TEALS Program

1 CB Unit 9: Inheritance

The following curriculum map is a day-by-day listing of the AP Computer Science course in chronological order. The order has been adapted to follow the College Board AP CS A Curriculum. The lesson plans numbers follow the original TEALS curriculum which was taught in the order of the Building Java Programs textbook.

- Unit 5 Slides
- Unit 6 Slides
- Unit 6 Word Bank
- Curriculum Assets
- Text Excel

LP	Title	In Class	Reading	Homework	Enduring Understanding	Learning Objective	E...k
6.01 01	Inheritance Basics (day 1)	WS 6.1 Start class poster Example 6.1		Collect images	MOD-3	MOD-3.B	MO 3. 3.
6.01 02	Inheritance Basics (day 2)	Finish class poster, discuss	"9.2 up to ""Dividend Stock Behavior"""		MOD-3	MOD-3.B	MO 3. 3.
6.02	Overriding Methods & Accessing Inherited Code	WS 6.2			MOD-2,MOD-3	MOD-2.D,MOD-3.B	MO 2. 3.
6.03	Interacting with the Object Superclass	SC 9.3, 9.4, 9.9, 9.10, E 9.4;WS 6.3 Poster 6.3	Rest of 9.2 starting from "The Object Class."		MOD-3	MOD-3.B	MO 3. 3.
6.04	Polymorphism	WS 6.4.1 WS 6.4.2 SC 9.11-9.17	9.3 up to "Interpreting Inheritance Code."	SC 9.18, 9.20	MOD-3	MOD-3.D	MO 3. 3.
6.05	Has-a Relationships	WS 6.5 ValueMeal exercise?	Rest of 9.4 "Is-a Versus Has-a Relationships."		MOD-3	MOD-3.C	MO 3. 3.
6.06	Interfaces (optional)	? Poster 6.6	9.5 (Optional if covering Interfaces)	Generate own class hierarchy like Financial hierarchy in book			
6.07 01	Programming project (day 1)	PP 9.1, notebook checks	9.6 (Optional if covering Abstract classes	Outline ch 9	MOD-2, MOD-3	MOD-2.D, MOD-3.B, MOD-3.C, MOD-3.D	
6.07 02	Programming project (day 2)	PP 9.1, outline checks					
6.07 03	Programming project (day 3)	PP 9.3	Read and outline Barrons ch 4	Barrons ch 4 (8th or later: ch			

			(8th or later: ch 5)	5) exam, self-grade			
6.07 04	Programming project (day 4)	E 9.8					
6.07 05	Programming project (day 5)	Barrons ch 3 (8th or later: ch 4) exam, outline checks	Read and outline Barrons ch 3 (8th or later: ch 4)	Submit questions for review			
6.07a 01	Celebrity Lab (day 1)	Celebrity Lab Activity 1, notebook checks		Outline ch 9			
6.07a 02	Celebrity Lab (day 2)	Celebrity Lab Activity 2, outline checks					
6.07a 03	Celebrity Lab (day 3)	Celebrity Lab Activity 3	Read and outline Barrons ch 4 (8th or later: ch 5)	Barrons ch 4 (8th or later: ch 5) exam, self-grade			
6.07a 04	Celebrity Lab (day 4)	Celebrity Lab Activity 4					
6.07a 05	Celebrity Lab (day 5)	Celebrity Lab Activity 5	Read and outline Barrons ch 3 (8th or later: ch 4)	Submit questions for review			
6.07a 06	Celebrity Lab (day 5)	Celebrity Lab Activity 5 (day 2)	Review ch 9	Submit questions for review			
6.07a 07	Celebrity Lab (day 5)	Celebrity Lab Activity 5 (day 3), outline checks	Review ch 9	Submit questions for review			
6.08	Finding & Fixing Errors	(Fix HW)	Review ch 9	Submit questions for			

			review			
6.09	Review	Review questions WS 6.5 Test practice	Review ch 9	Study		
6.99	Unit 6 test	Test 5 Guide Test 5 Section I Test 5 Section II				
7.00	Test Review & Reteach	Review test	13.1 up to "Sorting"	Test corrections		
6.XX	Text Excel	Text Excel Student Guide A Text Excel Student Guide B Text Excel Student Guide C Text Excel Teacher Guide			MOD-2, MOD-3	MOD-2.D, MOD-3.B, MOD-3.C, MOD-3.D
9.PP	Unit 9 Personal Progress Check Inheritance					

