Prompt Lab

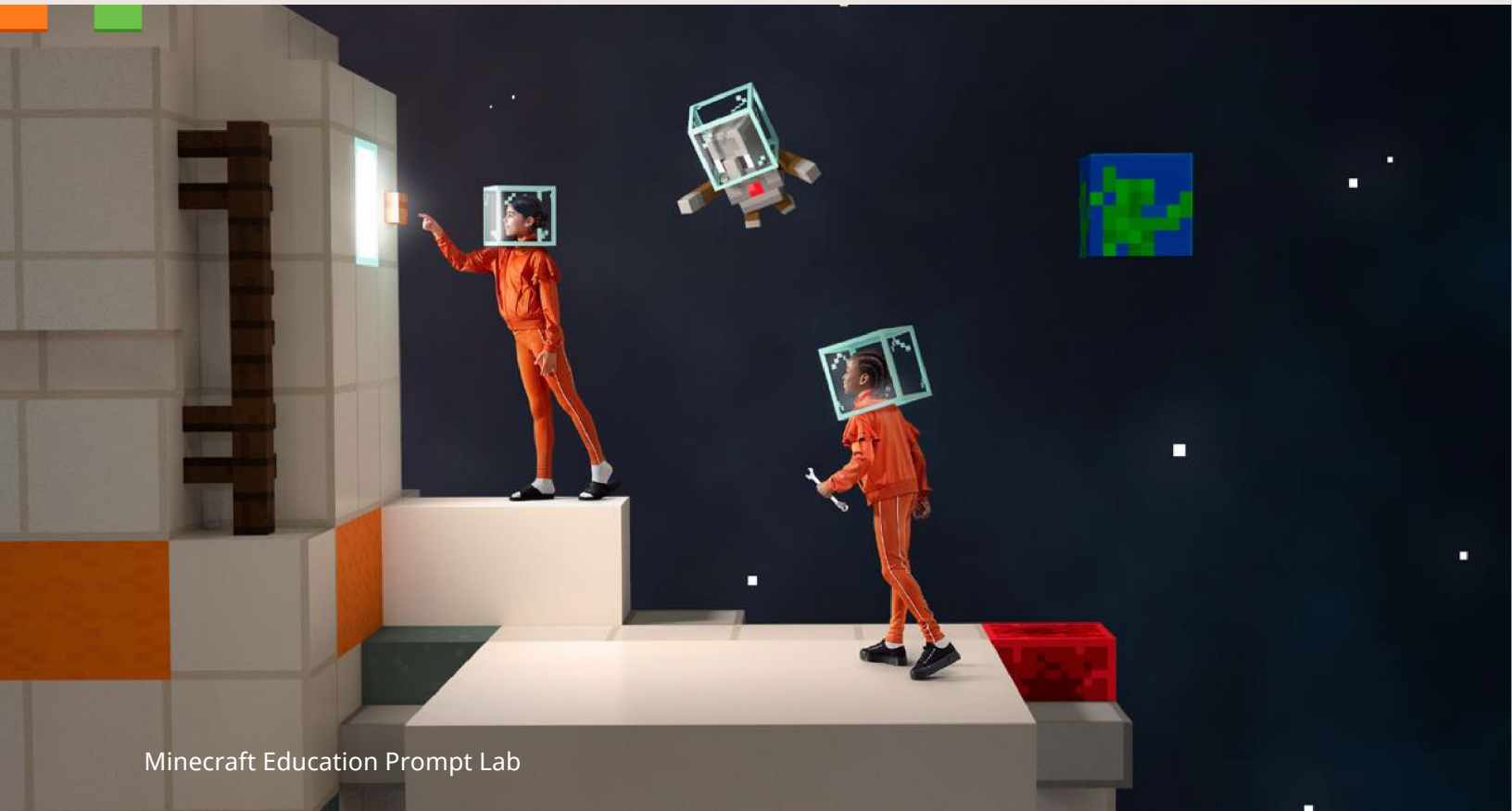
Working with Minecraft Education and Microsoft Copilot

Introduction

Welcome to Minecraft Prompt Lab for Educators, a transformative journey into integrating Minecraft Education and Microsoft Copilot into your teaching practice.

This series is designed to empower educators with the skills and knowledge to creatively use Minecraft Education as a dynamic teaching tool, leveraging the strengths of Microsoft Copilot to enhance the learning experience.

Through this series, you will embark on a path to not only understand the educational potential of Minecraft but also to skillfully weave it into your curriculum to achieve specific learning objectives.



Minecraft Education Prompt Lab

Who Is This Series For?

