

Moon Area School District Curriculum Map

Course: Java 1

Grade Level: 9-12

Content Area: Computer Science

Frequency: Semester Course

Big Ideas

1. Create and using Variables
2. Mixed data types
3. Using decision structures to control flow
4. Looping Structures
5. Different Numbers Systems and ASCII Codes
6. Class and Method creation
7. Using Arrays – When and why
8. How the use of static helps visibility in programming

Essential Questions

9. How can we store data in a Java program and keep it efficient?
10. Why do you use one decision making structure over another if both would work?
11. How do loops play an important role in programming when it comes to managing complexity, efficiency, and code clarity?
12. Why do different number systems exist and why are certain ones important to computing?
13. How are arrays different from regular variable? When and where should they be used?
14. Explain visibility when it comes to programming and pros and cons of making things “Static”

Primary Resource(s) & Technology:

BlueJ Textbook, BlueJ programming IDE,
Microsoft Teams, Promethean Boards, Student Laptops/Computer Lab

Pennsylvania and/or focus standards referenced at:

<https://www.csteachers.org/Page/standards> - CSTA Standards Used

Big Ideas/ EQs	Focus Standard(s)	Assessed Competencies (Key content and skills)	Timeline
1, 2 9	3A-AP-14 3A-AP-18	<ul style="list-style-type: none">• Variable creation and value assignment• Integers, Strings, Doubles, Boolean• Programming skeleton for Java• BlueJ IDE introduction• Using Mixed variable types• Casting variables	Weeks 1-5

		<ul style="list-style-type: none"> • Constants 	
3, 4 10, 11	3A-AP-15 3B-AP-11 3B-AP-13	<ul style="list-style-type: none"> • If and Switch statements • When to use loops • For, While, and Do While loop structures • Keyboard input 	Weeks 6-13
5 12	3B-AP-10	<ul style="list-style-type: none"> • ASCII characters • Binary, Hexadecimal, and Octal 	Week 14
6,7,8 13,14	3A-AP-14 3A-AP-17 3B-AP-11 3B-AP-16	<ul style="list-style-type: none"> • Creating your own classes, objects, and methods • Array creation, use, and advance concepts • Static variable and methods • Increasing visibility 	Week 15-18