Crafting Language

Helping Students Love Learning through Games

Rik Andes

ESL Program

andes@dixie.edu

Audience Poll

Just to satisfy my curiosity, some questions for the audience.

Raise your hand if you agree with the following statements:

- Grammar drills help students learn a foreign language.
- Grammar drills motivate students to practice the language.
- Authentic, meaning-driven communication improves foreign language acquisition and fluency.
- Games are entertaining distractions, but not good for much else.
- Games can be useful classroom tools for learning.

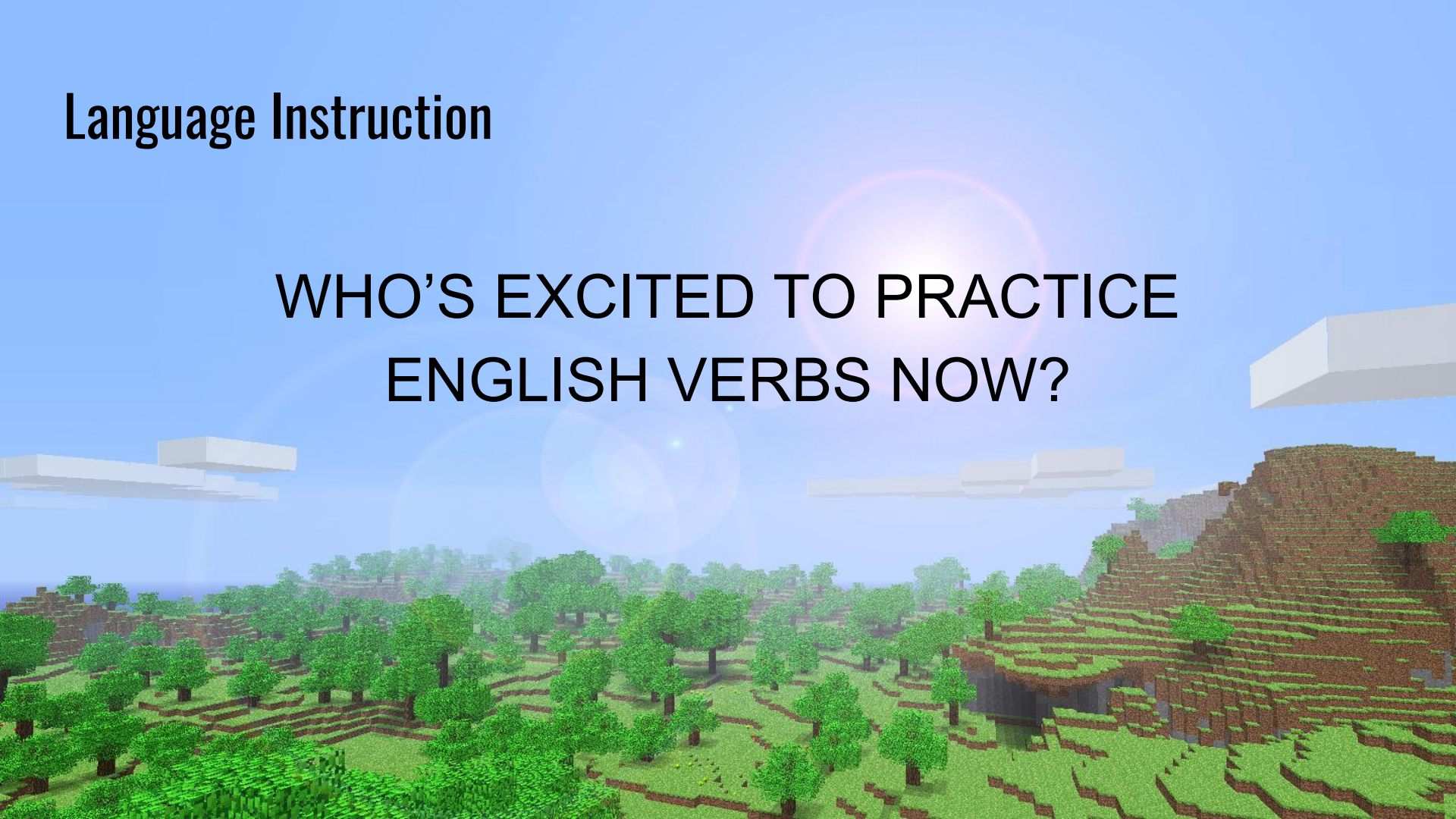
Language Instruction

Frequently, foreign or second language instruction is driven by grammar points (verb tenses, clause structures, etc.), which are then repetitively practiced to create mastery.

