



## HOMEWOOD-FLOSSMOOR HIGH SCHOOL COURSE SCOPE & SEQUENCE



**Semester 1 '10 –'11**

**Department:** Mathematics

**Course:** AP Java

**Instructor(s):** Brewczynski

**This course is aligned to:** College Board Standards

*The Homewood-Flossmoor High School Course Scope & Sequence provides parents and students with a semester-long overview of each class that we offer. **An instructor may alter a course's scope & sequence as needed.** Students are responsible for keeping track of due dates and other pertinent course information in their H-F Student Planners. Parents, please contact your child's teacher by telephone or e-mail to clarify any questions you may have about the scope & sequence of a particular course.*

WEEK	STANDARDS	INSTRUCTIONAL CONTENT	ACTIVITIES, READINGS, LABS, AND/OR ASSIGNMENTS	MAJOR ASSESSMENTS
WEEK #1 8/16 – 8/20 No school: 8/16 & 8/17	II.B.3	Unit 1 – Introduction to Java <ul style="list-style-type: none"><li>• computer systems</li><li>• java development</li><li>• program output</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• face fun application</li></ul> Reading: Chapter 1	
WEEK #2 8/23 – 8/27	I.A.1 II.B.2.c	Unit 1 – Introduction to Java <ul style="list-style-type: none"><li>• object oriented programming</li><li>• object creation</li><li>• object behavior</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• wild jeroos application</li></ul> Reading: Chapter 2	



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WEEK #3 8/30 – 9/3 PLC day: 9/3	II.B.2.e II.C	Unit 1 – Introduction to Java <ul style="list-style-type: none"><li>• java rectangles</li><li>• java applets</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• don't be a square application</li><li>• I said draw applet</li></ul> Reading: Chapter 2	
WEEK #4 9/6 – 9/10 No school: 9/6 Pep assembly: 9/10	IV.B	Unit 1 – Introduction to Java <ul style="list-style-type: none"><li>• data variables</li><li>• arithmetic operators</li><li>• creating custom objects</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• raid application</li></ul> Reading: Chapter 3	
WEEK #5 9/13 – 9/17		Unit 1 – Introduction to Java		Unit 1 Test Project Unit 1 Exam
WEEK #6 9/20 – 9/24 PLC day: 9/24	IV.B II.B I.B.1	Unit 2 – Introduction to Objects <ul style="list-style-type: none"><li>• constructors</li><li>• advanced mathematics</li><li>• java type checking</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• show the money application</li></ul> Reading: Chapter 4	



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WEEK #7 9/27 – 10/1	I.B.1 II.C	Unit 2 – Introduction to Objects <ul style="list-style-type: none"> <li>• string type</li> <li>• string methods</li> <li>• reading from text files</li> </ul>	Programming Projects: <ul style="list-style-type: none"> <li>• easter sunday application</li> </ul> Reading: Chapter 4	
WEEK #8 10/4 – 10/8 PLC day: 10/8	II.B.2.e II.C	Unit 2 – Introduction to Objects <ul style="list-style-type: none"> <li>• formatting output</li> <li>• printf command</li> </ul>	Programming Projects: <ul style="list-style-type: none"> <li>• be all that you can be application</li> </ul> Reading: Chapter 4	
WEEK #9 10/11 –10/15 No school: 10/11 All School Testing: 10/13		Unit 2 – Introduction to Objects		Unit 2 Test Project  Unit 2 Exam
WEEK #10 10/18 –10/22 End of 1 <sup>st</sup> Quarter: 10/22	I.A II.C	Unit 3 – Conditional Statements <ul style="list-style-type: none"> <li>• introduction to gridworld</li> <li>• introduction to actors</li> </ul>	Programming Projects: <ul style="list-style-type: none"> <li>• actor lab</li> </ul> Reading: Chapter 5	



