Botball Lesson Plan

**Title:** iRobot Create: Movement from sensor feedback

**Concept / Topic to Teach:** Driving the iRobot Create with built in sensors

**Standards Addressed:**

**Goal:**

By the end of this activity, students will be able to drive the Create using built in sensors.

**Anticipatory Set:**

This is important because driving with sensors helps guarantee that a robot will not drift from its path.

**Time Required:**

**Required Materials:** Computer with KISS-IDE, CBC, iRobot Create, download cable

**Activity Procedure:**

1. Open KISS-IDE
   1. Target: CBCv2
   2. New Program
2. Watch Video
3. Try it out
   1. Line following
   2. Drive straight until reaching a wall

**Assessment:**

Have students navigate a board using line following and the bumbers.

**Extension Activities:**

**iRobot Create: On board sensor handout**

These will return a 1 if pressed or 0 if not pressed.

Must provide the “lag value” inside of the parenthesis. Recommend .1

get\_create\_lbump(); left bumper sensor

get\_create\_rbump(); right bumber sensor

These will return 0 if looking at black line

Must provide the “lag value” inside of the parenthesis. Recommend .1

get\_create\_lcliff(); left cliff sensor

get\_create\_lfcliff(); left front cliff sensor

get\_create\_rfcliff(); right front cliff sensor

get\_create\_rcliff(); right cliff sensor