Take this video as an example:

Language Instruction

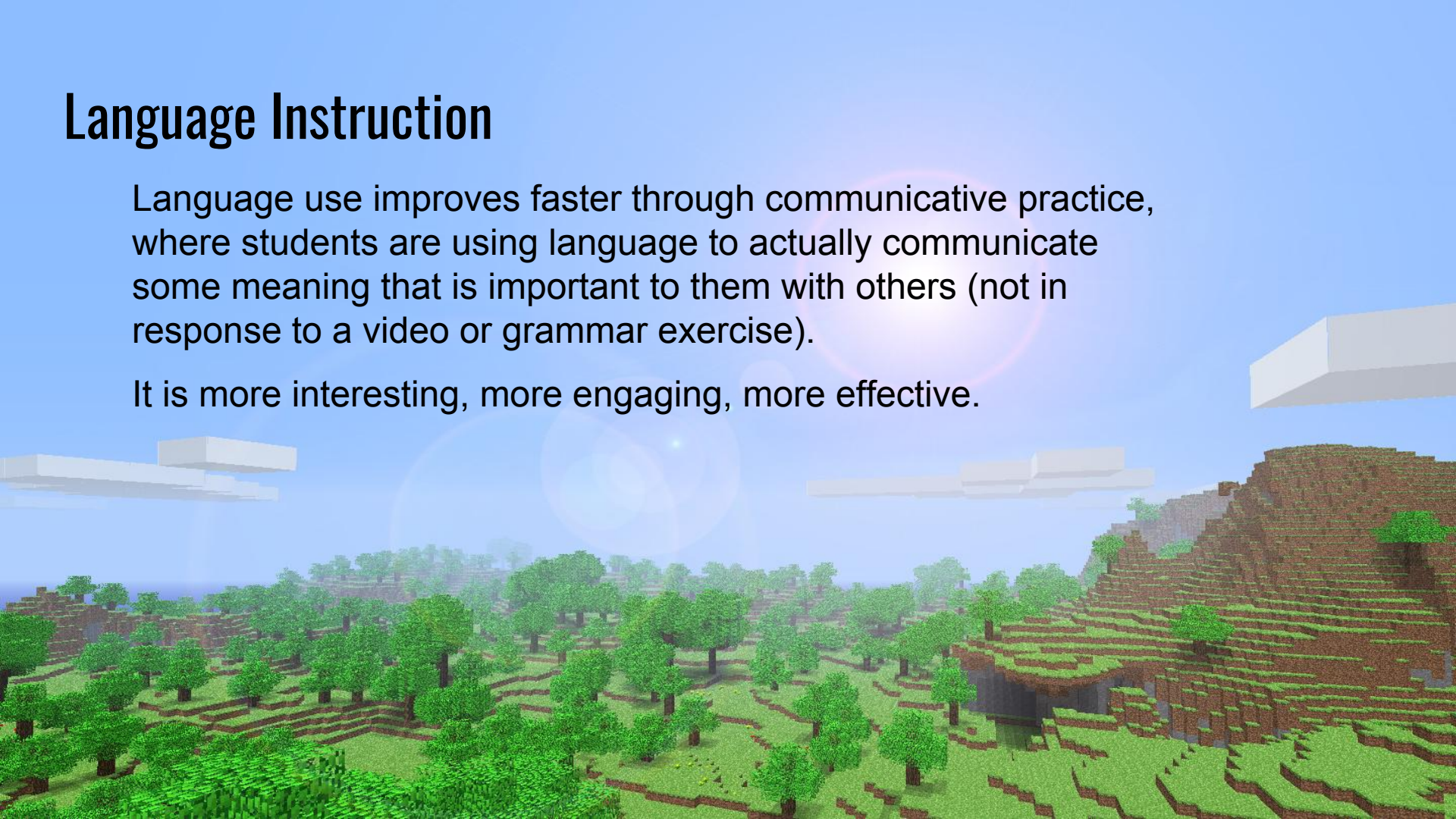
WHO’S EXCITED TO PRACTICE ENGLISH VERBS NOW?



Language Instruction

Language use improves faster through communicative practice, where students are using language to actually communicate some meaning that is important to them with others (not in response to a video or grammar exercise).