1.1 6.01.1

Lesson 6.01	*Inheritance Basics (Day 1)*
Objectives	Students will correctly define inheritance Students will use proper syntax to extend a class. Students will illustrate is-a relationships. Students will properly implement constructors of derived classes using super.
Assessments	Students will complete a Class Hierarchy Poster as indicated in WS 6.1.
In Class	WS 6.1 Start class poster Example 6.1
Reading	8.1
Homework	Collect images

1.2 6.01.2

Lesson 6.01	**Inheritance Basics (Day 2)**
Objectives	
Assessments	
In Class	Finish class poster Discussion
Reading	9.2 up to "*Dividend Stock Behavior*"
Homework	

1.3 6.02

Lesson 6.02	**Overriding Methods & Accessing Inherited Code**
Objectives	Students will replace superclass behavior by writing overriding methods in the subclass. Students will write subclass methods that access superclass methods.
Assessments	Students will add code to their Class Posters from the previous lesson.
In Class	WS 6.2
Reading	
Homework	

1.4 6.03

Lesson 6.03	**Interacting with the Object Superclass**
Objectives	Students will replace superclass behavior by writing overriding methods in the subclass. Students will write subclass methods that access superclass methods.
Assessments	Students will complete questions Students will complete a worksheet.
In Class	SC 9.3–4,9–10 E 9.4 WS 6.3 Poster 6.3
Reading	Rest of 9.2 starting from "*The Object Class*"
Homework	

1.5 6.04

Lesson 6.04	Polymorphism
Objectives	Students will define polymorphism. Students will trace the execution of methods through a class hierarchy and predict output.
Assessments	Students will complete a Tracing Inheritance guide and complete worksheet 6.4.
In Class	WS 6.4.1 WS 6.4.2 SC 9.11–17
Reading	9.3 up to "*Interpreting Inheritance Code*"
Homework	SC 9.18,20

1.6   6.05

Lesson 6.05	Has-a Relationships
Objectives	Students will be able to identify and explain why two classes have an is-a or a has-a relationship. Students will be able to create a has-a relationship between two classes.
Assessments	Students will complete an AP Section II question "*Trio*"
In Class	WS 6.5 ValueMeal exercise
Reading	Rest of 9.4 "*Is-a Versus Has-a Relationships*"
Homework	

1.7   6.06

Lesson 6.06	Interfaces (Optional)
Objectives	Students will implement and use interfaces.
Assessments	Students will complete an in-class competition.
In Class	Interface examples Poster 6.6
Reading	9.5 (Optional if covering Interfaces)
Homework	Generate own class hierarchy like Financial hierarchy in book

1.8   6.07.1

Lesson 6.07	Programming project (Day 1)
Objectives	Students will write complex code that uses polymorphism, and inheritance.
Assessments	Students will submit a program electronically.
In Class	PP 9.1 Notebook checks
Reading	9.6 (Optional if covering Abstract classes)
Homework	Outline ch 9

Lesson 6.07	Programming project (Day 2)
Objectives	
Assessments	
In Class	PP 9.1 Outline checks
Reading	
Homework	

Lesson 6.07	Programming project (Day 3)
Objectives	
Assessments	
In Class	PP 9.3
Reading	Read and outline Barrons ch 4 (8th or later: ch 5)
Homework	Barrons ch 4 (8th or later: ch 5) exam, self-grade