This module is specifically designed for educators and teachers who are eager to embrace innovative teaching methods by integrating Minecraft Education and Microsoft Copilot into their classrooms. Whether you are a seasoned educator familiar with game-based learning or new to the concept, this module is for you if:

- **You are seeking dynamic teaching tools**: If you aim to bring a fresh perspective to your teaching methods and engage your students in a more interactive and enjoyable learning process, this module will guide you on how to use Minecraft Education effectively.
- **You want to enhance student engagement**: Ideal for educators looking to boost student motivation and participation through interactive and immersive learning experiences.
- **You are open to technology integration in education**: This module is perfect for those who are enthusiastic about incorporating advanced technologies like AI (Artificial Intelligence) and game-based learning platforms into their teaching practices.
- **You aim for curriculum innovation**: If your goal is to transform your curriculum to be more adaptable, creative, and aligned with 21st-century skills, this journey through Minecraft and Copilot will provide you with the necessary tools and strategies.
- **You prioritize collaborative and problem-solving skills**: Educators focused on developing critical thinking, collaboration, creativity, and problem-solving skills in their students will find this module particularly beneficial.

This module is a steppingstone towards revolutionizing your teaching approach, making your classroom a more engaging, informative, and innovative environment.

Series Objectives

- **Understanding Minecraft Education as a Teaching Tool**: Develop a foundational understanding of how Minecraft Education can be used to foster student creativity, collaboration, critical thinking, and problem-solving skills.
- **Integrating Minecraft into Curricular Goals using Copilot**: Learn to seamlessly integrate Minecraft Education into your curriculum, using Microsoft Copilot to align with educational standards and learning objectives.
- **Designing Engaging Minecraft-Based Lesson Plans using Copilot**: Gain competence in creating comprehensive and engaging lesson plans, utilizing Microsoft Copilot to effectively incorporate the "Build a Satellite" challenge in Minecraft Education.
- **Applying Real-World Concepts in Minecraft, supported with Copilot**: Master the ability to translate real-world scenarios and concepts into the Minecraft setting, enriching your students' learning experiences.

Module Format

This series combines interactive hands-on activities, and demonstrations. You will engage with a mix of instructional content, guided Minecraft sessions, and collaborative discussions, all aimed at building your proficiency in using Minecraft Education and Microsoft Copilot as an educational tool.

By the end of this module, you will be well-prepared to integrate Minecraft Education and Microsoft Copilot into your teaching, enhancing the learning experience for your students with the innovative use of technology.

Modules are divided into **Learning** (things to know and understand) and **Labs** (things to practice).

Prerequisites for this Series

Before we dive into the exciting journey of integrating Minecraft Education and Microsoft Copilot into your teaching practice, it's important to ensure you are well-prepared. Below is a list of prerequisites designed to maximize your learning experience in this series.

- Basic Familiarity with Minecraft.
- Understanding of Educational Technologies.
- Foundational Knowledge in Pedagogy.
- Comfort with Technology.
- Interest in Game-Based Learning.
- Basic Understanding of AI Tools.
- Creativity and Openness to New Methods.
- Access to Necessary Resources.

Important Data Privacy Warning

As you engage in building educational prompts, particularly when using digital tools like Minecraft Education and Microsoft Copilot, please be considerate about data privacy and protection. Privacy and data protection are not just legal requirements but ethical imperatives in education.

Please heed the following warning:

Do Not Share Personal or Sensitive Information

- Avoid Using Personal Data
- Student Privacy is Paramount
- Compliance with Privacy Laws
- Use Secure Platforms
- Educate About Privacy

How to Get Started – Minecraft Education

If you are licensed to use Minecraft Education through your O365 EDU account, download directly at https://aka.ms/download or reach out to your IT department for assistance.

More information on deployment and license assignment can be found at https://aka.ms/meedeployguide

Here's how to get setup:

- First, check here to see if your school account is eligible.
- If you do not have a valid O365 EDU account, you can still download and play for free on Windows, Mac or iPad.
- Download Minecraft Education for Windows, Mac, Android Phone & Tablets, Chromebook, iPhone or iPad.

Once you are set-up with Minecraft Education, you should:

- If you are new, become familiar with the basic functions of Minecraft Education, using the videos on Getting Familiar with Minecraft Education (youtube.com)
- Check out the Minecraft Education learning available for fere on MS Learn Minecraft Education: Teacher Academy - Training | Microsoft Learn