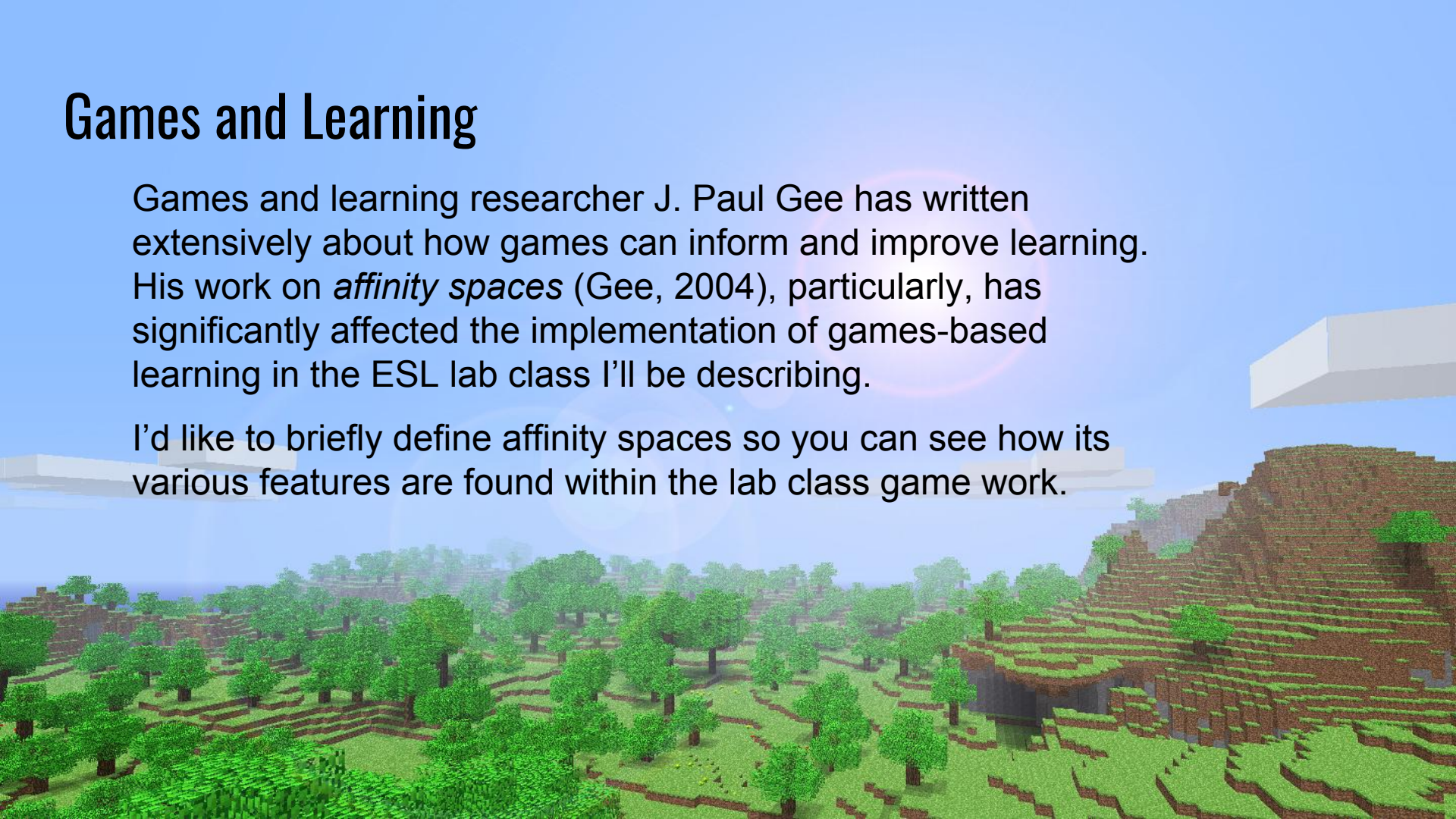
It is more interesting, more engaging, more effective.



Games and Learning

Games and learning researcher J. Paul Gee has written extensively about how games can inform and improve learning. His work on *affinity spaces* (Gee, 2004), particularly, has significantly affected the implementation of games-based learning in the ESL lab class I'll be describing.

