MINECRAFT

EDUCATION EDITION

Build Challenges

These build challenges for Minecraft: Education Edition are designed to engage learners' creativity and strengthen 21st century skills with easy-to-implement activities for your classroom or remote learning. To view additional build challenges or to search through hundreds of educational standards-aligned Minecraft lessons, please visit https://education.minecraft.net. To view a playlist of short introductory videos for each Minecraft Build Challenge, click here and use settings to change the caption to your language.

Quick Start

Getting started with Minecraft: Education Edition is easy.

1. CHECK THAT YOUR ACCOUNT IS ELIGIBLE

Minecraft: Education Edition is available through June 2020 for all educators and learners who have a valid Office 365 Education account. **Click here** to **see if your school account is eligible.** If you have a valid account, **fill out this form** to request access to Minecraft: Education Edition. (If you do not have a valid account, download the app below for a free demo lesson.)

2. DOWNLOAD & INSTALL THE APP

Download Minecraft: Education Edition **for Windows, Mac, or iPad.** Follow the directions on the page to ensure your device is setup to support Minecraft.

3. LOGIN

After you download and launch Minecraft: Education Edition, login with your Office 365 school account and password.

4. START A BUILD CHALLENGE

Take a look at the Build Challenges in this document. Links will download the world files that you need for each challenge. Double-clicking these files will open them in Minecraft: Education Edition where you can start creating, exploring, and learning right away.

5. OTHER LEARNING OPPORTUNITIES WITH MINECRAFT

Whether teaching in the classroom or working from home, Minecraft: Education Edition is great for:

- Projects in social studies, language arts, art and design
- Science, technology, engineering and math learning
- Learning to code
- Completing art and design projects
- Learning 21st century skills like creativity, collaboration, communication, and critical thinking

BLOCK BIOGRAPHY

Research a famous figure and create a quiz to convey this information in Minecraft.

https://aka.ms/BiographyWorld

Objective

History is full of famous faces. Bring your biography project to life with an interactive quiz. Your challenge is to research a famous figure and convey this information in Minecraft. Create a quiz to share with a partner that features biographical facts and a creative representation of your chosen figure. This could be a statue, a portrait, or a symbol.

Extensions

- Take screenshots or make a video of your world to use as part of a presentation.
- Share your work with the class and see if they can guess your subject.
- Use a structure block to export your sculpture and 3D print your creations to create a sculpture gallery.

MODELING GRATITUDE

Use Minecraft as a way to creatively model gratitude.

Objective

Research has shown that positive social activities such as expressing gratitude can lead to stronger relationships, improved quality of life, and may motivate us to give back to our community. Your challenge is to use Minecraft to creatively model gratitude. Close your eyes and visualize a time another person did something to benefit you. How did it make you feel? Use Minecraft to build a scene with images and words to express this episode. Use the camera, portfolio, and book and quill to capture your work and share your thoughts about who and what you appreciate.

Extensions

- Write a short narrative or poem to accompany your creation.
- Pair with an activity to recall acts of kindness you performed yourself.
- Instead of a scene, build an object to represent your experience.

VISIT TO THE ISS

This student build challenge created in partnership with NASA invites you to visit the International Space Station in Minecraft: Education Edition.

https://aka.ms/ISSBuildChallenge
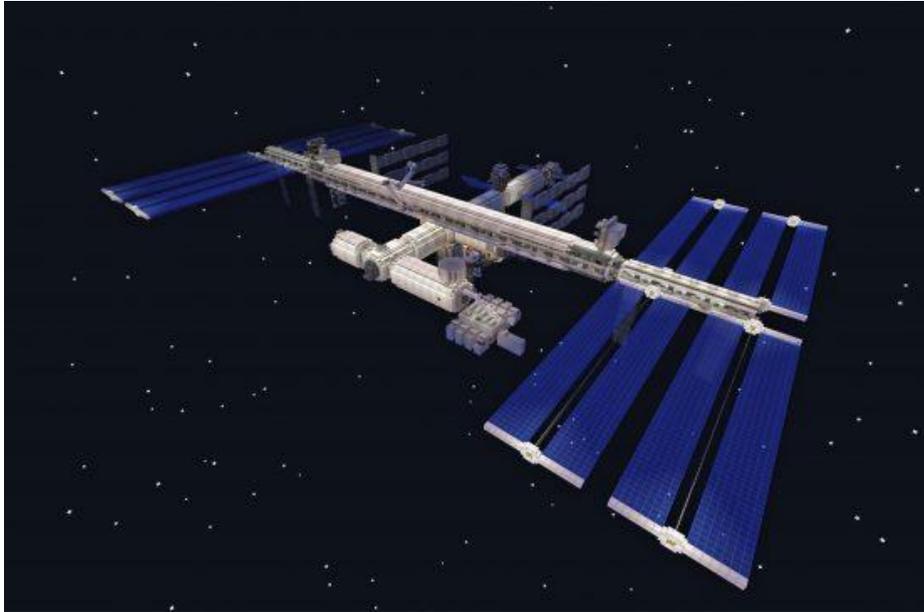
Objective

Did you know that humans have been living in space for almost 20 years? Minecraft: Education Edition is celebrating this historic milestone in partnership with NASA with a new International Space Station world for you to explore! The station has been continuously occupied since November 2000, and orbits Earth every 90 minutes. The six-person crew lives and works in the solar-powered station, which offers sleeping quarters, bathrooms, a gym and a 360-degree view bay window to look down to Earth. Researchers from 103 countries have conducted thousands of experiments on board, and you are next! Design a new module for the space station and describe what hypothetical scientific experiments you will run.

