

# Coding with Minecraft: Education Edition Teacher Academy

## Two- Day Experience



## Description

Coding with Minecraft: Education Edition Two-Day Teacher Academy focuses on the importance of introducing coding to students in an engaging familiar digital environment. Participants will be actively creating, navigating, managing, and using block-based coding in Minecraft: Education Edition. Coding skills are strengthened through online and offline activities. Providing participants with best practices, coding connections, and resources to support educators interested in beginning to integrate coding into current classroom instruction.

## Objectives

### Participants will:

- explore the need to begin implementing Computer Science in schools with students.
- make connections between Computer Science and our daily lives.
- experience the planning and building in a Minecraft: Education Edition World.
- experience 21st century skills in Minecraft: Education Edition allowing for collaboration, creativity, and communication.
- apply the principles of computational thinking including decomposition, pattern recognition, abstraction, and algorithmic thinking.
- learn about coordinates and how they can be used in the classroom setting.
- use their creativity and problem-solving skills to explore and build underwater worlds as they create multiple lines of code with an intended outcome.
- test different coding solutions as they focus on how to use loops and conditionals in the Minecraft: Education Edition Voyage Aquatic world.
- apply learning in the puzzles to build imaginative underwater creations with code.
- apply decomposition and pattern recognition skills to create an algorithm
- decompose the steps needed to solve a problem into a precise sequence of instructions.
- apply the following programming concepts as block-based code and/or JavaScript in Microsoft MakeCode:
  - Event handlers, Coordinates, Loops, Place, Fill, Repeat, Spawn, Random Placement, Coordinates
- explore the saving and sharing features of MakeCode in order to document, download and reuse the code used.
- use abstraction and algorithmic skills to transfer the treasure maze code to MakeCode in Minecraft: Education Edition.
- be introduced to coding concepts as they complete various coding Unit 1 lessons.
- experience selected coding activities to understand and gain knowledge of the progression and sequence of the curriculum.

- apply the principles of computational thinking including decomposition, pattern recognition, abstraction, and algorithmic thinking.
- experience Computing with Minecraft: Education Edition Curriculum gaining knowledge of the progression and sequence of the curriculum
- make connections to their classroom content.
- locate resources to support standards aligned lessons, online training materials, and a community for product support

## Target Audience

The primary audience for this session is teachers, empowering educators teaching in a variety of settings.

- Grades 1-12
- All subjects/content areas
- Professional Learning Communities
- Teacher Professional Development
- Administrators

Recommended size for this academy is 25 educators with one trainer.

## Length

Twelve-hours (plus a 1-hour recommended lunch)