

Robotic Patterns

Brief Overview:

Students work in small groups to use the Path app to create animal patterns for Dash to complete. Works well with the ActivPanel.

Target Grade Levels:

K-1

Time:

15 min centers

Computer Science SOLs:

Target SOLs: K.1, K.2, 1.2,
Supporting SOLs: 1.3

Content SOLs:

Target SOLs: K.13, 1.14
Supporting SOLs:

Objectives:

- The student will create growing and repeating patterns (ABAB, AABB, ABCABC, etc).
- The student will construct algorithms (instructions) independently or collaboratively.
- The student will use creative expression while constructing an algorithm.

Materials/ Prep:

- Dash Robot
- ActivPanel (preferred) or iPad
- Path App (with all the levels unlocked)

CS Vocabulary:

- Algorithm-A list of steps to finish a task.

Teaching Guide:

1. Open the Path App (make sure all the levels are unlocked) and connect to the Dash robot. Open the grid level (level 1).
 2. Draw a line for the robot and add all animals to the dock.
 3. Have students take turns creating a specific pattern with the robot. For example, students may make the ABAB pattern with pig, duck, pig, duck.
 4. Have student run the program by tapping Dash's head.
- See page 2 for directions with pictures.

Credits and Links:

Lesson written by Roanoke County ITRTs. Lesson vetted by HLH Kindergarten teachers.