Understanding Minecraft Education and Microsoft Copilot

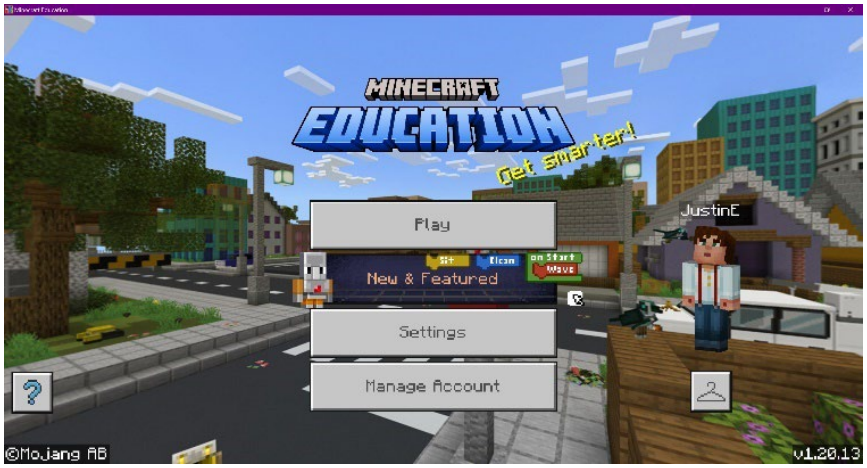
In this lesson you will gain a basic understanding of the educational benefits and applications of Minecraft Education https://education.minecraft.net/en-us and Microsoft Copilot https://copilot.microsoft.com/ in fostering student creativity, collaboration, critical thinking, and problem-solving skills.

Minecraft Education Prompt Lab

Minecraft Education, its features, and its role in modern education.

Key Features of Minecraft Education:

- **Engagement and Motivation**: Minecraft Education engages students in a familiar and fun environment, boosting motivation and interest in learning.
- **Skill Development**: Facilitates the development of 21st-century skills such as creativity, problem-solving, digital literacy, and collaboration.
- **Adaptable Learning**: Adapts to different learning styles and levels, allowing for personalized education experiences.
- **Interdisciplinary Approach**: Encourages an interdisciplinary approach to learning, blending elements of gaming with traditional educational content.
- **Global Education Community**: Connects educators and students globally, sharing resources, ideas, and learning experiences.



Minecraft Education represents a significant shift in educational methods, aligning with modern pedagogical approaches that emphasize interactive, student-centred learning. It's an innovative tool that brings a fresh perspective to the classroom, making learning more dynamic, relevant, and enjoyable for students.

Minecraft's Role in Modern Education

- Engagement and Motivation: Minecraft Education engages students in a familiar and fun environment, boosting motivation and interest in learning.
- Skill Development: Facilitates the development of 21st-century skills such as creativity, problem-solving, digital literacy, and collaboration.
- Adaptable Learning: Adapts to different learning styles and levels, allowing for personalized education experiences.
- Interdisciplinary Approach: Encourages an interdisciplinary approach to learning, blending elements of gaming with traditional educational content.
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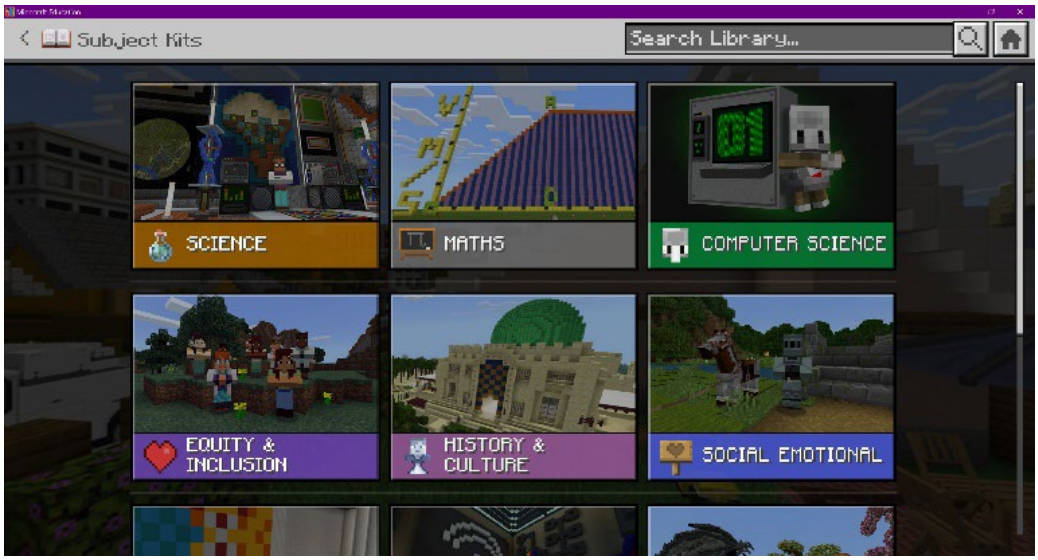
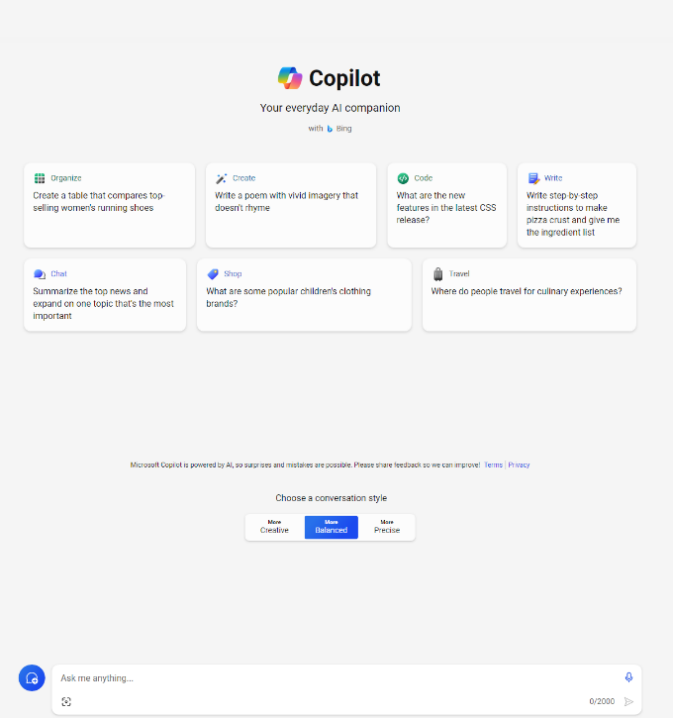


