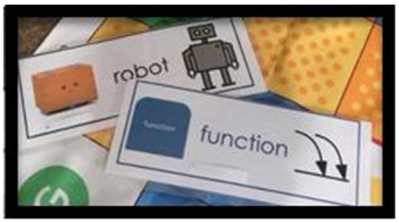
Cubetto

Adaptations for Blind/Low Vision

Cubetto was not designed with this population of students in mind. Classrooms with the resources to have a range of coding applications will find other applications designed with features that better support this population of students. Refer to the ideas below to increase the accessibility of Cubetto for students who are blind.

Braille tags:

- Print the braille vocabulary list in the braille level that suits yourstudents. (This file, *Cubetto – Braille Vocabulary List,* is available digitally; the word list is also included at the end of this document)
- Use Velcro dots or tape to attach the braille to the vocabulary cards, to a consistent corner of each square of the mat, to the tiles and to the directional images attached to Cubetto's sides and top. The braille list includes whole words for the command blocks – using the initial letter of function, forward, right and left would fit better. You can add Braille to any of the lesson materials being printed for students. The braille vocabulary list does not include labels for all the individual and whole class print materials.

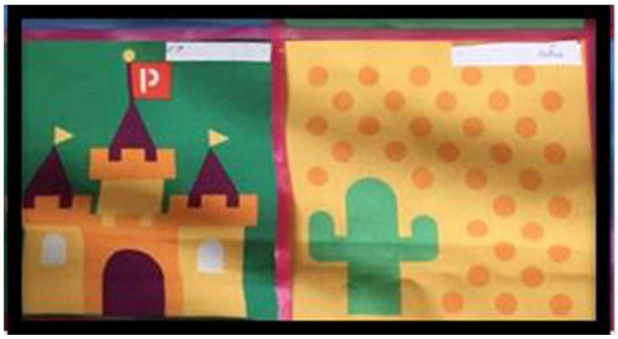


Vocabulary Cards

Sequencing Cards

Cubetto Mat:

- Use tape to demarcate the grid on Cubetto's mat.
  (See pink tape outlining the squares in the image below. Ensure that the tape used will stick well to cloth. Alternatively use a clear plastic cover such as a shower curtain and put tape on the plastic cover.)
- Secure a braille tag with a description of the image in the square in a consistent corner of each square.



Cubetto:

- Demarcate the front and back of Cubetto by attaching a pipe cleaner tail to the back and googly eyes to the front of Cubetto.
- Alternatively attach braille tags to the front and the sides of Cubetto (left, right, forward)

Command Blocks:

- Attach a label to each of the programming blocks. Alternatively, separate blocks into separate containers relative to their direction/function and label the boxes.
- Place Velcro dots beside all of the block spaces, or just beside the first one to mark it. Once the first space is labeled, students can use the spaces and the engraved line connecting the spaces for position and orientation clues.

Monitoring Cubetto's path and debugging:

- This is most easily handled in a small group. Have the other students in the group call out the path as Cubetto travels (e.g. forward > forward > left)
- A student who has vision impairment can also place a hand lightly on Cubetto as it travels, without impeding its movement.
- The Coding to Learn and Create team has requested that the manufacturer incorporate speech feedback for the sequence from the control panel after the Go button is pressed.

Tip Sheets:

- All student tip sheets have been provided on the USB key in text only format to support screen reading.

Braille Vocabulary List

Tiles:
Forward
Turn Left
Turn Right
Function

Vocabulary Cards:
Control Panel
Go
Sequence
Debug
Program
Forward
Left
Right
Function
Loop
Repeated pattern
Command Block
Robot
Map
Algorithm

Cubetto Map:
Dirt coloured land (10 squares)
Grass coloured land (6 squares)
Water (9 squares)
Castle
Boat
Tree
City
Cactus
Mountains
P (2 Squares)
R
G
B

Teaching repeated patterns:
Baseball
Football
Soccer ball

Sequencing Anchor Activity:
1
2
3
4

Wet toothbrush
Put toothpaste on brush
Brush teeth
Spit out toothpaste

Put on underwear and socks
Put on shirt and pants
Put on shoes
Put on coat