2.1 Lesson Summary - VBA Vibes

Visual Basic for Applications (**VBA**) is a programming language tightly integrated with Excel that will allow you to automate tasks and expand the functionality of Excel.

Concept: Code is often written **Procedurally** by breaking down the actions you wish to accomplish into a number of steps that are then written as code.

Concept: The following components are the fundamental building blocks of most codings languages including VBA:

**Variables** are the placeholders for data in your code. In VBA you would declare a variable like this: *dim firstVar as String* and you would assign that variable like this: *firstVar = “I am a variable”*

**Arrays** are groups of related items. You would declare an array like this:

*dim ingredients(0 to 2) as String*

**Conditionals** control the flow of the program by specifying logical statements and code instructions to follow if they are satisfied. An example would look like this:

*if (varToTest > 1.0) then*

*runThisCodeIfTrue()*

*end if*

**Iterations** repeat code a specified number of times. A sample iteration would look like this:

*For i = 1 to 5*

*runThisCodeFiveTimes()*

*Next i*

**Functions** organize code into reusable units that can be referenced by code elsewhere in your program. They can also referred to as methods or procedures.

* Activity: 07-Ins\_Variables, 08-Stu\_TotalCalculator, 09-Ins\_Arrays, 12-Ins\_Conditionals, 13-Stu\_ChooseYourStory

Concept: Functions in VBA are designated using the *Sub* keyword. Dialogue boxes with text can be displayed by calling the *MsgBox* function.

* Activity: 01-Ins\_HelloWorld, 02-Stu\_HelloVBA

Concept: **Buttons** allow you to assign code to an element that can be placed in a worksheet.

* Activity: 03-Ins\_ButtonClicks, 04-Stu\_ChooseYourButton

Concept: In the VBA ranges of cells can be specified using the following syntax: *Ranges(“A1:A10”)* and individual cells can be referenced using the following syntax: *Cells(1,1)*

* Activity: 05-Ins\_CellsAndRanges, 06-Stu\_ChessBoard

Concept: The **Split** method can break up a string based on a specified delimiter. For example:

*ArrayOfWords = Split(“Break up this phase”, " ")*

* Activity: 10-Ins\_Splitting, 11-Stu\_SentenceBreaker

VBA is a powerful and intuitive programming language that can help you get the most out of Excel.