What is Microsoft Copilot?

Microsoft Copilot https://copilot.microsoft.com/ is an AI-powered tool designed to assist in various tasks, particularly in the realm of content creation, data analysis, and problem-solving. It leverages advanced AI algorithms to understand and execute a wide range of commands and queries, making it a versatile assistant in many professional scenarios, including education.

Key Capabilities of Microsoft Copilot:

- **Content Generation and Editing**: It's able to generate text-based content like lesson plans, email drafts, reports, and more. It also offers editing and enhancement suggestions for existing documents.
- **Data Analysis and Interpretation**: Can analyse large sets of data, providing summaries, insights, and recommendations. It is also useful for interpreting student performance data, survey results, etc.
- **Problem-Solving Assistance**: Helps in brainstorming solutions for various challenges, offering creative and logical suggestions. It can also assist in developing strategies for classroom management, lesson planning, and more.
- **Research and Information Gathering**: Quickly gathers information on a wide range of topics, useful for lesson preparation and staying updated with educational trends. It can compile and summarize relevant research material.
- **Interactive Learning and Feedback**: Provides interactive learning experiences, offering instant feedback and suggestions. Useful for educators in refining their teaching methods and materials.



It’s all about Prompts.

We're going to use Microsoft Copilot and Minecraft Education together to build a great lesson. As we'll work through the rest of this module, getting great results is all dependent on writing great prompts.

Prompts, in the context of interacting with AI systems or creative processes, refer to a set of instructions, questions, or statements designed to elicit a response or guide the generation of content. They serve as a starting point or a guide, helping to direct the focus and scope of the response.

Minecraft Education Prompt Lab

Why is a Good Prompt Important?

A good or great prompt is key to achieving high-quality, relevant, and satisfying results from AI generation tools. It bridges the gap between your imagination and the AI's interpretation, leading to more effective and enjoyable creations.

Writing a good or great prompt when using AI generation tools like Microsoft Copilot is important for several reasons:

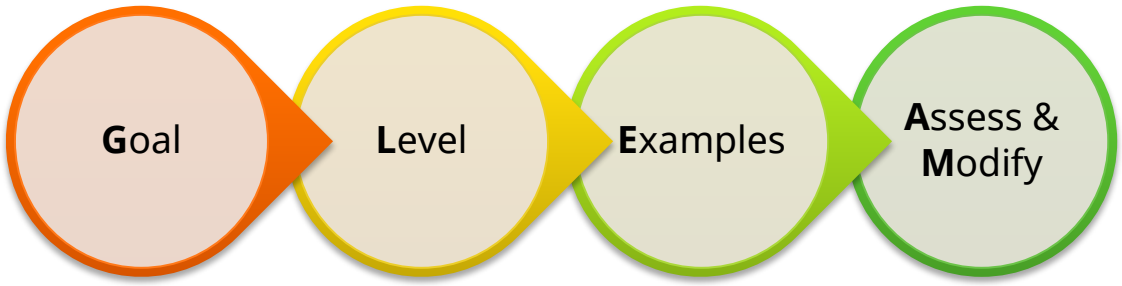
- **Accuracy in Output**: A well-crafted prompt helps the AI in accurately interpreting and rendering your ideas. The more precise and detailed your description, the closer the resulting output will be to your envisioned concept.
- **Reducing Ambiguity**: Vague or overly broad prompts can lead to unexpected or undesired outcomes. Clear and detailed prompts minimize ambiguity, guiding the AI to produce outputs that align more closely with your intentions.
- **Enhancing Creativity**: A good prompt can inspire more creative and unique outputs. By providing specific details and context, you encourage the AI to generate outputs that are not just accurate but also imaginative and engaging.
- **Efficiency and Timesaving**: When your prompt is clear and detailed, it reduces the need for multiple iterations. This saves time, as you are more likely to get a satisfactory result on the first try.
- **Better Utilization of AI Capabilities**: A well-written prompt allows you to make full use of the AI's capabilities. By clearly articulating styles, moods, and specific elements, you can explore the full range of what the AI can create.
- **Avoiding Misinterpretations**: A great prompt leaves less room for the AI to misinterpret your request, ensuring that the content of the generated image is appropriate and aligns with your expectations.
- **Enhanced User Experience**: Crafting a good prompt can be a creative and enjoyable process. It allows you to think deeply about what you want to create, enhancing your overall experience with the tool.

