|  |  |
| --- | --- |
| **Date Assigned: 1/5/16** | **Date Due: 1/7/16** |
| **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).

|  |
| --- |
| **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: |

|  |  |
| --- | --- |
| **Key Terms: (lookup each language and write a short description of each)** | |
| **C++** | A middle level programming language that runs on a variety of platforms |
| **C#** | Simple modern general purpose object oriented programming language |
| **Java** | A generaly-purpose computer programming language |
| **Python** | General-purpose, high-level programming language |
| **Visual Basic** | A third generation event driven programming language |
| Type Safety | The extent to which a programming language discourages or prevents type errors |
| Interpreted | A language for which most of its implementations execute instructions directly |
| Procedural | A language that contains a series of computational steps |
| Compiled | Programs compiles into bytecode, the virtual machine friendly interpreted language |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **C++** | **C#** | **Java** | **Python** | **Visual Basic** |
| Intended Use | Software infrastructure | Simple modern general purpose | To let application developers, “write once, run anywhere” | To express concepts in fewer lines of code | To be relatively easy to learn and use |
| Strongly Typed | Static,Strong,Safe | Static,Strong,Safe | Static,Strong,Safe | Dynamic,Strong,Gradual | Static,Strong |
| OS’s | Cross Platform | Cross Platform | Cross Platform | Cross Platform | Windows and MS-DOS |
| Industry |  | Microsoft | Oracle Corportation | Python Software Foundation | Microsoft |
| **Atoms or Bits** | Bits |  |  |  |  |
| Current Version | C++14 | 6.0 | 8 | 3.5.1 | 6.0 |
| Official Standard | ISO/IEC | 6.0 | 8 | 3.5.1 | 6.0 |

|  |
| --- |
| **History and Background of the Language you are interested in:** |
| Developed by Microsoft and first released in 2000.Development team led by Anders Hejlsberg. Designed for the common language infrastructure. Stable release is 6.0 released july 20th 2015. |

|  |
| --- |
| **Assignment:** |
| Rewrite Class from Starter:  Public class Car  {  Car object1 = new Car();  Car object2 = new Car(); |

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

|  |
| --- |
|  |