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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: |

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| **Key Terms: (lookup each language and write a short description of each)** | |
| **C++** | Programming language with a bias towards system programming |
| **C#** | Multi-paradigm programming language with strong typing |
| **Java** | General purpose language, most popular language |
| **Python** | Interactive object oriented programming language. |
| **Visual Basic** | Event driven Microsoft supported language. Easy to learn |
| Type Safety | The extent that a programming language discourages typing errors |
| Interpreted | A programming language that will execute instructions directly |
| Procedural | Programming is based off of procedure calls |
| Compiled | Transforms source code into a programming language |

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|  | **C++** | **C#** | **Java** | **Python** | **Visual Basic** |
| Intended Use | General | Windows dev. | Multi platform usage | Web Dev. | Easy coding language |
| Strongly Typed | Yes | No | Yes | Yes | Both |
| OS’s | Multi | Windows | Multi | Multi | Windows |
| Industry |  |  |  |  |  |
| **Atoms or Bits** | Atoms | Atoms | bits | bits | bits |
| Current Version | 3.4.5 | 6.0 | SE 8u112 | 3.5.2 | 6.0 IDE |
| 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.) |

Notes (Points of interest, mistakes, lessons learned, web resources, and thoughts):

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