Crafting a Good Prompt

Crafting effective prompts for educational purposes involves clarity, specificity, and relevance to the learning objectives.

Here's how you can adapt the principles for Microsoft Copilot or similar AI tools to education-focused queries using ‘GLEAM’:

- **G - Goal**: Define the educational goal or objective of your query.
- **L - Level**: State the educational level or grade level for which the learning is intended.
- **E - Examples**: Request specific examples or analogies to better illustrate the topic.
- **A - Assess**: Critically assess the AI's responses for accuracy and educational value.
- **M - Modify**: Be willing to refine or modify your query based on the responses to get more precise information.



Example of a Good Prompt

Here’s an example of a well-structured educational prompt:

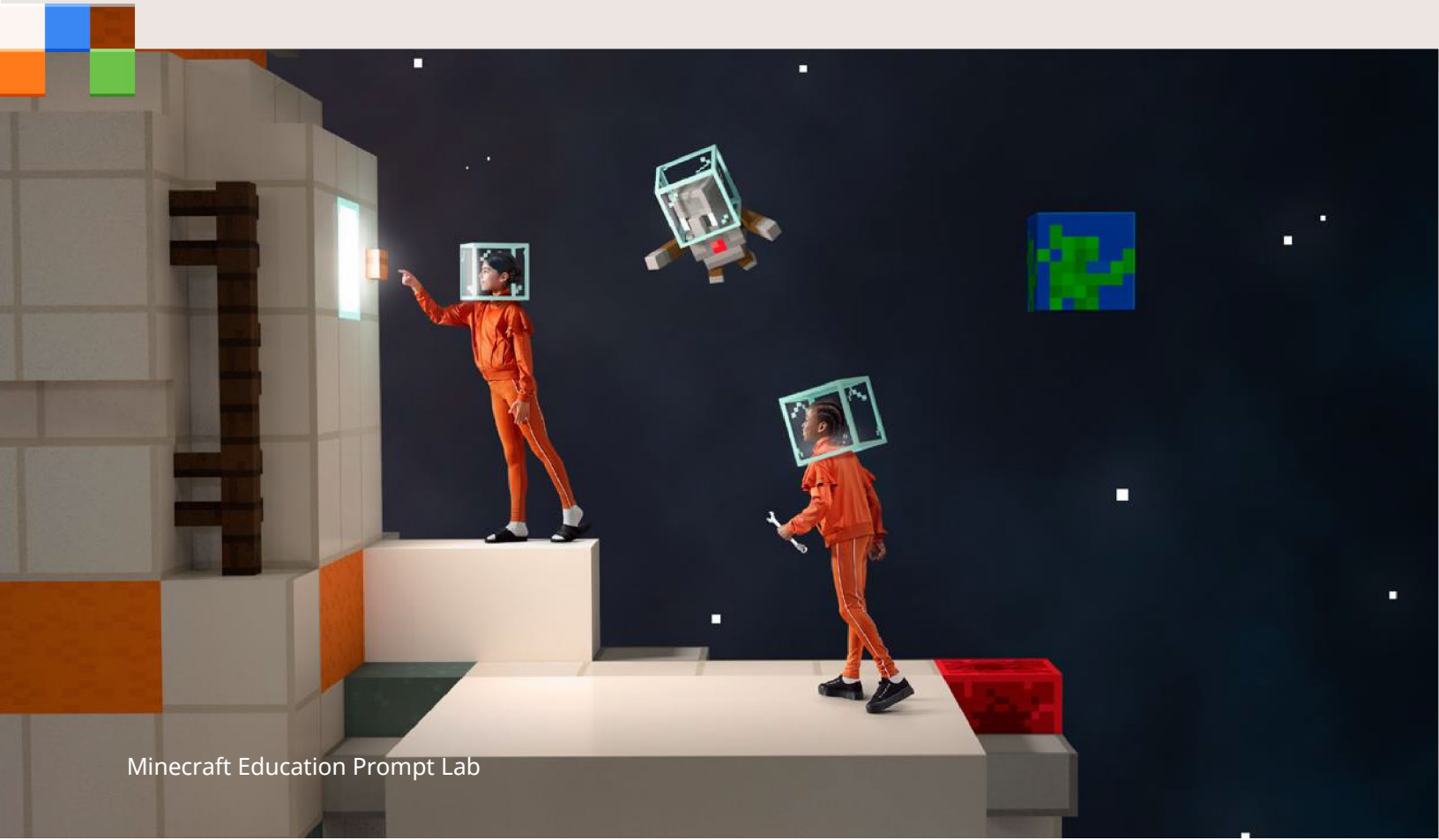
```
"I’m teaching high school students studying American history and I'm
having trouble explaining the significance of the American Civil War.
Could you provide a concise summary of the main causes of the war, its
major events, and its long-term impact on American society?”
```

In this short example, the prompt is clear about the educational need, the level of understanding, and the specific information required, leading to more targeted and useful assistance from the AI.

