

**La Porte High School AP Computer Science A Outreach Learning**  
**27 April – 4 May 2020**

**AP Computer Science A Week of 27 April – 4 May 2020**

Teacher/Team:

If there are any questions, please feel  
free to email me/us at:  
(Email Address of the Teacher)

[cornettj@lpisd.org](mailto:cornettj@lpisd.org)

[AP Computer Science A](#)

Codehs.com

Link to [TEAMS Folder](#)

Previous Lessons:

Link to: (Resources).

## Objectives

In this lesson, students will create references using inheritance hierarchies. An object can take on different forms depending on its implementation. Java can call the correct method even when an object is disguised as a more generic reference type. This is known as **polymorphism**. This lesson corresponds with AP Computer Science A topic 9.5.

Students will be able to:

- Define reference variables of a superclass to be assigned to an object of a subclass in the same hierarchy

## Enduring Understandings

This lesson builds toward the following Enduring Understandings (EUs) and Learning Objectives (LOs). Students should understand that...

- EU Mod-3 When multiple classes contain common attributes and behaviors, programmers create a new class containing the shared attributes and behaviors forming a hierarchy. Modifications made at the highest level of the hierarchy apply to the subclasses. (LO's 3.B, 3.C)

In this lesson, students will take a deeper dive into Polymorphism. At compile time, methods in or inherited by the declared type determine the correctness of a non-static method call. At run-time, the method in the actual object type is executed for a non-static method call. This lesson corresponds with AP Computer Science A topic 9.6.

## Objective

Students will be able to:

- Call methods in an inheritance relationship

# La Porte High School AP Computer Science A Outreach Learning

27 April – 4 May 2020

In this lesson, students will call and use the Object superclass. The Object class is the superclass of all other classes in Java. This lesson corresponds with AP Computer Science A topic 9.7.

## Objective

Students will be able to:

- Call Object class methods through inheritance
- Utilize the Object class through inheritance

## Activities

Student Activities: (Resources, videos for students to use.)

Go to Codehs.com Look for the assignment:

1. [9.5.1 Creating References Using Inheritance Hierarchies](#)
2. [9.5.2 Quiz: References Using Inheritance Hierarchies](#)
3. [9.5.3 Animal Sounds](#)
4. [9.5.4 Shape Areas](#)
5. [9.5.5 Person Class](#)
6. [9.5.6 Pies](#)
7. [9.5.7 Creating .equals](#)
8. [9.5.8 Online Companies Revisited](#)
9. [9.5.9 Assignments](#)
10. [9.6.1 Polymorphism](#)
11. [9.6.2 Quiz: Polymorphism](#)
12. [9.6.3 Using Person Methods](#)
13. [9.6.4 Modified Student Class](#)
14. [9.6.5 Vehicle Methods](#)
15. [9.6.6 Which Team?](#)
16. [9.6.7 Cars](#)
17. [9.6.8 Library Books](#)
18. [9.6.9 Fun with Solids](#)
19. [9.7.1 Object Superclass](#)
20. [9.7.2 Quiz: Object Superclass](#)
21. [9.7.3 Default Values](#)
22. [9.7.4 Override toString](#)
23. [9.7.5 Override equals](#)
24. [9.7.6 Equal?](#)
25. [9.7.7 Equals? - Part 2](#)
26. [9.7.8 Equal Rectangles](#)

**La Porte High School AP Computer Science A Outreach Learning**  
**27 April – 4 May 2020**

27. [9.7.9 2D Array Tester](#)

### Academic/Instructional Support

Schedule:

Office Hours

Teacher Support - TEAMS

Office Hours: 8 – 12

Email: [cornettj@lpisd.org](mailto:cornettj@lpisd.org)

### To Be Graded

Assignment for students to submit to CodeHs.com Folder:

- [9.5.2 Quiz: References Using Inheritance Hierarchies](#)
- [9.5.6 Pies](#)
- [9.5.7 Creating .equals](#)
- [9.5.8 Online Companies Revisited](#)
- [9.5.9 Assignments](#)
- [9.6.2 Quiz: Polymorphism](#)
- [9.6.6 Which Team?](#)
- [9.6.7 Cars](#)
- [9.6.8 Library Books](#)
- [9.6.9 Fun with Solids](#)
- [9.7.2 Quiz: Object Superclass](#)
- [9.7.6 Equal?](#)
- [9.7.7 Equals? - Part 2](#)
- [9.7.8 Equal Rectangles](#)
- [9.7.9 2D Array Tester](#)

When is it due? 4 May 2020

What assignments will the student submit?

**La Porte High School AP Computer Science A Outreach Learning**  
**27 April – 4 May 2020**

- [9.5.2 Quiz: References Using Inheritance Hierarchies](#)
- [9.5.6 Pies](#)
- [9.5.7 Creating .equals](#)
- [9.5.8 Online Companies Revisited](#)
- [9.5.9 Assignments](#)
- [9.6.2 Quiz: Polymorphism](#)
- [9.6.6 Which Team?](#)
- [9.6.7 Cars](#)
- [9.6.8 Library Books](#)
- [9.6.9 Fun with Solids](#)
- [9.7.2 Quiz: Object Superclass](#)
- [9.7.6 Equal?](#)
- [9.7.7 Equals? - Part 2](#)
- [9.7.8 Equal Rectangles](#)
- [9.7.9 2D Array Tester](#)

How will it be submitted?

CodeHs.com

Electronically, except by individual arrangement.