

# Unit 04: Writing Classes

Content Area: **Mathematics**  
Course(s): **AP Comp Sci A**  
Time Period: **Semester 1**  
Length: **2 weeks**  
Status: **Published**

## Standards

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MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.8	Look for and express regularity in repeated reasoning.
TECH.K-12.1.4.a	know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.
TECH.K-12.1.4.b	select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.
TECH.K-12.1.6.a	choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.

## Enduring Understanding

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A class is a blueprint from which an object is created. For example, an architect draws a blueprint for a model home and then a builder actually builds houses that follow that blueprint.

A class is not an object itself; the objects are created based upon the class.

## Essential Questions

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How do I write my own methods?

How are classes defined to act as blueprints for new objects?

## Knowledge and Skills

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- write a method header with a scope, return type, name and argument
- define classes that act like blueprints for new objects, made of variables and methods.
- explain encapsulation and Java modifiers.
- explore the details of method declarations.
- review method invocation and parameter passing.

- explain and use method overloading.
- divide complicated methods into simpler, supporting methods.
- describe relationships between objects.
- create graphics based objects. (optional)

## **Transfer Goals**

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Students will be able to identify and build a class to represent an object.

Students will be able to break a component down into the difference between a state and behavior.

## **Resources**

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[AP CS A Java Course — AP CSAwesome](#)

[Overview \(Java SE 11 & JDK 11 \)](#)

[Albert.io](#)

[AP Classroom](#)

[Repl.it IDE](#)