You can ask AI to assess your prompt against these criteria and provide feedback. Later in this module we’ll explore this.

Build Challenge Prompt Lab

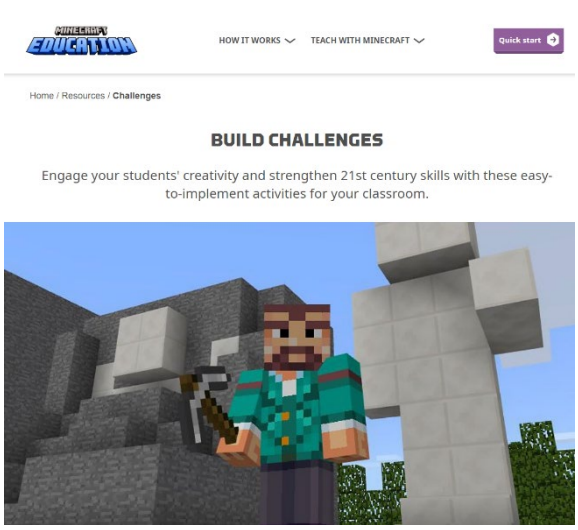
Use Microsoft Copilot to help us make a Lesson Plan for Minecraft Education. Navigate to https://copilot.microsoft.com/



Minecraft Education Prompt Lab

Build Challenges Are a Great Starting Point

We're going to build our immersive and excising lesson around a Minecraft Build challenge.



A Minecraft Build Challenge is an engaging and creative activity often used in educational settings, particularly within Minecraft Education. You can get Build Challenges at

These challenges are designed to encourage students to use their imagination, critical thinking, and problem-solving skills to build something specific within the Minecraft world.

Each challenge usually has a unique theme or a specific goal, providing students with a clear objective to achieve through their builds.

There are many themed build challenges that educators can use in their classrooms.

Here are some great ones to start with:

- **Orbital Outpost** https://education.minecraft.net/en-us/challenges/orbital-outpost : Students design and build a space-themed structure, like a space station or a lunar base.
- **Sports Spectacle** https://education.minecraft.net/en-us/challenges/sports-spectacle : This challenge revolves around creating sports-related structures, like stadiums or athletic fields.
- **Build a Satellite** https://education.minecraft.net/en-us/challenges/build-a-satellite : This challenge combines science and engineering as students design and construct a satellite.

These build challenges not only enhance students' Minecraft skills but also integrate educational elements from various disciplines, making learning more interactive and fun.

They are excellent for promoting collaboration, creativity, and critical thinking.

Build A Satellite

There are more than 7000 satellites in orbit around Earth. We use them every day in our phones, cars, and airplanes. They are the way we stay connected to our modern world. Your challenge is to create a satellite of any shape or size within Minecraft. Choose what purpose your satellite will serve and include details in your build to help the satellite achieve its task. Some examples could be a Communication, Weather, GPS or Research Satellite.

This build challenge is about building a satellite in Minecraft. It is an open template that has a building area, where students can build their own satellite. But we are going to use Copilot to help us build classroom experience using this Minecraft World.

A Minecraft world is a virtual landscape where players can explore, create, and interact within the Minecraft game. These worlds are generated by the game and consist of varied terrains, ecosystems, and features. They can include mountains, forests, rivers, oceans, and various biomes, each with its unique characteristics and resources. Players can mine resources, build structures, and engage with both passive and hostile entities (like animals and monsters) in these worlds.

In the context of Minecraft Education, a Minecraft world becomes an educational space. Educators can use these worlds as interactive environments for teaching various subjects, from history and science to art and mathematics. The worlds can be customized or selected from a range of templates to suit specific educational objectives.

