Unit 09: GridWorld Case Study

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

Standards

MA.K-12.4	Model with mathematics.
TECH.K-12.1.6.a	choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.
TECH.K-12.1.6.c	communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.
TECH.K-12.1.7.c	contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.
9-12.HS-ETS1-1.1	Asking Questions and Defining Problems
9-12.HS-ETS1-4.4.1	Models (e.g., physical, mathematical, computer models) can be used to simulate systems and interactions— including energy, matter, and information flows— within and between systems at different scales.

Enduring Understanding

Sometimes it is beneficial to embrace an exhisting codebase instead of starting from scratch.

Graphical representation can be helpful to model phenomina

Essential Questions

How can we learn about a complex codebase?

How can a programmer pull code from other sources?

Knowledge and Skills

Students will be able to study and extend a large-scale program

Transfer Goals

APIs and javadocs can be used to understand a body of code.

Testing environments allow coders to explore abstract ideas like inheritance.

Resources

AP CS A Java Course — AP CSAwesome

Overview (Java SE 11 & JDK 11)

Albert.io

AP Classroom

Repl.it IDE