Extensions

- Go on a scavenger hunt, find and label each of the station's parts and modules then write a description about how each is used.
- Research facts about the station using the NASA website and tools like Eyes on the Solar System.
- Use the Camera, Book & Quill and Boards in Minecraft: Education Edition to document your work.

BUILDING SYSTEMS

Build a system within Minecraft to learn more about how it works.

https://aka.ms/SystemsChallengeWorld

Objective

A system is a group of interrelated elements that form a unified whole. Understanding how systems work is vital skill to understanding the world around us and our place in it. Your challenge is to illustrate a system within Minecraft. This could be a natural system such as the water cycle, photosynthesis, or circulatory system, or a human-made system such as an electrical circuit, an optical camera, or even a political process.

Extensions

- If applicable, track energy transfer within a system and define if it is open or closed.
- For an easier activity, make a simple cause and effect machine.
- For a bigger challenge, try to create a Rube Goldberg style machine.

TIME MACHINE

Re-imagine a space in your community, school, or home What will the space look like 100 years in the future or 100 in the past?
https://aka.ms/TimeMachineChallenge

Objective

Choose a space in your community, school, or home then use Minecraft to reimagine the space. What will the space look like 100 years in the future? What did the space look like 100 years ago? How can the space change to meet a current or future need? What necessitated the changes over time? Watch the video introduction.

Extensions

- Use the Book & Quill to write a short essay to accompany your build about the changes you foresee or those you researched. Use the structure block and mixed reality viewer to photograph your creation next to the real location.

HARVEST TIME

Challenge yourself to code the Agent to improve the efficiency of growing and harvesting crops through automation.

Objective

As the world population grows, optimizing food production is becoming increasingly more important. Your challenge is to code the Agent to improve the efficiency of growing and harvesting crops through automation. Just like in the real world, crops in Minecraft have special requirements to successfully grow. Use the book and quill to take notes on the choices you made to automate your farm and about the variety of crops you chose to grow.

Extensions

- Investigate real ways farmers are using automation to increase crop yield.
- Research the world food crisis and talk about contributions you can make locally.
- Code the agent to carve a pumpkin Minecraft then replicate the design the real life.
- Share images or video of your Agent automated farm with the class.

MINECRAFT MICRO MODELS

Create scientific models in Minecraft to communicate information about structures and concepts.

https://aka.ms/HarvestTimeWorld

Objective

Developing and using models is a key skill in understanding the world around us. Scientists can use models to represent ideas, processes, and structures and communicate information to others. Your challenge is to construct a model in Minecraft of something too small to be seen by the human eye. Research images of structures or organisms such as atoms, proteins, viruses, cells, or micro-animals then work to accurately construct your own three-dimensional model in Minecraft.

Extensions

- Label the parts of your model and use tools like the camera and portfolio to document your work.
- Work collaboratively to model parts of larger a system, such as the human body or the water cycle.

AGENT RESCUE

Interact with patterns in this world to give yourself a coding workout and use the Agent to save the day!

https://aka.ms/AgentRescueWorld

Objective

Interact with patterns in this world to give yourself a coding workout and use the Agent to save the day!

Extensions

- Plan out patterns on graph paper then create your own patterns by coding the Agent.
- Use the camera to take pictures and share with your class.
- Look at architectural patterns on real world buildings for inspiration.
- Use code to have the agent create an entire building.
- Try to complete the patterns using as few lines of code as possible.

DESERT ISLAND

Use this desert island world as a setting to build an object in Minecraft representing the one thing you would want to have on a desert island.
https://aka.ms/DesertIslandWorld

Objective

Use this desert island world as a setting to build an object in Minecraft representing the one thing you would want to have on a desert island.

Extensions

- Take pictures of your creations with the camera and share back with the class.
- Write a paragraph about what you built and why. Was your choice driven by necessity or comfort? Use as a writing prompt, what would happen next if you were stranded on an island with this item?
- Once you are done, switch to survival and see how long you can survive on the island with only the resources provided!

BOOK COVER

Use this book themed world to create your own Minecraft book covers. Your designs could be 2D or 3D.

https://aka.ms/BookCoverWorld

Objective

Use this book themed world to create your own Minecraft book covers.
Your designs could be 2D or 3D.

Extensions

- Use the camera to take pictures and share with your class.
- Choose a book to create a cover for or design a cover for your own original story!
- Start a new world or use the space around the book to build more scenes from the story. Choose a scene from each chapter, or to represent the Aristotelian story structure.