You can open the Minecraft world directly with this link:

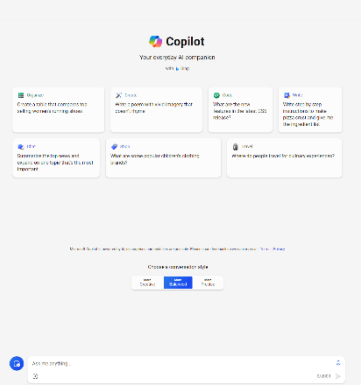
https://education.minecraft.net/world/84eec9f5-5e00-4702-b21e-9f0f3948deff

Or you can access it through this web page:

https://education.minecraft.net/en-us/challenges/build-a-satellite

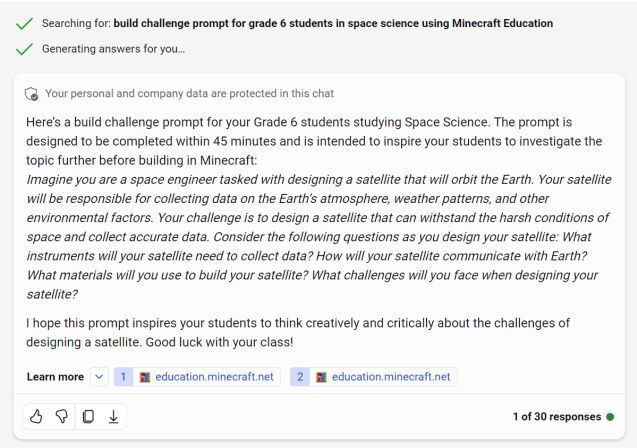
Putting it into practice – Crafting a Build Challenge

Start Microsoft Copilot to help us craft better prompts for education. Navigate to https://copilot.microsoft.com/



Copy and paste the ‘build challenge prompt’ on the next page into the Copilot, swapping out the details in square brackets with information and your prompt.

Now we have a build challenge prompt, which we can now use on a PowerPoint slide for our class.



Build Challenge Prompt

I would like a build challenge prompt for my class. I will be using Minecraft Education and the Build Challenge world name of build challenge] which is located at the web page [website where challenge is located on education.minecraft.net].

The class groups are made up of students of [Grade / Age] and they are studying the subject [add a subject, which could be related to building a community]. The class will last [min]. I would like the challenge to be in a single paragraph, inspiring and lead them to investigate the topic more before building with Minecraft. I would like them to work as [choose individuals or groups] on their Minecraft building.

Example Application

I would like a build challenge prompt for my class. I will be using Minecraft Education and the Build Challenge world 'Building a Satellite' which is located at the web page https://education.minecraft.net/en-us/challenges/build-a-satellite.

The class groups are made up of students of Grade 6 and they are studying the subject Space Science. The class will last 45 min. I would like the challenge to be in a single paragraph, inspiring and lead them to investigate the topic more before building with Minecraft. I would like them to work as Individuals on their Minecraft building.

Example Response from Copilot

Imagine you are a space engineer tasked with designing a satellite that will orbit the Earth. Your satellite will be responsible for collecting data on the Earth's atmosphere, weather patterns, and other environmental factors. Your challenge is to design a satellite that can withstand the harsh conditions of space and collect accurate data. Consider the following questions as you design your satellite: What instruments will your satellite need to collect data? How will your satellite communicate with Earth? What materials will you use to build your satellite? What challenges will you face when designing your satellite?

I hope this prompt inspires your students to think creatively and critically about the challenges of designing a satellite. Good luck with your class!

Add Student Introduction Materials

That's great!

I would like an introduction that I can use with my [Grade of students] students within this class. The introduction should explain a [topic], why they are important and what things we must consider when building them. Also set out some information sources that students can access, that are grade appropriate and supportive on the subject.

Set the text out as a handout in grade appropriate language that the student can follow.

Example Application

That's great!

I would like an introduction that I can use with my Grade 6 students within this class. The introduction should explain a satellite, why they are important and what things we must consider when building them. Also set out some information sources that students can access, that are grade appropriate and supportive on the subject.

Set the text out as a handout in grade appropriate language that the student can follow.

Example Response from Copilot

Here's an introduction that you can use with your Grade 6 students studying Space Science. The introduction is designed to be easily understood by students and provides a brief overview of satellites, their importance, and what to consider when building them:

What is a satellite?

A satellite is an object that orbits a planet or a star. Earth is a satellite orbiting the Sun, and the Moon is a satellite orbiting Earth. Satellites can be natural or artificial. Natural satellites are objects that occur naturally in space, such as the Moon. Artificial satellites are man-made objects that are launched into space and move around Earth or another body in space. Satellites have a variety of uses, including communication relay, weather forecasting, navigation, broadcasting, scientific research, and Earth observation. They can help us learn about Earth and the universe.

Why are satellites important?

Satellites are important because they can collect more data, more quickly, than instruments on the ground. They can see into space better than telescopes at Earth's surface because they fly above the clouds, dust, and molecules in the atmosphere that can block the view from the ground. Satellites can collect data on large areas of Earth at one time, which helps us better understand the planet and its environment. They can also help us predict weather patterns, track hurricanes, and monitor wildfires, volcanoes, and their smoke. Satellites are also used for communications, such as TV signals and phone calls around the world. They help us find our way with GPS.

