

Blackhawk School District

CURRICULUM

Course Title: Computer Science 1
Course Number: 0527 - 0528
Grade Level(s): 9 – 12
Length of Period: 45 minutes
Length of Course: 1 semester
Faculty Author(s): Cox
Credits: .5
Date: 1/19/09; Revised May '09

COURSE DESCRIPTION: This course is designed for the student who would like to continue his or her study of programming by using the Java language. This language is now widely used in colleges, industry, software development, and web page design. Students who plan on entering a computer science, mathematical, scientific, or engineering field should take this course.

PA Standard	Description
3.7.10.C	Apply basic computer operations and concepts.
3.7.10.D	Utilize computer software to solve specific problems.
3.7.12.C	Evaluate computer operations and concepts as to their effectiveness to solve specific problems.
3.7.12.D	Evaluate the effectiveness of computer software to solve specific problems.

Class Resources
Blue Pelican Java by Charles E. Book (ebook)
BlueJ Development Environment

Course Topic	Proposed Time	Topic Reflection
Introduction to Java	7 Days	
<ul style="list-style-type: none"> * Compare Java and Visual Basic * Introduce Development Environment and JDK * Basic Program Shell * Comments * Console Output * JOptionPane Output * Escape Sequences 		

Course Topic	Proposed Time	Topic Reflection
Variables and Operations	11 Days	
<ul style="list-style-type: none"> * Declaring Variables * Variable Naming Conventions * Literals * Variable Assignment * Numeric Operation * String Operations * Constants 		

Course Topic	Proposed Time	Topic Reflection
Math Classes	10 Days	
<ul style="list-style-type: none"> * JOptionPane Input * Console Input * Predefined Math Methods * Math Operations * Problem Solving using Math Operations 		

Course Topic	Proposed Time	Topic Reflection
Selection	15 Days	
<ul style="list-style-type: none"> * Boolean Logic * If Statements * Nested If Statements * If Else Statements * Switch Statement * Problem Solving using Selection Statements 		

Course Topic	Proposed Time	Topic Reflection
Loops	16 Days	
<ul style="list-style-type: none"> * For Loops * While Loop * Do While Loop * Problem Solving using Loops 		

Course Topic	Proposed Time	Topic Reflection
Methods	21 Days	
<ul style="list-style-type: none">* ASCII and Numbering Systems* Creating methods* Using Classes and Objects* Advanced String Methods* Creating User Defined Methods* Problem Solving using Methods		