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WEEK #11 10/25 –10/29 PLC day: 10/29	I.B.1 II.B.4.c	Unit 3 – Conditional Statements <ul style="list-style-type: none"><li>• if statements</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• gridworld conditionals</li></ul> Reading: Chapter 5	
WEEK #12 11/1 – 11/5 Parent/teacher Conferences: 11/4 No school: 11/5	I.B.1 II.B.4.c	Unit 3 – Conditional Statements <ul style="list-style-type: none"><li>• if-else statements</li><li>• equality operators</li><li>• relational operators</li><li>• conditional operators</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• more bugs application</li></ul> Reading: Chapter 5	
WEEK #13 11/8 –11/12 No school: 11/11	I.B.1 II.B.4.c	Unit 3 – Conditional Statements <ul style="list-style-type: none"><li>• more string methods</li><li>• dialog boxes</li><li>• input boxes</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• mouse game application</li></ul> Reading: Chapter 5	
WEEK #14 11/15 –11/19 PLC day: 11/19	I.B.1 II.B.4.c	Unit 3 – Conditional Statements	Programming Projects: <ul style="list-style-type: none"><li>• making the grad application</li><li>• income tax helper application</li></ul> Reading: Chapter 5	



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WEEK #15 11/22 – 11/26 No school: 11/25 & 11/26		Unit 3 – Conditional Statements		Unit 3 Test Project Unit 3 Exam
WEEK #16 11/29 – 12/3	I.B.1 II.B.4.d	Unit 4 – Repetition Structures <ul style="list-style-type: none"><li>• while loop</li><li>• do-while loop</li><li>• for loop</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• robot projects application</li></ul> Reading: Chapter 6	
WEEK #17 12/6 – 12/10 PLC day: 12/10	I.B.1 II.B.4.d	Unit 4 – Repetition Structures <ul style="list-style-type: none"><li>• counters and accumulators</li><li>• types of loops</li><li>• the Math class</li><li>• random numbers</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• binary fun application</li><li>• corral the cows applet</li></ul> Reading: Chapter 6	
WEEK #18 12/13 – 12/17	I.B.1 II.B.4.e	Unit 4 – Repetition Structures <ul style="list-style-type: none"><li>• recursion</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• e approximator application</li></ul> Reading: Chapter 6	Unit 4 Test Project Unit 4 Exam



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WEEK #19 1/3 – 1/7	IV.D V.A	Unit 5 – One Dimensional Arrays <ul style="list-style-type: none"><li>• array introduction</li><li>• length of an array</li><li>• initialize an array</li><li>• enhanced for loop</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• array of arithmetic application</li><li>• permutation press application</li></ul> Reading: Chapter 7	
WEEK #20 1/10 – 1/14 Finals: 1/11 – 1/13 Marking Day 1/14		Final Exam Review		



## HOMEWOOD-FLOSSMOOR HIGH SCHOOL COURSE SCOPE & SEQUENCE



**Semester 2 '10 –'11**

**Department:** Mathematics

**Course:** AP Java

**Instructor(s):** Brewczynski

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WEEK #11 10/25 –10/29 PLC day: 10/29	IV.D V.A	Unit 5 – One Dimensional Arrays <ul style="list-style-type: none"> <li>• copying arrays</li> <li>• resizing an array</li> <li>• inserting into an array</li> <li>• deleting elements from an array</li> <li>• try/catch blocks for exceptions</li> </ul>	Programming Projects: <ul style="list-style-type: none"> <li>• array of random integers applet</li> </ul> Reading: Chapter 7	
WEEK #12 11/1 – 11/5 Parent/teacher Conferences: 11/4 No school: 11/5		Unit 5 – One Dimensional Arrays		Unit 5 Test Project  Unit 5 Exam



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WEEK #13 11/8 –11/12 No school: 11/11	V.B V.C	Unit 6 – Sorting & Searching <ul style="list-style-type: none"><li>• big O notation</li><li>• selection sort</li><li>• insertion sort</li><li>• merge sort</li><li>• quick sort</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• selection/insertion sort application</li><li>• merge/quick sort application</li></ul> Reading: Chapter 14	
WEEK #14 11/15 –11/19 PLC day: 11/19	V.B V.C	Unit 6 – Sorting & Searching <ul style="list-style-type: none"><li>• sequential search</li><li>• binary search</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• search comparison application</li></ul> Reading: Chapter 14	
WEEK #15 11/22 – 11/26 No school: 11/25 &11/26		Unit 6 – Sorting & Searching		Unit 6 Test Project Unit 6 Exam
WEEK #16 11/29 – 12/3	I.B IV.C	Unit 7 – Class Design & ArrayLists <ul style="list-style-type: none"><li>• static fields/methods</li><li>• scope</li><li>• arrayLists</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• bank account application</li></ul> Reading: Chapter 8	



