

EDUCATOR RESOURCE GUIDE

# THE GREAT TECH STORY

CHM



# GAME OVERVIEW

**The Great Tech Story**, the Computer History Museum's world in Minecraft: Education Edition, empowers students from ages 8–18 to become engaged digital citizens. They will be inspired to make and use technology that impacts the world for the better. Students navigate the virtual museum to learn about the impact of computing technology and its relationship between the past, present, and future. They can explore the artifacts on display and interact with non-player characters (NPCs) and click links to "Learn more."

Five of the NPCs invite students to teleport themselves to immersive experiences to learn hardware and software concepts, meet a startup team, debate ethics in tech, and see how technology is used in daily life.

After completing the five experiences, students engage in a build challenge that focuses on collaboration, critical thinking, and creativity, to build their capacity as active problem solvers and future innovators.

Build challenges are available on our website [here](#).

Check back over time for new build challenges.

## SUGGESTIONS FOR CLASSROOM FACILITATION

Educators may choose to facilitate **The Great Tech Story** in a variety of ways.

- Assign students to explore the museum and the five immersive experiences either in a single lesson, or over the course of several lessons to align with classroom curriculum.
- Assign students to complete a build challenge applying knowledge and skills gained exploring the museum and learning experiences.
  - a. **Build:** Guide students to follow the build challenge prompt on the [CHM Build Challenge web page](#).
  - b. **Record:** Each student/team should record a video up to two minutes in length about their finished build. Students under 18 will need a parent, guardian, or educator to submit the recording. Video submissions should show the finished build with student narration to explain: what they built, why they built it, and how they integrated concepts from the immersive experiences and museum content.
  - c. **Submit:** Complete the online form on the [CHM Build Challenge web page](#) to submit student recordings. Selected submissions may be shared on the CHM website.

- Assign students to explore the museum and learn about the various artifacts in alignment with the classroom curriculum. Suggested assignments include:
  - a. Students explore the artifacts on display and select three that interest them. They can click the links to “Learn more” and research the artifact to discover the history and purpose of each, then write a short report or present their findings to the class.
  - b. Students interact with NPC innovators in the museum and select one that interests them. They can click the links to “Learn more” and research the person to discover their background, the technology they worked with and the impact it has had, then write a short report or present their findings to the class.
  - c. Educators guide students through the museum in large or small groups as a virtual field trip experience, then students can continue to explore independently.
  - d. Educators create a scavenger hunt of items from the [list of artifacts](#) for students to search for and learn about specific artifacts and/or innovators in the museum. Educators may choose to select artifacts and/or innovators that are relevant to the topics they are teaching in the classroom.

## IMMERSIVE EXPERIENCES

Five NPCs located throughout the exhibits teleport students to immersive experiences to explore different topics related to computing and technology.

NPC Name	NPC Image	Location in Exhibit	Immersive Experience
CHM Tour Guide		Relay	The Hardware Garage
Margaret Hamilton		Lunar Lander	The Software Lab
Entrepreneur		Palm Pilot	The Startup Workspace
Ethics TA		Self-driving Car	The Ethics Forum
Tech User		Texting	The Impact House

# THE HARDWARE GARAGE



In this experience, students will meet historic technology innovators and learn about some of the key hardware components of computers.

## LEARNING OBJECTIVES:

- Learn about basics of hardware—internal and external.
- Engage with interactives and content to explore concepts of: relays and switches; AND/OR logic gates; components of a computer; microchips and Moore's law; networking.

# THE SOFTWARE LAB



In this experience, students will meet historic technology innovators and learn about some of the key concepts of computer software.

## LEARNING OBJECTIVES:

- Learn that software is a set of instructions or code that a machine or computer can process to perform a function.
- Learn what code and algorithms are and where they came from.
- Engage with interactives to explore concepts of: automation; punched cards; stored programs; branching; computer languages and compilers.

# THE STARTUP WORKSPACE



In this experience, students will meet a team of five NPCs discussing “Project X.” In the team’s workspace, students engage with each NPC to learn about their roles and responsibilities in the startup company, the challenges they face in the engineering design process, and the tech innovator’s journey.

## LEARNING OBJECTIVES:

- Explore and understand the engineering design process and the journey of an idea from a prototype to a product.
- Learn about ways that new ideas and companies get funded.
- Understand how team members collaborate and contribute unique perspectives in the development of a product.

# THE ETHICS FORUM



In this experience, students will meet a team of five NPCs discussing important issues and values that are important to consider when technology is designed, built, used or reimaged.

## LEARNING OBJECTIVES:

- Learn to think critically when building and using technology.
- Explore concepts of transparency, privacy, access, intentions, and diversity.

# THE IMPACT HOUSE



In this experience, students will meet a family of six, including a grandmother, mother, father, and three kids. Each character shares something about the technology they are using in their daily life.

## LEARNING OBJECTIVES:

- Learn and think critically about the intersection and impact of technology with real people and the world.
- Consider how technology can assist people with different abilities and needs.

# STANDARDS ALIGNMENT

The Great Tech Story and its accompanying build challenges align with ISTE and CSTA standards. Facilitated by educators, students will explore technology through a variety of lenses and practice skills such as critical thinking, problem solving, creativity, collaboration, and communication.

## CSTA K-12

2-IC-20 Compare tradeoffs associated with computing technologies that affect people's everyday activities and career options.

2-IC-21 Discuss issues of bias and accessibility in the design of existing technologies.

3B-CS-02 Illustrate ways computing systems implement logic, input, and output through hardware components.

## ISTE

1e (Computational Thinking) Recognize how computing and society interact to create opportunities, inequities, responsibilities and threats for individuals and organizations.

4b (Computational Thinking) Design authentic learning activities that ask students to leverage a design process to solve problems with awareness of technical and human constraints and defend their design choices.

4c (Computational Thinking) Guide students on the importance of diverse perspectives and human-centered design in developing computational artifacts with broad accessibility and usability.

6c Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems.

## SUPPLEMENTAL RESOURCES

Learn more about some of the game's non-player characters (NPCs).

[Glossary of terms](#) used in the game.

[List of all artifacts](#) in the game.