Botball Lesson Plan

Title: Printing to the CBC screen

Concept / Topic to Teach: Printing to the CBC screen

Standards Addressed:

Goal:
By the end of this activity, students will be able print sentences verbalizing what part of the program is currently running and sensor values to the CBC screen.

Anticipatory Set:
This is important because writing sentences to sensor values to the screen, is the easiest way to troubleshoot and develop code.

Time Required:

Required Materials: Computer with KISS-IDE, Demo bot, download cable

Activity Procedure:
1. Open KISS-IDE
    a. Target: CBCv2
    b. New Program
2. Watch Video
3. Try it out
    a. Print sentences to the screen.
    b. Print sensor values to the screen

Assessment:
Step 1. Print a haiku describing the sensor used for step 2.
Step 2. While the black button is not pressed, print the value of that sensor every .1 seconds
Step 3. When the black button is pressed, the program should end.

Extension Activities:

Printing to the screen Handout

Placeholders
%d - int
%f - float or double

Escape sequences
\n – starts a new line
\t – inserts a tab (5 spaces)

Format
printf("Text in the quotes %d \t %f\n",intValue, floatValue);

Helpful Tips
End each printf with a \n (new line) so that the next printf will start on a new line, instead of continuing the previous printf.

Printf takes a lot of processing power. Once your program works like you expect, remove the print statements, especially from loops. During a loop, like one used for color tracking with the camera, the CBC will read more values, more quickly without the additional load of printing those values.