

## WICORized Lesson: Inquiry: Friendly Robot Expanding (Foundations 3–6)

This article describes how a small, interactive robot helps to calm and teach young hospital patients in Florida.

### Core Content Areas

Science, Technology

### AVID Elementary Components

Student Success Skills, Partnerships, WICOR

This lesson refers to strategies and resources located in the curriculum guide, *AVID Elementary Foundations: A Schoolwide Implementation Resource* (2016 edition).

### AVID Elementary Objective

This WICOR lesson is intended to provide an opportunity for students to use inquiry strategies to promote deep thinking about the article. By responding to pre-determined leveled questions, students question, analyze, discuss, and construct a greater understanding of the content. Students work collaboratively to read the article, respond to questions, and participate in academic conversations. The WICOR process of the lesson supports students' critical thinking and formulation of opinions.

### Common Core Connections

#### CCSS.ELA-LITERACY.CCRA.R.2

*Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.*

#### CCSS.ELA-LITERACY.CCRA.R.8

*Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.*

#### CCSS.ELA-LITERACY.CCRA.R.10

*Read and comprehend complex literary and informational texts independently and proficiently.*

#### CCSS.ELA-LITERACY.CCRA.SL.1

*Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.*

### Preparation and Differentiation

*Each month, we have selected one article or graphic that is designed to differentiate between the stages of AVID Elementary: Emerging (Foundations K–2); Expanding (Foundations 3–6); and Bridging*

*(Bridges 6–8). Please remember to preview the lesson matrix each month to identify lessons that have similar content and learning focus differentiated for the specific target students found within our AVID Elementary stages.*

1. Access the AVID Elementary Weekly article, "Interactive robot befriends hospital's youngest patients to soothe away their anxiety." Determine whether the article will be provided in electronic or paper copy. The class may use the Class Login function on the AVID Elementary Weekly website for students to access the article electronically.
2. Determine the level of support required for all students (including General Ed, Special Ed, and ELL populations) to move successfully through the levels of thinking and build academic skills.
3. Identify collaborative groups for specific components of the lesson. (Collaboration)
4. Prepare leveled questions about the article from each of Costa's levels. (Inquiry)

**Flexible Grouping:** provides an opportunity to differentiate instruction within whole group, small group, one-to-one, or independent learning.

**Support Tools:** prepare and incorporate non-linguistic representations, teacher-created notes, CLOZE activities/reading, translations, etc.

**Academic Language Scripts:** provide an opportunity for oral language development by creating a structured way for students to engage in academic discourse for vocabulary and language development in a scholarly environment.

**Rehearsal and Revision:** engage students in practice of formal register (vocabulary and language development) in which they attempt, practice, and correct their own responses.

**Sentence Frames:** prepare and incorporate guiding prompts for questions and responses to provide scholarly visual anchors for students to add their own ideas.

**Word Banks:** prepare and incorporate lists of content or academic vocabulary that students choose from to integrate into a personal written or oral response.

**Writing + Speaking; Speaking + Writing:** incorporate writing and speaking activities that are paired together to practice oral and written responses.

## Inquiry-Based Differentiation

Before (Level 1)	During (Levels 1, 2, 3)	After (Level 3)
Establishing prior knowledge	Gathering information	Reflecting on learning
Gathering information	Thinking about and comparing information	Making connections
	Applying the information	

### Before – Level 1

1. Provide students with a copy of the AVID Elementary Weekly article, "Interactive robot befriends hospital's youngest patients to soothe away their anxiety."
2. Students analyze the text with the F-L-I-P strategy in order to determine its difficulty level and apply knowledge of text features and comprehension strategies. (Reading 5.6)
3. Using the STAR note-taking strategy, model how to set up 2-column notes to guide the note-taking process for students. In the first column, insert pre-determined leveled questions to guide the note-taking process. Questions should help guide students to develop a summary of each section. *A third column may be added for visuals or student-created questions.*

Example:

#### Friendly Robot

Leveled Questions and Responses	Student's Response
<p><u>Level 1:</u>            What is the title of the article?            What is the name of the robot?            Where does the robot work?            What are some of the jobs of the robot?</p> <p><u>Level 2:</u>            Describe MEDi and his role at the Children's Hospital.            Explain the relationship between Tommy and MEDi.            Compare and contrast MEDi with a regular doctor or nurse at a hospital.</p> <p><u>Level 3:</u>            Based on information from the article, describe a typical day for MEDi.            Explain why MEDi's job is important.            Imagine you were a patient at a hospital, and explain what you would like to have at the hospital with you in order to help you to feel happy and calm.</p>	