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WEEK #17 12/6 – 12/10 PLC day: 12/10	I.B IV.C	Unit 7 – Class Design & ArrayLists <ul style="list-style-type: none"><li>• arrayLists class methods</li><li>• wrapper classes</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• bank account application II</li></ul> Reading: Chapter 8	
WEEK #18 12/13 –12/17	I.B IV.C	Unit 7 – Class Design & ArrayLists	Programming Projects: <ul style="list-style-type: none"><li>• tetris clone application</li></ul> Reading: Chapter 8	
WEEK #19 1/3 – 1/7	I.B IV.C	Unit 7 – Class Design & ArrayLists		Unit 7 Test Project Unit 7 Exam
WEEK #20 1/10 – 1/14 Finals: 1/11 – 1/13 Marking Day 1/14	I.B IV.C I.A.3	Unit 8 – Interfaces and Polymorphism <ul style="list-style-type: none"><li>• user created interfaces</li></ul>	Programming Projects: <ul style="list-style-type: none"><li>• bank account / basketball player stats application</li><li>• measurable interface application</li></ul> Reading: Chapter 9	



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WEEK #11 10/25 –10/29 PLC day: 10/29	I.B IV.C I.A.3	Unit 8 – Interfaces and Polymorphism <ul style="list-style-type: none"> <li>• adding methods to an interface</li> <li>• polymorphism</li> </ul>	Programming Projects: <ul style="list-style-type: none"> <li>• accept method application</li> <li>• spot application</li> </ul> Reading: Chapter 9	
WEEK #12 11/1 – 11/5 Parent/teacher Conferences: 11/4 No school: 11/5	I.B IV.C I.A.3	Unit 8 – Interfaces and Polymorphism		Unit 8 Test Project  Unit 8 Exam
WEEK #13 11/8 –11/12 No school: 11/11	I.B IV.C I.A.3	Unit 9 – Inheritance <ul style="list-style-type: none"> <li>• inheritance</li> <li>• super class</li> <li>• sub class</li> <li>• inheritance hierarchies</li> <li>• final class</li> </ul>	Programming Projects: <ul style="list-style-type: none"> <li>• workers application</li> <li>• drawing applet</li> </ul> Reading: Chapter 10	
WEEK #14 11/15 –11/19 PLC day: 11/19	I.B IV.C I.A.3	Unit 9 – Inheritance <ul style="list-style-type: none"> <li>• abstract classes</li> <li>• abstract methods</li> </ul>	Programming Projects: <ul style="list-style-type: none"> <li>• vehicles applet</li> </ul> Reading: Chapter 10	Unit 9 Test Project  Unit 9 Exam



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WEEK #15 11/22 – 11/26 No school: 11/25 & 11/26	I.B.4 II.C	Unit 10 – GridWorld Extended	Programming Projects: <ul style="list-style-type: none"><li>• gridworld project</li></ul> Reading: Case Study Manual	
WEEK #16 11/29 – 12/3	I.B.4 II.C	Unit 10 – GridWorld Extended	Programming Projects: <ul style="list-style-type: none"><li>• gridworld project</li></ul> Reading: Case Study Manual	Unit 10 Test Project Unit 10 Exam
WEEK #17 12/6 – 12/10 PLC day: 12/10	I.B.4 II.C	Unit 11 – Greenfoot	Programming Projects: <ul style="list-style-type: none"><li>• greeps</li></ul>	
WEEK #18 12/13 – 12/17	I.B.4 II.C	Unit 11 – Greenfoot	Programming Projects: <ul style="list-style-type: none"><li>• greeps</li></ul>	
WEEK #19 1/3 – 1/7		Final Exam Review		