



# PIONEERS Co-Op

P.O. Box 6425, Jackson MI 49201

Voicemail: (517) 888-4328 Email: OfficeAdmin@pioneershess.org

Website://pioneershess.org

## Overview of **COMPUTER SCIENCE** with Microsoft Minecraft (Grades 8-12)

**Tutor:** Mrs. Jenn McGarry  
517-499-8435  
mcgarry@pioneershess.org

**Textbook:** Not required. All lessons have been created by Microsoft in Minecraft Education.

### Required Supplies:

- Laptop – Windows PC, Chromebook or Mac with Internet access
- Pencil/Paper
- 2-pocket folder for handouts

**Lab Fee:** \$5.00/year (covers student subscription to Minecraft Education)

**Class Description:** While all lessons have been created by Microsoft in Minecraft Education, as the instructor, I may create my own activities to facilitate more activities, quizzes or challenges over each topic. To learn more about how you can help, encourage or participate with your child, please go to <https://education.minecraft.net/en-us/get-started/parents>.

In this class, we will focus on an intermediate level of Computer Science topics. We will cover topics such as Personal Information & Privacy, Online Safety, and cover why these things are important. We will then move into computational thinking, functions, algorithms using pseudo-code. Using the foundational understanding learned from this, we will move into programming with Python using Minecraft Education. This is an intermediate class that will prepare the students who already have an understanding of technology, for living in an online world with the increase in popularity of AI's like ChatGPT, Microsoft's Copilot and others.

### Topic Overview:

- Personal Information & Privacy
- Online Safety
- Cybersecurity
- Artificial Intelligence
- Coding – with Python

### Learning Objectives

- Understand the importance and benefits of the Internet in our everyday lives.
- Identify and avoid common cybersecurity risks by remembering, "STOP and THINK before you CLICK."
- Build awareness to ensure the privacy of personal information.
- Advocate for help from trusted adults if you are unsure or uncomfortable.
- Build awareness with families about their role in making a safer internet.
- Keep login information private.
- Discuss real-world cybersecurity problems and how personal information can be protected.



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- Explain how physical and digital security measures protect electronic information.
- Consider ways of managing the use of social media to maintain privacy needs.
- Discuss digital citizenship rules and behaviors for participating in an online environment.
- Apply safe practices while participating in online environments.
- Use technology safely, respectfully, and responsibly; recognize acceptable/unacceptable behavior; identify a range of ways to report concerns about content and contact.
- Explain the concept of Artificial Intelligence (AI) and its relevance in different aspects of our daily lives.
- Explore the rules that make sure AI is helpful, safe, and fair for everyone.
- Utilize coding concepts and computational thinking to develop algorithmic reasoning and problem decomposition skills for creating effective coding solutions.
- Understand the potential impacts of AI on people and society.
- Apply new learning about AI to gain awareness of CS career connections.

## Student Evaluation:

|                     |     |
|---------------------|-----|
| Class Participation | 10% |
| Homework            | 30% |
| Quizzes             | 20% |
| Tests or Projects   | 40% |

## Grading Scale

|               |    |
|---------------|----|
| 90-100%       | =A |
| 80-89%        | =B |
| 70-79%        | =C |
| 60-69%        | =D |
| Less than 60% | =E |