

Matatalab Edu Activity/Lesson Plan:

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Classroom Key Information

Content-Related:

Computer Science Math Art Music
Science ELA Social Study Other _____

Time: 45mins Student Age: 5 years

Complexity: ★ ★★ ★★★ ★★★★ ★★★★★
(★ stands for the easiest)

Activity/Lesson Key Information

Project Name: Sunflower LifeCycle

Big Idea: Tale-Bot Pro is going to teach the kindergartners the life cycle of a sunflower and will challenge the students to code it to walk through the steps of the life cycle.

The students will also identify how they came up with their steps and what they had to do to fix the problems, if any.

Concepts: Tale-Bot Pro tangible coding language, sequence

Main Objectives:

Students will learn the life cycle of the sunflower and will be able to code the Tale-Bot Pro to walk through the sunflower's full life cycle.

Learning Outcomes:

- Retell the Sunflower Life Cycle in order to remember the steps and code the Tale-Bot Pro to follow the correct path and pass over the steps in order from seed to adult
- Figure out steps and directions for Tale-Bot Pro to reach the destination
- Understand how to input coding directions to program a path that follows specific steps
- Correct code inputted, if needed

Matatalab Products & Supplementary Materials

- Coding Set Music Add-On Artist Add-On Pro Set
 Animation Add-On Sensor Add-On Lite MATATA Map
 Tale-Bot Pro

Key Vocabulary:

- Tale-Bot Pro: a Robot
- Map: an area for Tale-Bot Pro to explore
- Command: instructions given to a computer or robot
- Move forward: the Tale-Bot Pro moves forward 10cm
- Move backward: the Tale-Bot Pro moves backward 10cm
- Turn right 90°: turn to the robot's right side
- Turn left 90°: turn to the robot's left side
- Life Cycle: the stages a living thing goes through during its life.

Prior Knowledge:

Some knowledge of what a life cycle is and have basic knowledge of how to give directions using arrows.


Standards(ISTE, CSTA, CCSS, NGSS, etc.):

K-2.AP.17- Describe the steps taken and choices made during the iterative process of program development.

K-ESS3- Use a model to represent relationships in the natural world.


Detailed Activity/Lesson Plans

Matatalab Edu classic lesson

	Instructions step by step	Time
Lead in & Guided Activity	<p>1. Instruct students to give the teacher directions to follow to sit in a chair (make sure the directions include turning left or right). Teacher follows it exactly. Go over how important exact instructions are.</p> <p>2. Review how to give directions by going over command cards and choosing/pressing the correct arrows. (pic. on following page)</p> 	10 mins

Detailed Activity/Lesson Plans

Matatalab Edu classic lesson

	Instructions step by step	Time
Lead in & Guided Activity	<p>a. Place robot on the "Main Entrance" (Yellow Circle on the top left of map)</p>  <p>3. Students will listen to the instructions from Tale-Bot Pro, when it is placed on the Instructions section.</p> <p>4. Place the robot on the Starting Point and watch the robot explain the lifecycle by passing over and stopping at each step in the sequence.</p>	10 mins
Independent Activity	<p>Students need to:</p> <ol style="list-style-type: none"> 1. Students will retell the cycle out loud as a group, looking at the correct sequence on the board with images. 2. Place the Tale-Bot Pro on the Code section then back on the Starting Point (E1) 3. Students will use the command cards to plan out the steps the robot needs to take. Teacher will draw the arrows on the board for the rest of class to see. 4. They will code the robot by clicking on the correct arrows to code the robot to each next step in the cycle (click the appropriate arrows then click play button). 5. Students will click the "x" to delete the incorrect choices to start again. 	30 mins
Feedback & Extension	<p>What did you have to do to fix your mistake? How did you know you made a mistake? Can you code the robot one time to have it walk through all the steps without stopping? What can you do to help you?</p>	5 mins

Essential Questions:

- Did you pass by each part of the life cycle in order?
- What helped you choose the right arrows?
- How did you know you made a mistake?
- How can you make sure which arrow you clicked?