 

**Advanced Placement Computer Science**

**Unit 8: Polymorphism/Graphics**

Lesson: Polymorphism

*Last Updated: 7/10/2013*

Polymorphism:

In C++ and Java, polymorphism allows the ability for child classes to respond to the same message uniquely.

Classic polymorphic example:

You want to create a drawing program, with different types of shapes

You have a base class, with the upper left X and Y of where the shape is to be drawn and a draw method.

Subclasses all extend the base class, and each over-rides the draw method

abstract Shape

Circle

Rectangle

Abstract base class: Has at least one abstract method, cannot be instanciated.

Abstract method: Signature defined in parent, HAS NO IMPLEMENTATION, MUST BE OVER-RIDDEN. Can have variables and concrete methods.