Unit 2: Objects and Methods

Content Area: **Business**
Course(s):
Time Period: **Semester 1 & 2**
Length: **3 weeks**
Status: **Published**

Standards

TECH.8.2.12.E	Computational Thinking: Programming: Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.
TECH.8.2.12.E.2	Analyze the relationships between internal and external computer components.
TECH.8.2.12.E.4	Use appropriate terms in conversation (e.g., troubleshooting, peripherals, diagnostic software, GUI, abstraction, variables, data types and conditional statements).
TECH.8.2.12.E.CS1	Computational thinking and computer programming as tools used in design and engineering.

Enduring Understanding

An object represents an instance of a class, while a class is a blueprint which define the attributes and behaviors for an object.

Essential Questions

Why is object oriented programming beneficial?

Knowledge and Skills

- Describe what it means for Java to be an object-oriented language
- Describe classes and objects and how they are used in Java
- Able to read a UML class diagram
- Can distinguish between the attributes and the behaviors of objects
- Know that methods represent behaviors of objects
- Can use a constructor to create an instance of a class
- Can invoke methods to have an object perform a behavior
- Can trace method calls to determine the outcome of a program
- Able to concatenate Strings and to use escape sequences
- Use methods of the String class
- Use static methods the Math class

Transfer Goals

Deconstructing a problem into components allows you to tackle complicated tasks.

Resources

Repl.it Teams for Education for writing programs

Teacher created Computer Science Google site

CSAwesome

CodingBat