What things must we consider when building a satellite?

When building a satellite, we must consider several important factors, such as what it looks like and where it is going. We must decide what instruments the satellite will need to collect data, how it will communicate with Earth, what materials we will use to build it, and what challenges we will face when designing it. We must also consider the harsh conditions of space and design a satellite that can withstand them.

Here are some grade-appropriate information sources that your students can access to learn more about satellites:

- *NASA Space Place*
- *NASA/JPL Edu*
- *NASA's Eyes on the Solar System*

Build an Assessment Rubric

Thank you, that's awesome.

Now I would like an assessment rubric for the build challenge. The rubric should be suitable for [Grade] pupils, who are working towards [Your state or Education Jurisdiction]. The rubric should be set out in a table.

Example Application

Thank you, that's awesome.

Now I would like an assessment rubric for the build challenge. The rubric should be suitable for Grade 6 pupils, who are working towards Texas State Standards. The rubric should be set out in a table.

Example Response from Copilot

Here's an assessment rubric for your Grade 6 students working towards Texas State Standards. The rubric is designed to be easily understood by students and provides a clear outline of the criteria that will be used to evaluate their work:

Criteria	***Description***	***Score***
Creativity	*The satellite design is original, imaginative, and visually appealing.*	*1-4*
Functionality	*The satellite is designed to collect data on the Earth's atmosphere, weather patterns, and other environmental factors.*	*1-4*
Communication	*The satellite is designed to communicate with Earth and transmit data effectively.*	*1-4*
Materials	*The satellite is built using appropriate materials that can withstand the harsh conditions of space.*	*1-4*
Presentation	*The student presents their satellite design in a clear and organized manner.*	*1-4*

Each criterion will be scored on a scale of 1-4, with 1 being the lowest score and 4 being the highest score. The total score will be calculated by adding up the scores for each criterion. I hope this rubric helps you evaluate your students' work effectively. Good luck with your class!

Map to Standards

How does this project map to [State / Region] Standards?

Lab 3d: Example Application

How does this project map to Texas State Standards?

Lab 3d: Example Response from Copilot

The project you have designed for your Grade 6 students studying Space Science maps to several Texas State Standards. Here are some of the relevant standards that your students will be working towards:

- *Scientific and engineering practices: Students will plan and conduct investigations to answer questions and explain phenomena using appropriate tools and models. They will identify problems and design solutions using appropriate tools and models 1.*
- *Matter and energy: Students will build upon their knowledge of properties of solids, liquids, and gases and further explore their molecular energies. They will learn how elements are classified as metals, nonmetals, or metalloids based on their properties on the Periodic Table. Students will compare the density of substances relative to fluids and identify evidence of chemical changes 1.*
- *Force, motion, and energy: Students will investigate the relationship between force and motion using a variety of means, including calculations and measurements through the study of Newton's Third Law of Motion. They will learn that energy occurs as either potential or kinetic energy and that energy is conserved throughout systems by changing from one form to another and transfers through waves 1.*
- *Earth and space: Students will study cycles within Sun, Earth, and Moon systems as they learn about seasons and tides. They will identify that the Earth is divided into spheres and examine the processes within and organization of the geosphere 1.*

I hope this information helps you understand how your project aligns with Texas State Standards. Good luck with your class!

END OF LAB 3

Conclusion

In summary, this educational module has aimed to harness the immense potential of Minecraft Education as an innovative and engaging learning tool. Through the practical activities and theoretical insights presented, we've explored how this platform can revolutionize teaching methodologies and foster a more interactive, student-centred learning environment.

As we conclude, it's important to reflect on the key takeaways:

- Versatility in Education: Minecraft Education is not just a game; it's a versatile platform that can be adapted to various subjects and educational levels, from elementary through to higher education.
- Enhancing Student Engagement: By incorporating this tool into your curriculum, you can enhance student engagement, nurture creativity, and develop critical thinking and problem-solving skills in a fun, relatable format.
- Continuous Professional Development: To further deepen your understanding and mastery of using Minecraft Education in the classroom, I highly recommend exploring the MS Learn courses specifically designed for Minecraft Education. These courses offer valuable insights and strategies to effectively integrate this tool into your teaching practice. You can find these resources at Minecraft Education on **MS Learn**.
- Theme-Based Challenges: Additionally, don't forget to utilize the various themed build challenges such as Orbital Outpost, Sports Spectacle, and Historical Homes, among others. These challenges are great for stimulating students' imagination and can be seamlessly integrated into different learning modules. You can explore these challenges in detail at Minecraft Education Challenges.

In closing, the journey of integrating Minecraft Education into your teaching practice is an exciting and ongoing process. Embrace the creativity and flexibility it offers, and witness the transformative impact it can have on your students' learning experiences. Remember, education is not just about imparting knowledge; it's about inspiring and engaging young minds to explore, create, and achieve.