Lesson 6.07	Programming project (Day 4)
Objectives	
Assessments	
In Class	EX 9.8
Reading	
Homework	

Lesson 6.07	Programming project (Day 5)
Objectives	
Assessments	
In Class	Barrons ch 3 (8th or later: ch 4) exam, Outline checks
Reading	Read and outline Barrons ch 3 (8th or later: ch 4)
Homework	Submit questions for review

Lesson 6.07a	Celebrity Lab (Day 1)_
Objectives	Students will complete a long-form lab, using classes, objects, two dimensional arrays of objects, array traversing algorithms, program analysis, while/for loops.
Assessments	Students will complete the College Board's AP CS A Celebrity Lab. Students will answer end of activity Check your understanding and open-ended activity.
In Class	Celebrity Lab Activity 1 Notebook checks
Reading	Review ch 9
Homework	Outline ch 9

Lesson 6.07a	Celebrity Lab (Day 2)_
Objectives	
Assessments	
In Class	Celebrity Lab Activity 2 Outline checks
Reading	
Homework	

Lesson 6.07a	Celebrity Lab (Day 3)_
Objectives	
Assessments	
In Class	Celebrity Lab Activity 3
Reading	Read and outline Barrons ch 4 (8th or later: ch 5)
Homework	Barrons ch 4 (8th or later: ch 5) exam, self-grade

Lesson 6.07a	Celebrity Lab (Day 4)_
Objectives	
Assessments	
In Class	Celebrity Lab Activity 4
Reading	
Homework	

1.17 6.07a.5

Lesson 6.07a	Celebrity Lab (Day 5)_
Objectives	
Assessments	
In Class	Celebrity Lab Activity 5, Outline checks
Reading	Read and outline Barrons ch 3 (8th or later: ch 4)
Homework	

1.18 6.07a.6

Lesson 6.07a	Celebrity Lab (Day 6)_
Objectives	
Assessments	
In Class	Celebrity Lab Activity 5 (day 2), Outline checks
Reading	Review ch 9
Homework	

1.19 6.07a.7

Lesson 6.07a	Celebrity Lab (Day 7)_
Objectives	
Assessments	
In Class	Celebrity Lab Activity 5 (day 3), Outline checks
Reading	Review ch 9
Homework	Submit questions for review

1.20 6.08

Lesson 6.08	Finding & Fixing Errors
Objectives	Students will find errors in their returned homework assignments, and correct their code.
Assessments	Students will re-submit all homework assignments with corrected answers.
In Class	Fix homework
Reading	Review ch 9
Homework	Submit questions for review

1.21 6.09

Lesson 6.09	Review
Objectives	Students will identify weaknesses in their Unit 6 knowledge.
Assessments	Students will create a personalized list of review topics to guide tonight's study session.
In Class	Review questions WS 6.5 Test practice
Reading	Review ch 9
Homework	Study

1.22 6.99

Unit 6 Test	Inheritance and Polymorphism
Guide	Test 5 Guide
In Class	Test 5 Section I Test 5 Section II

1.23 7.00

Lesson 7.00	Test Review & Reteach
Objectives	Students will re-learn or strengthen content knowledge and skills from Unit 6.
Assessments	Students will re-submit test answers with updated corrections for partial or full credit, depending on instructor preference.
In Class	Review test
Reading	13.1 up to "*Sorting*"
Homework	Test corrections

1.24 6.XX

Unit 6 Project	*Text Excel*
In Class	Text Excel Text Excel Student Guide A Text Excel Student Guide B Text Excel Student Guide C Text Excel Teacher Guide

1.25 9.PP

Lesson 9.PP	*Unit 8 Personal Progress Check*
Objectives	Identify weaknesses in student's Unit 9 knowledge
Assessments	Students will take Unit 9 Personal Progress Check

1.26 Abbreviations

- **WS** — Worksheet
- **SC** — Self-Check problem (in the textbook)
- **EX** — Exercise (in the textbook)
- **PP** — Programming Project (in the textbook)

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