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| **Date Assigned: 12/1/16** | **Date Due: 12/5/16** |
| **Unit:** Languages | **Turn In List:** **1. Terms** |
| *“I will be able to declare the language of focus for Semester 2 .”* | |

**Computer Programming Languages: An in-depth analysis**

**Content Objectives:** Students will research each of the five languages acceptable for the 2A computer programming state CTE certification. The following [Wiki article](http://en.wikipedia.org/wiki/Comparison_of_programming_languages) may help in your search. [Language popularity article](http://en.wikipedia.org/wiki/Measuring_programming_language_popularity).

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| **Starter Activity** |
| Write a class that will run in Processing. You may choose from the following list of class names: Human, Cat, Dog, Spaceship, Soldier or Planet. The class must contain a name, at least 2 class variables, 1 constructor, a display function and at least one action function. Paste code below:  class SpaceShip {  float x;  float y;  SpaceShip(){  x= mouseX;  y= mouseY;  }  void display(){  fill(255);  quad(x,y,x-50,y-50,x-25,y,x-50,y+50);  }    } |

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| **Key Terms: (lookup each language and write a short description of each)** | |
| **C++** | A general Purpose Programming language that has object oriented and generic programming features |
| **C#** | Microsoft specialized |
| **Java** | used a lot on all types of machine |
| **Python** | A visual language used primarily for web development |
| **Visual Basic** | language based heavily on visuals and is now barely used. |
| Type Safety |  |
| Interpreted |  |
| Procedural |  |
| Compiled |  |

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|  | **C++** | **C#** | **Java** | **Python** | **Visual Basic** |
| Intended Use | To be a generic coding languages | Developing Software Components suitable for deployment in distributed environments | to let application developers run Java code on all platforms that support Java without the need for recompilation | Intended to make code more readable and allows programmers to use the fewest lines of code as possible. | A relatively basic and easy to use program. |
| Strongly Typed | yes | no | yes | no | both |
| OS’s | All | Windows | All | Web All | Windows |
| Industry | usually used in game, office application, graphics and video editors | Typically used for writing programs in Windows. | usually a | Building games and Web development | Barely used currently. |
| **Atoms or Bits** | atom | atom | atoms | both | bits |
| Current Version | C++ 14 | C#6.0 | Java 7 | Python 3.5.2 | Visual Basic 10 |
| Official Standard |  |  |  |  |  |

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| **History and Background of the Language you are interested in:** |
| You may work in pairs for this portion but you need to submit your own file to Canvas. Give the When’s, Who’s, Why’s, Where’s, How’s and worldwide popularity pulse applicable for the language you are considering. (Note, this is NOT your final decision.) |

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| **Assignment:** |
| Rewrite Class from Starter:  Find the official standard website or simply do a google search for your language and “class” or “object” and do your best to re-write the class from starter in the new language (code not require to build or compile.)  Class Spaceship {  public:  float x;  float y:  };  int display()  {  fill(255);  quad(x,y,x-50,y-50,x-25,y,x-50,y+50);  } |
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Notes (Points of interest, mistakes, lessons learned, web resources, and thoughts):

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