## During – Levels 1, 2, 3

1. Provide students with a copy of the AVID Elementary Weekly article, "Interactive robot befriends hospital's youngest patients to soothe away their anxiety."
2. Students work independently, with dyads, or in collaborative groups to read the article and take notes in a 2-column format. Students organize their notes by listing the leveled question in the first column of the 2-column chart. *Differentiation Option:* Have questions pre-written in the first column for emerging learners. (Organization and Reading)
3. Students respond to the leveled questions in the first column of the 2-column chart. (Organization and Inquiry)
4. Prepare whole group to participate in a Collaborative Snowball Fight in order to reflect on the reading and review the content. (Collaboration 3.33)
5. Choose one of the Level 3 questions from the students' 2-column note-taking chart. Read the question aloud and have students record their responses on a blank sheet of paper. Students crumple their paper into a "snowball" and participate in a "Snowball Fight" to share their responses with their peers. (Collaboration)

### After – Level 3

1. Debrief with the entire group and identify key components that should be included in the 2-column notes. (Organization)
2. Monitor students' learning and provide clarity and guidance as needed.
3. Students work independently to complete an Interest-Based Learning Log to summarize their learning and reflect on what questions they still have. (Writing 1.7c)

## Variations/Extensions

1. Using new vocabulary words from the article, research definitions and create a vocabulary poster.
2. Conduct additional research about MEDi. Create a PowerPoint presentation or write an essay to illustrate what you learn.
3. Write an acrostic poem using the word "HOSPITAL."
4. Create your own leveled questions about the AVID Elementary Weekly article.
5. Using your notes, write a comprehensive summary about the article.
6. Work with partners or small groups to create a unique note-taking format.

## WICOR Framework

AVID Elementary Components	Before (Level 1)	During (Levels 1, 2, 3)	After (Level 3)
Writing to Learn	<ul style="list-style-type: none"> <li>Forces clarity.</li> <li>Gives students a tool to express themselves.</li> </ul>	<ul style="list-style-type: none"> <li>Promotes critical and reflective thinking.</li> <li>Forces clarity.</li> <li>Promotes long-term learning.</li> <li>Gives students a tool to express themselves.</li> </ul>	<ul style="list-style-type: none"> <li>Promotes critical and reflective thinking.</li> <li>Forces clarity.</li> <li>Promotes long-term learning.</li> <li>Gives students a tool to express themselves.</li> </ul>
Inquiry	<ul style="list-style-type: none"> <li>Begins all learning with questions.</li> </ul>	<ul style="list-style-type: none"> <li>Engages students in all levels of critical thinking, from recall of knowledge to evaluation.</li> <li>Enables students to pursue understanding with mutual respect and civility, mindful of each other's dignity.</li> </ul>	<ul style="list-style-type: none"> <li>Enables students to be persuaded by arguments/evidence more powerful than their own, and change their minds in light of fresh insights.</li> </ul>
Collaboration	<ul style="list-style-type: none"> <li>Enables students to work collaboratively.</li> <li>Allows for positive interdependence.</li> <li>Promotes heterogeneity.</li> </ul>	<ul style="list-style-type: none"> <li>Promotes shared leadership.</li> <li>Promotes shared responsibility for one another.</li> <li>Allows for interaction necessary for task completion.</li> </ul>	<ul style="list-style-type: none"> <li>Enable groups to process their effectiveness.</li> </ul>
Organization	<ul style="list-style-type: none"> <li>Includes organizational tools.</li> <li>Includes note-taking strategies.</li> </ul>	<ul style="list-style-type: none"> <li>Promotes use of agenda/planner.</li> <li>Includes organizational tools.</li> <li>Includes note-taking strategies.</li> </ul>	<ul style="list-style-type: none"> <li>Promotes use of agenda/planner.</li> <li>Includes organizational tools.</li> <li>Includes note-taking strategies.</li> </ul>
Reading to Learn	<ul style="list-style-type: none"> <li>Engages prior knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>Engages prior knowledge.</li> <li>Monitors understanding.</li> <li>Encourages connections.</li> </ul>	<ul style="list-style-type: none"> <li>Encourages connections.</li> </ul>
Student Success Skills	<ul style="list-style-type: none"> <li>Instill communication skills (writing, listening, speaking).</li> </ul>	<ul style="list-style-type: none"> <li>Instill communication skills (writing, listening, speaking).</li> <li>Instill time management skills.</li> <li>Instill goal-setting skills.</li> </ul>	<ul style="list-style-type: none"> <li>Instill communication skills (writing, listening, speaking).</li> </ul>
Partnerships	<ul style="list-style-type: none"> <li>Establish and maintain connections.</li> <li>Build and maintain community.</li> </ul>	<ul style="list-style-type: none"> <li>Establish and maintain connections.</li> <li>Build and maintain community.</li> </ul>	<ul style="list-style-type: none"> <li>Establish and maintain connections.</li> <li>Build and maintain community.</li> </ul>