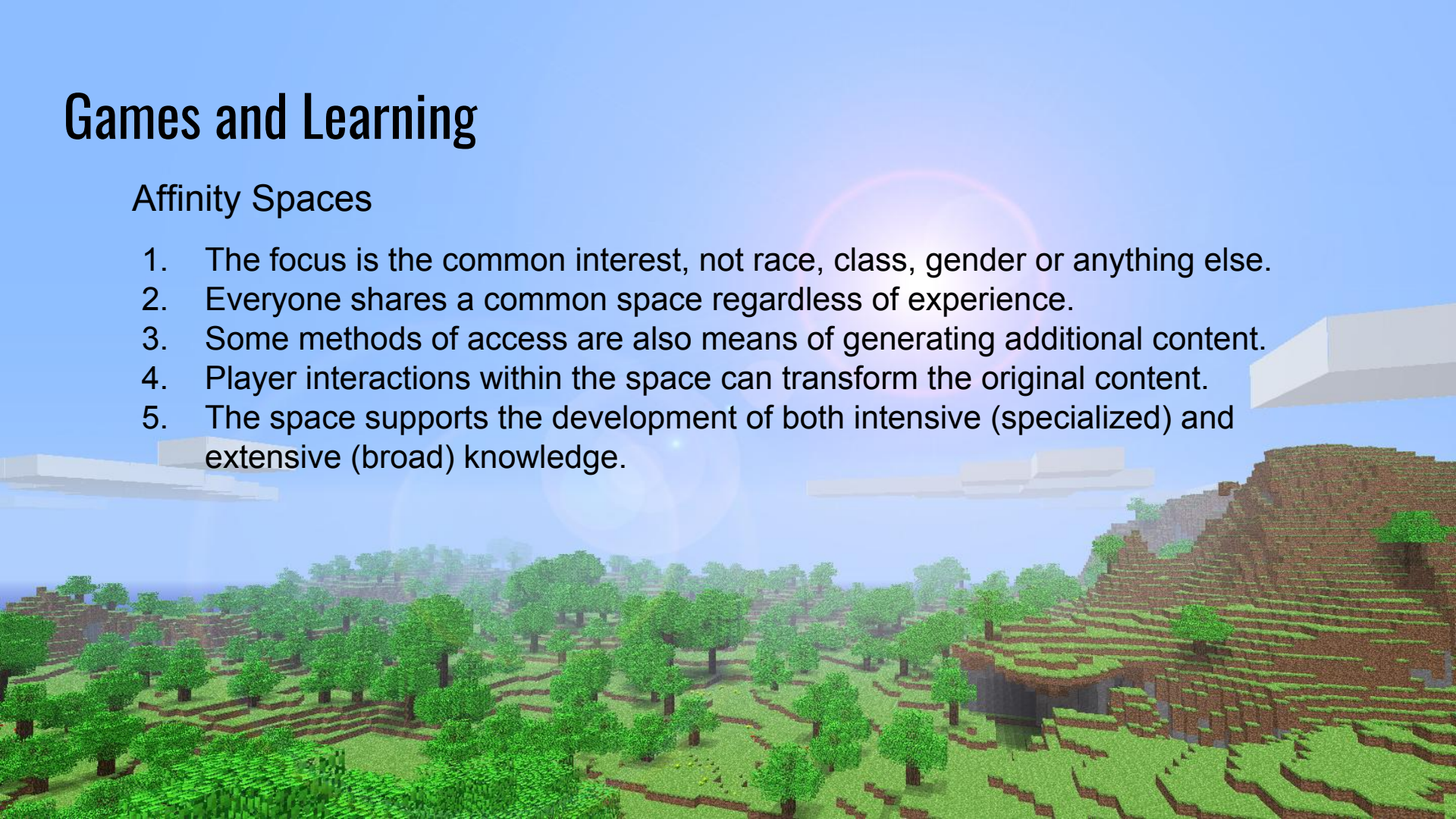
I'd like to briefly define affinity spaces so you can see how its various features are found within the lab class game work.



Games and Learning

Affinity Spaces

1. The focus is the common interest, not race, class, gender or anything else.
2. Everyone shares a common space regardless of experience.
3. Some methods of access are also means of generating additional content.
4. Player interactions within the space can transform the original content.
5. The space supports the development of both intensive (specialized) and extensive (broad) knowledge.



