to add to Block Center. Include play tools (real wrenches may be added), and an oil can labeled **Robot Oil**.
- Post photos of robots on the wall.
- Post a large sign that says **Robot Shop** and is illustrated with a picture of a robot.
- Place the book, *Clink*, in a basket and add it to the center.
- Add a variety of boxes of different sizes to block center.
- Add a variety of loose parts (see Materials to Collect and make)
- Observe children as they experiment with the materials. Based on your observations, involve yourself in their play by making comments about your observations, asking questions and/or making suggestions. Say, for example, "I see that you have used bottle caps for the robots eyes." "Is your robot for work or for play?"

### Library Center

- Add the following books:  
*Boy + Bot* by Ame Dyckman, illustrated by Dan Yaccarino  
*Clink* by Kelly DiPucchio, illustrated by Mathew Myers

### Discovery Center

#### Learning Goal:

**ST3.1 Demonstrates knowledge of the characteristics of living things, the earth's environment, and physical objects and materials** (*living things, physical objects and materials*)

#### Activity: Robot and Not a Robot

- Add the chart with two columns: **Robot** and **Not a Robot**. See Attachment: [Robot and Not a Robot - Sorting Chart](#)
- Add pictures of people, animals, and robots. See Attachment: [Robot and Not a Robot – Sorting Pictures](#)
- Invite children to put the pictures in the correct column and explain why they did this.

## Art Center

### **Learning Goal:**

**CA2.1 Explores, manipulates, creates, and responds to a variety of art media** (*exploration of arts*)

### **Activity: Creating a Robot**

- Have basic materials available in the Art Center: scissors, glue, washable markers, crayons, paper
- Post pictures of robots on the wall in the Art Center.
- Add small boxes of different sizes.
- Add materials from the list of Materials to Collect and Make (page 2)

## Music and Movement

### **Learning Goals:**

**EL1.1 Shows interest in literacy experiences** (*engagement in literacy experiences*)

**CA1.1 Explores through listening, singing, creating, and moving to music** (*exploration of music and movement*)

**Book:** *If You're a Robot and You Know It* by David A Carter

- Prepare to read the book, *If You're a Robot and You Know It*. Practice pulling the tabs so that you can easily pull them while reading the story to the children.
- Listen to the song you have downloaded and be prepared to play it as you are showing the pages to the children.
- Show the cover and give the title and the author.
- Play the song as you pull the appropriate tabs and turn the pages as directed in the song.
- Follow up by playing the song again and inviting children to join in.

### **Teacher Notes:**

- *If you are unable to download the song, sing it as you pull the tabs and turn the pages and then follow up by involving children in singing the song.*
- *Developers recommend that the book be designated as a teacher book and kept with your materials.*
- *Read the book with children who request it.*

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### **Learning Goals:**

**PH1.1 Demonstrates locomotor skills** (*traveling*)

**LD1.1 Understands and responds to language** (*in child's home language, follows directions*)

### **Activity: Robot Freeze**

- Discuss, model and involve children in walking like a robot (slow and plodding)
- Explain to children that you will play some music and they are to walk around the room like a robot until you stop the music and announce "Robots freeze" and they are to freeze in place until the music starts again.
- Play a very slow song for this activity.
- Decide when children are tiring of the activity and say "Robots walk home" and they return to their home base.

## Transition Activities

### Learning Goal:

**CD2.2 Shows flexibility in adjusting thinking and behavior to different contexts** (*adjusting behavior to match context*)

- Have a collection of pictures of people, animals and robots. Have each child select a picture, identify what it is, say if it is or is not a robot and then transition to next activity.
- Ask each child to walk like a robot or walk like a person and transition to next activity.

## Family Connection and Engagement

- Let families know that children have been learning about robots for work and robots for play.
- Suggest that families invite their children to tell them some things they have learned about robots.
- Invite families to look at the book children have created about jobs they would like their robot to do for them.

## Additional Books

*Me and My Robot* by Tracy West, illustrated by Cindy Revell

*R is for Robot* by Adam F. Watkins

*Ray Bot* by Adam F. Watkins