AP Computer Science Pacing Guide
Unit 4 – Arrays

Online textbooks are <u>Building Java Methods</u> **by Stuart Regges and Marty Stepp and**
<u>Blue Pelican Java</u> **by Charles E. Cook under the textbook tab.**

Day	Assignments	References
1 **10/23-24** *Objectives: Students will review and practice Array concepts*	**Simple Arrays WS 1 (5 pts)** **Do CodingBat Array Programs**: **5** from **Array 1 (1 pt each)** **3** from **Array 2 (2 pts each)** **Due Q1**	**Read Notes on Arrays** **BluePelicanJ- Lesson 18** **BJP - ch 7** **Lecture Notes Arrays and Sorting** **Array Example**
2 **10/25-28** *Objectives: Students will practice basic Array searches*	**Do CodingBat Array Programs**: **2** from **Array 2 (2 pts)** **5** from **AP1 (2 pts each)** (**be aware** of the difficulty level in wordsWithoutList and commonTwo) **Due Q1**	**Read Notes on Arrays** **BluePelicanJ- Lesson 18** **BJP - ch 7** **Lecture Notes Arrays and Sorting** **Array Example**
3 **10/29-30** *Objectives: Students will practice basic Array searches*	**DNA Lab (10 pts)** **Due Q1**	**Read Notes on Arrays** **BluePelicanJ- Lesson 18** **BJP - ch 7** **Lecture Notes Arrays and Sorting** **Array Example**
4 **10/31-11/01** *Objectives: Students will learn the binary search algorithm and how to use merge sort*	**Binary Search Pizza Lab (10 pts)** **Submit to GradeIT** **Merging Two Arrays Lab (10 pts)** **Submit to GradeIT**	**BJP - ch 13** **Searching Algorithms** **Sequential and Binary Search**
5 **11/06-07** *Objectives: Students will review and practice using arrays of objects*	**CodingBat QUIZ (20 pts)** **Arrays of Objects Worksheet (5 pts)** **Post Office Lab (20 pts)**	**Arrays of Objects BPJ Notes**

6 **11/08-11** *Objectives: Students will learn sorting algorithms*	**Selection, Insertion, and Merge Sort Worksheet** **(5 pts)** **Sorting Out Integers Lab (10 pts)**	Sorting – Quadratic Sorts Writing your own Simple sort Note Sheet **Animations to help you** http://math.hws.edu/eck/jsdemo/sortlab.html https://www.cs.usfca.edu/~galles/visualization/ComparisonSort.html https://visualgo.net/bn/sorting?slide=1
7 **11/12-13** *Objectives: Students will include an Array of Objects into a class*	**Practice Writing a class with Array of Objects (in class today) (5 pts)** **Arrays Multiple Choice WS (5 pts)**	**Read Notes on Arrays** **BluePelicanJ- Lesson 18** **BJP - ch 7**
8 **11/14-15** *Objectives: Students will take a formative assessment on Arrays of Objects*	**Arrays of Objects QUIZ – one writing a class question (20 pts)** **Sort & Search MC WS (5 pts)**	**Read Notes on Arrays** **BluePelicanJ- Lesson 18** **BJP - ch 7**
9 **11/18-19** *Objectives: Students will practice completing Free Response AP questions*	**Two Free Response AP questions on Arrays**	**Read Notes on Arrays** **BluePelicanJ- Lesson 18** **BJP - ch 7**

10 **11/20-21** *Objectives: Students will prepare for a summative assessment*	**Arrays of Objects MC WS (5 pts)** **REVIEW for the unit TEST.** **Answers will turn on at 3 PM on 11/21. No worksheets will be accepted after that time.**	**Read Notes on Arrays** **BluePelicanJ- Lesson 18** **BJP - ch 7**
11 **11/22-25** *Objectives: Students will take a summative assessment*	**Unit 4 TEST Arrays, Searching and Sorting**	**Read Notes on ArrayLists** **arrayList2.ppt** **BJP textbook** **Chapter 10** **Blue Pelican Java Lesson 42 and 43** **Java** **ArrayList Review Notes**