Games and Learning

Affinity Spaces

6. The space supports the development of both individual and distributed knowledge.
7. The space supports and encourages the use of dispersed knowledge.
8. The space supports and encourages the development of tacit knowledge.
9. There are many and varied ways to participate within the space.
10. There are many and varied ways to gain status.
11. The space values leaders and leaders change easily.

Minecraft

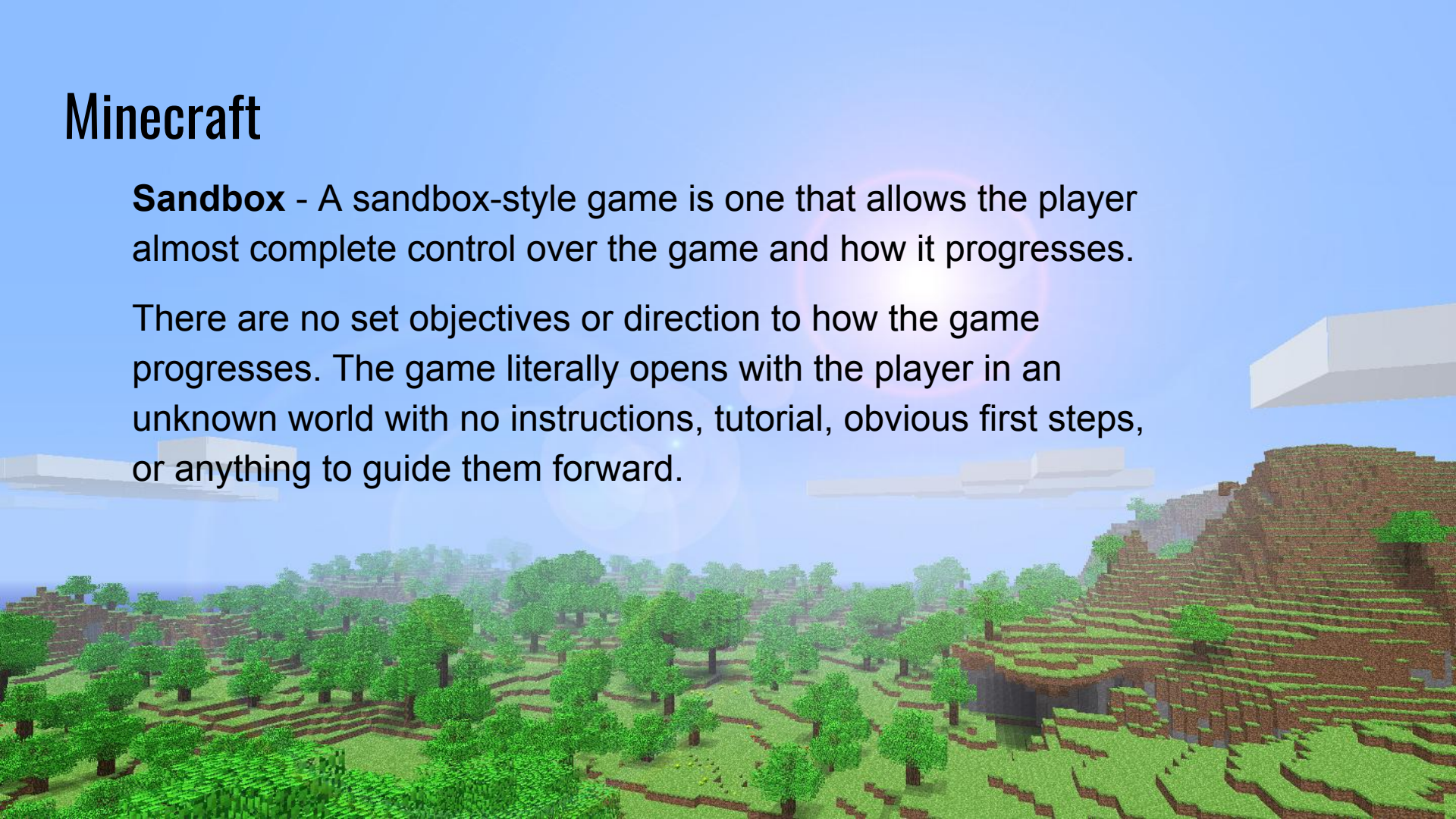
Minecraft is a sandbox-style game focused on the breaking and placing of blocks in a procedurally generated 3D world.

