

## Botball Lesson Plan

**Title:** Programming: Declaring variables and constants

**Concept / Topic to Teach:** Declaring variables and constants to store data

**Standards Addressed:**

**Goal:**

By the end of this activity, students will be able declare and implement variables.

**Anticipatory Set:**

This is important because using variables and constants make changing values easier and guarantee that all changes are made.

**Time Required:**

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

**Activity Procedure:**

1. Open KISS-IDE
  - a. Target: CBCv2
  - b. New Program
2. Watch Video
3. Try it out
  - a. Declare a constant for motor speed
  - b. Declare a variable for motor speed

**Assessment:**

**Extension Activities:**

# Variables and Constants Handout

Variable type	Variable description	printf placeholder	example
int	Integer	%d	10
float	Floating point decimal	%f	10.0
double	Double floating point decimal	%f	4 294 967 296.
string	String of text	%s	Ten

## Declare the variable:

```
int exampleVariable;
```

## Initialize the variable:

```
exampleVariable = 1; (previously declared)
```

or

```
int exampleVariable = 1; (declare and initialize at the same time)
```

## Several at once:

```
int exampleVariable=1, i = 0, whoKnows;
```

## Declare the constant AND initialize

```
#define exampleConstant 1.1
```

or

```
const float exampleConstant=1.1;
```