



TRY-A-TRADE[®] TAKE-OUT MICROSOFT CODING CLASSES

Try-A-Trade Take-Out Support Document

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Minecraft Hour of Code: A Tale of Two Villages

Use basic coding concepts to bring two villages together in this free Hour of Code lesson in Minecraft: Education Edition. Players will experience empathy and compassion for their neighbors, learn about cooperation and inclusion, and practice social-emotional skills.

Requirements

- Windows 10, Chromebook, Mac or iPad devices that meet software and hardware requirements. See supporting files and links for more details.
- Ability to install Minecraft Education Edition on devices. You may need to work with your school's IT for help with this.

How to Get Started

- Install Minecraft: Education Edition by visiting <https://aka.ms/HourofCode2020>
- [Watch the intro video](#) to get acquainted with this Hour of Code theme
- [Watch the walkthrough video](#) to get a better understanding of how to start the lesson and navigate the world
- Open the world and play through
- Download a copy of the [answer key](#)
- Have additional questions? Check out our [FAQ](#).

Theme Overview

For centuries, the Villagers and Illagers shared the same space but seldom interacted with each other. Now you can use the power of code to bring the two villages together. Players will experience empathy and compassion for their neighbors, learn cooperation and inclusion, and embrace the diversity that makes us all uniquely special.

This lesson is offered in both Blocks and Python.

Lesson Objectives

By the end of the lesson the students will:

- Understand the importance and benefits of diversity, including the role of diversity and inclusion in a community
- Understand bias and recognize how it may cause harm
- Create coding solutions that include sequences, iteration, and loops

- Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions
- Iterate on coding solutions to complete a task

Supporting Files and Links

- [Lesson Plan](#)
- [Educator Guide](#)
- [Solutions](#)
- [Intro video](#)
- [Lesson walkthrough video](#)
- [Software and Hardware Requirements](#)

Minecraft Hour of Code: AI for Good

A village needs your help to prevent the spread of a nearby forest fire. Train the Agent to identify what causes fires, remove materials that help fires spread, and then bring life back to a forest destroyed by fire – all with code! Inspired by Microsoft's [AI for Earth](#) team this lesson takes place in Minecraft Education Edition.

Requirements

- Windows 10, Chromebook, Mac or iPad devices that meet software and hardware requirements. See supporting files and links for more details.
- Ability to install Minecraft Education Edition on devices. You may need to work with your school's IT for help with this.

How to Get Started

- Install Minecraft: Education Edition by visiting <http://aka.ms/minecrafthourofcode>
- [Watch the intro video](#) to get acquainted with the Hour of Code theme
- [Watch the walkthrough video](#) to get a better understanding of how to navigate the world
- Use the [Lesson Plan](#) to prepare
- Have the [Coding Solutions](#) on hand to answer student questions
- Need help downloading or accessing the lesson? Check out our [FAQ](#).

Guiding Ideas

A village is threatened by fire and needs you to code a solution! Meet your coding helper, the Minecraft Agent, then program the Agent to navigate the forest and collect data. This data will help the Agent predict where fires will occur. Then code the Agent to help prevent the spread of fire, save the village, and bring life back into the forest. Learn the basics of coding and explore a real-world example of artificial intelligence (AI).

Lesson Objectives

By the end of the lesson the students will:

- Get a high-level understanding of how Artificial Intelligence can be used to collect data about forest fires
- Create coding solutions that include sequences, events, loops, and conditionals
- Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions
- Iterate on solutions to complete a task

The lesson also includes free time to explore coding concepts they've learned through playing to deepen their understanding.

Supporting File and Links

- [Lesson Plan](#)
- [Solutions](#)
- [Intro video](#)
- [Lesson walkthrough video](#)
- [Software and Hardware Requirements](#)

Use Python Basics to Solve Mysteries and Find Answers

There's a secret message that needs a code cracker to find the truth. Solve the code mystery to reveal a location. Get a glimpse into the popular Python programming language with this introductory lesson that requires no coding experience.

Requirements and Software used

- Windows 10, Mac, or Linux devices meeting recommended requirements. See supporting files and links
- Visual Studio Code
- Python 3

How to Get Started

- Navigate to [Use Python basics to solve mysteries and find answers - Learn | Microsoft Docs](#)
- Follow the instructions found in the first module?: [Set up your Python beginner development environment with Visual Studio Code - Learn | Microsoft Docs](#) for a walkthrough on how to set up Python and VS Code.
- Continue to the next module: [Crack the code and reveal a secret with Python and Visual Studio Code - Learn | Microsoft Docs](#)
- Optionally complete the last module: [What is your super sleuth personality? - Learn | Microsoft Docs](#)

Guiding Idea

You are a novice but dedicated sleuth, and you enjoy solving mysteries. Harness the power of Python and Visual Studio Code to find solutions programmatically and resolve intrigue.

Lesson Objectives

By completing all three modules students will

- Discover ways you can engage with code to solve basic problems
- Write your first lines in Python
- Build a message decoder program
- Create a personality quiz to determine your super sleuth character

Supporting Files and Links

- [Lesson](#)
- [Requirements for Visual Studio Code](#)
- [Additional Student lessons on Microsoft learn](#)
- [YouTube Walkthrough of similar lesson](#)