Let’s break that down.

Minecraft

Sandbox - A sandbox-style game is one that allows the player almost complete control over the game and how it progresses.

There are no set objectives or direction to how the game progresses. The game literally opens with the player in an unknown world with no instructions, tutorial, obvious first steps, or anything to guide them forward.

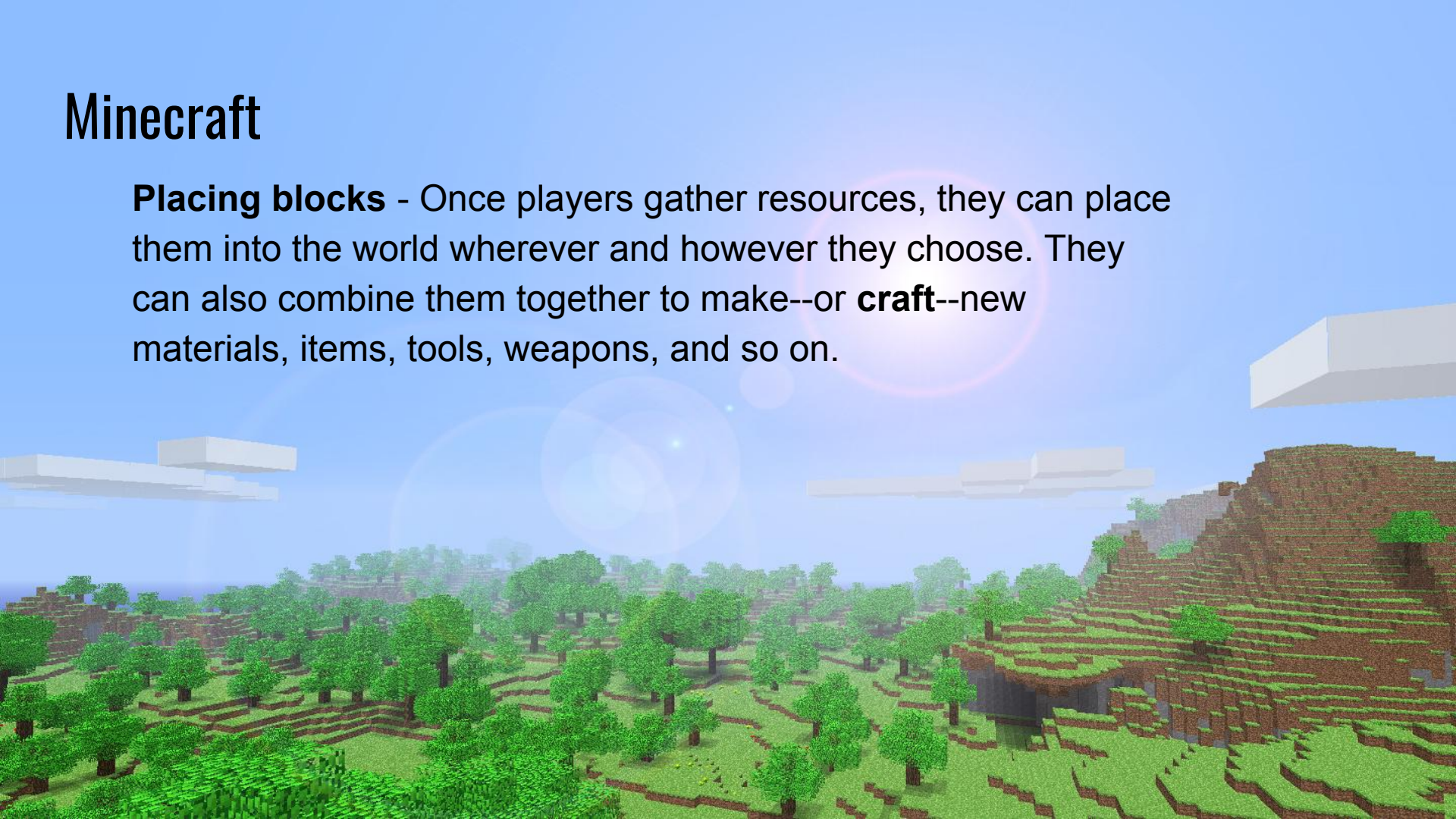


Minecraft

Breaking blocks - Players can interact with everything within the world. By breaking blocks--or **mining** them--they can gather resources, remove obstacles, dig and discover underground caves, mines, or rare materials.

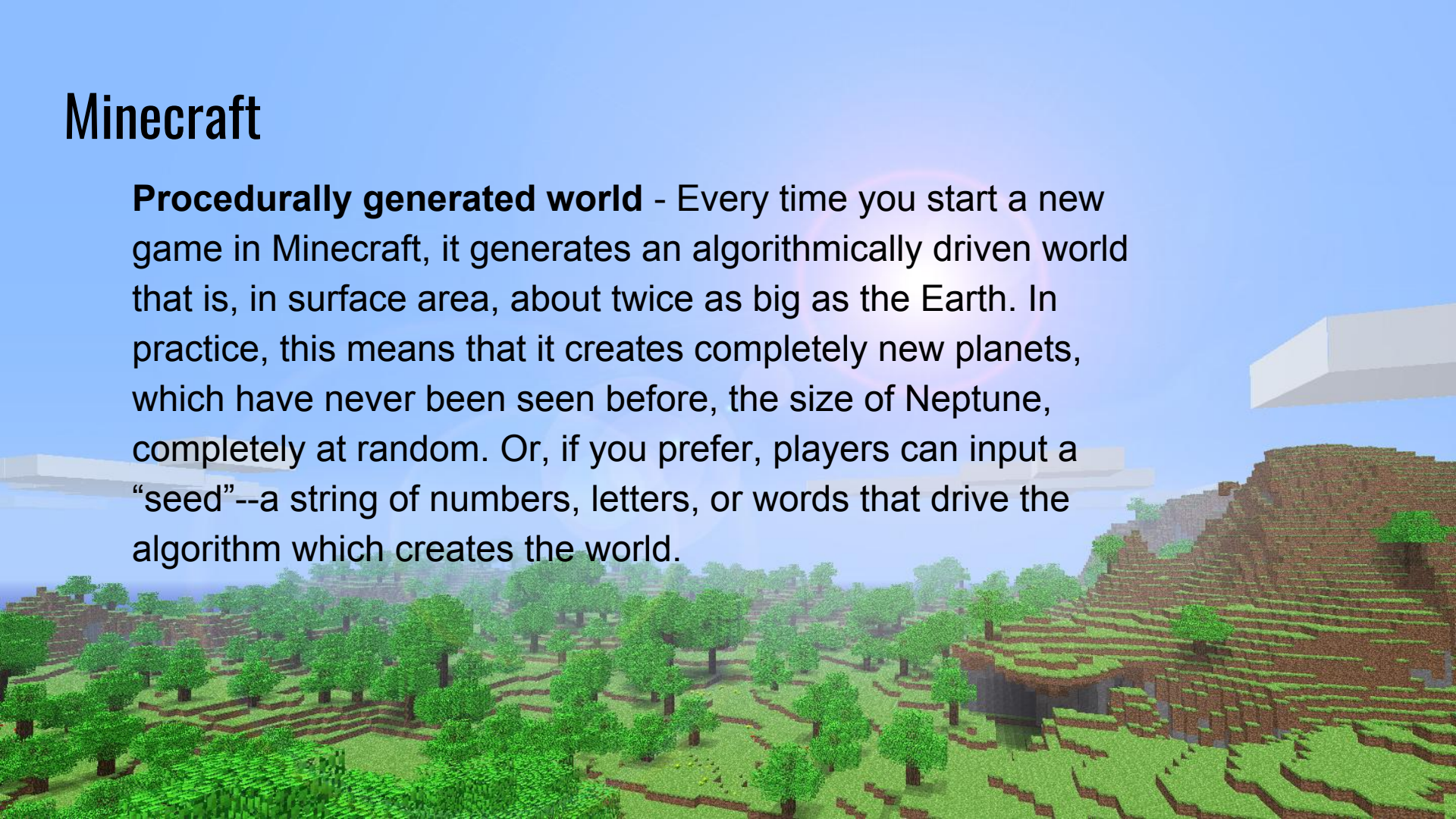
Minecraft

Placing blocks - Once players gather resources, they can place them into the world wherever and however they choose. They can also combine them together to make--or **craft**--new materials, items, tools, weapons, and so on.