# Interactive robot befriends hospital's youngest patients to soothe away their anxiety

By Susannah Bryan  
Sun Sentinel  
(TNS)

1 FORT LAUDERDALE, Fla. — Never fear, MEDi the robot is here, ready to calm the nerves of children scared of the hospital and all the things that go with it – like prickly needles and cavernous hallways and mysterious medical equipment.

2 MEDi, a blue and white robot now on staff Broward Health Children's Hospital, has just the right touch when it comes to keeping little ones calm. This nifty little robot, whose name is short for Medicine and Engineering Design Intelligence, resembles a toy at just 2 feet tall and 15 pounds, but he's been a big hit with the hospital's youngest patients.

3 He's their companion, pain coach and even their teacher, letting them know what to expect next when they're having blood drawn or a cast removed, said Dr. Patricia Rowe-King, pediatric program coordinator at Broward Health Medical Center.

4 Broward Health is one of only eight hospitals nationwide using this particular child-friendly robot to help pediatric patients overcome the anxiety and fear associated with most medical procedures, officials there say.

5 He's also bilingual, ready to chat in English or Spanish.

6 Purchased with a \$15,000 grant three months ago, MEDi has been used to comfort cancer patients as young as 2 and up to 14. Programmed just for the pediatric hospital setting, MEDi also gives tips on how to manage pain and stress using deep breathing techniques. He can assist with several procedures, including blood tests, dressing changes, catheter removal, port access and vaccinations.

7 But most of all, he's knows how to buddy up to the hospital's littlest patients.

MEDi and Tommy Boegler, a 4-year-old diagnosed with kidney cancer in February, have become fast friends in the past few weeks.

8  
9 When Tommy needs his blood drawn, MEDi is right there with him, telling him what's coming next and distracting him just before the needle prick. To draw Tommy's attention away, he asked for help getting something out of his eye, then said, "You'll never guess what color my blood is. The same color as my toes."

10 That would be blue, not red.

11 And when it's all over, he can sing and dance, tell a story or play a game.

12 "Hospitals can be a scary place," said Kasey Castro, a child life specialist who works with Tommy. "We use him to distract them and to educate them about the procedure. He can make it more fun and less threatening for them."

13 During an outpatient visit this week, Tommy's mom asked if he thought his little robot friend would remember him.

14 Tommy was sure he would – and he was right.

15 MEDi has facial recognition software and can be programmed to greet each child by name.

16 When MEDi came into the room, Tommy's face lit up.

17 After saying hello to Tommy, the robot motioned for a high-five. When MEDi danced, playing his own lively tune, Tommy moved along with him.

18 The past few months have not been easy for Tommy, said his mother, Beth-Ann Boegler, of Tamarac. He spent 100 days in the hospital and has undergone two surgeries, seven radiation treatments and 23 chemo treatments. He has two more to go.

19 But Tommy thinks it's not so scary now because his robot friend is here.

20 “MEDi took the fear of being here away,” his mom said. “With two surgeries and chemo and radiation, it was all very scary. There were a lot of dark days for a while. We didn’t think he’d ever get out of the hospital. But he’s doing great now.”

21 Dr. Hector Rodriguez-Cortes, Tommy’s physician, says when the robot helps the patient, he’s helping the staff as well by making it easier for them to do their job.

22 “This thing that looks like a toy puts the patient in amore calm state so the nurses can move ahead with the procedure,” he said.

23 The little robot seems to be a hit with doctors as well.

24 “I’ve danced with him,” Rodriguez-Cortes said. “But it looks like the robot was doing a better job than me.”

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Susannah Bryan covers the Animal Beat and several City Hall beats for the Sun Sentinel, including Hollywood, Sunrise, Hallandale Beach and Dania Beach.



Tommy Boegler, 4, of Tamarac, Fla. with MEDi at his side during a visit to Broward Health. The hospital is one of eight hospitals nationwide using a child-friendly robot named MEDi to help the littlest patients overcome the anxiety and fear associated with most medical procedures. (Carline Jean/Sun Sentinel/TNS)