Unit 07: Inheritance

Content Area: **Mathematics**
Course(s): **AP Comp Sci A**
Time Period: **Semester 2**
Length: **3 weeks**
Status: **Published**

Standards

MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.4	Model with mathematics.
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-12.1.5.c	break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

Enduring Understanding

Inheritance and polymorphism are integral to the development of complex programs and classes.

Traits can be inherited from super classes.

Essential Questions

How do I create a hierarchy of classes that incorporate polymorphism?

What are the benefits and restricts of creating one class depended on another?

Knowledge and Skills

- Design class hierarchies
- Explain how inheritence supports software reuse
- Add and modify methods in child classes
- Define polymorphism and how it can be done

Transfer Goals

Students will be able to write class hierarchies which show that some objects are more specialized versions of

their parent object (Cat "is an" Animal).

Students will be able to read a diagram in order to see the interdependancies of data.

Resources

AP CS A Java Course — AP CSAwesome

Overview (Java SE 11 & JDK 11)

Albert.io

AP Classroom

Repl.it IDE