Minecraft

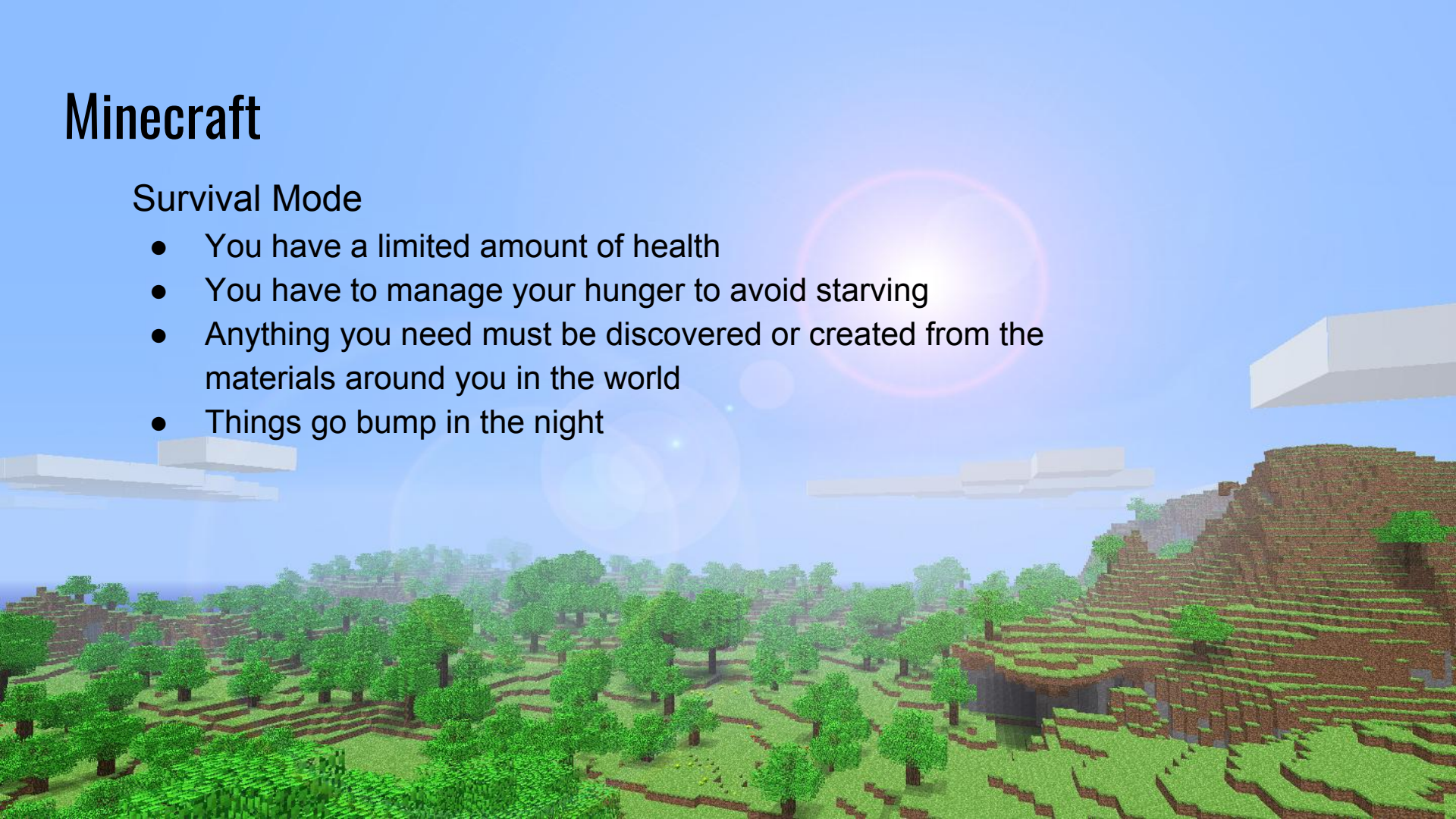
Procedurally generated world - Every time you start a new game in Minecraft, it generates an algorithmically driven world that is, in surface area, about twice as big as the Earth. In practice, this means that it creates completely new planets, which have never been seen before, the size of Neptune, completely at random. Or, if you prefer, players can input a “seed”--a string of numbers, letters, or words that drive the algorithm which creates the world.



Minecraft

Survival Mode

- You have a limited amount of health
- You have to manage your hunger to avoid starving
- Anything you need must be discovered or created from the materials around you in the world
- Things go bump in the night



Minecraft

Survival Mode

Minecraft

Survival Mode

Minecraft

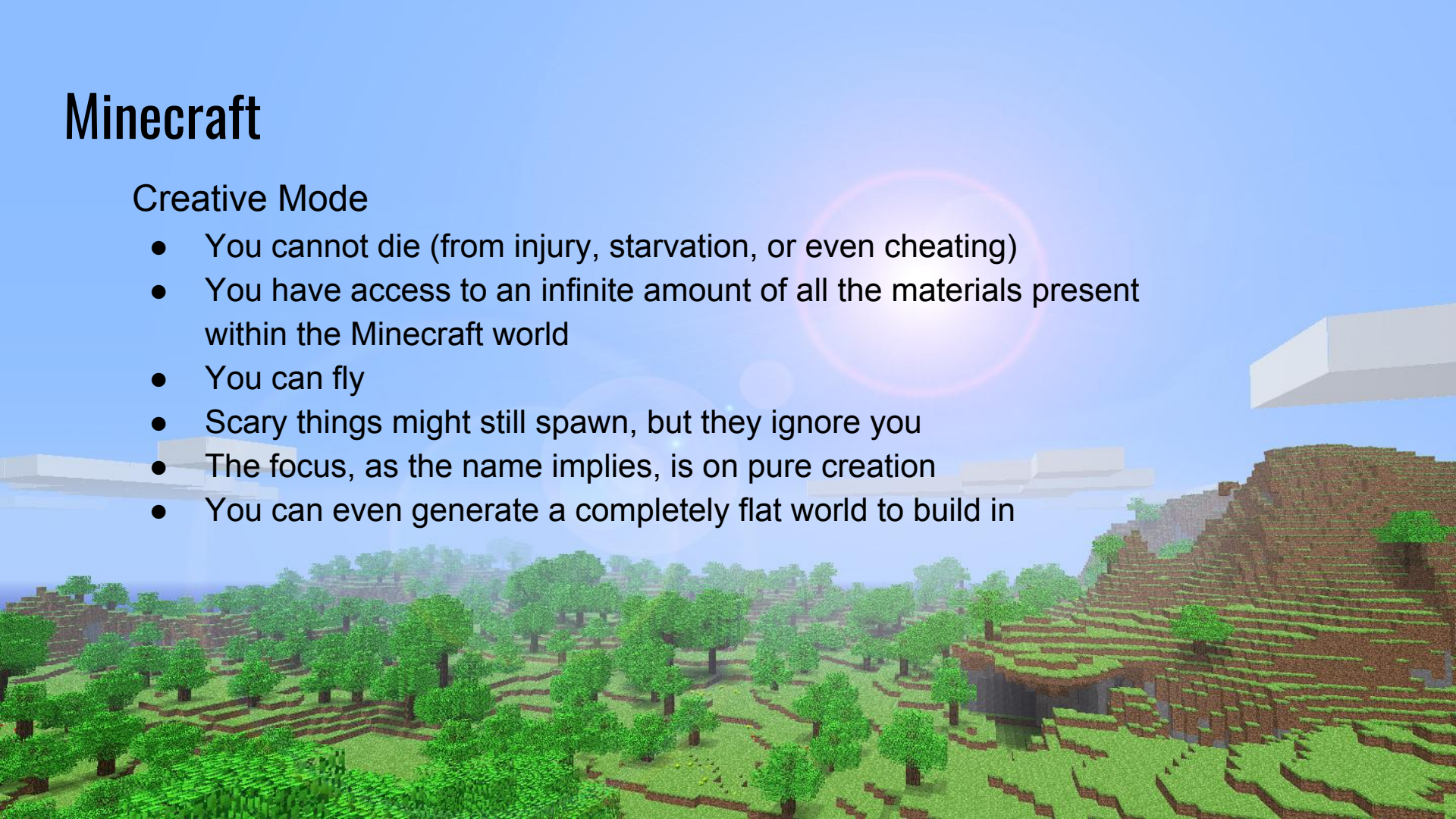
Survival World Features

- Each world consists of the same types of resources
- Day/night cycle
- Gravity
- Renewable vs scarce resources
- Friendly “mobs” - breeding, population control
- Biomes
- Structures
- Difficulty settings - Peaceful to Hardcore

Minecraft

Creative Mode

- You cannot die (from injury, starvation, or even cheating)
- You have access to an infinite amount of all the materials present within the Minecraft world
- You can fly
- Scary things might still spawn, but they ignore you
- The focus, as the name implies, is on pure creation
- You can even generate a completely flat world to build in



Minecraft

Creative Mode

Minecraft in the Classroom

Minecraft: Education Edition

A special edition of Minecraft produced and released by Microsoft in late 2016 with tools to make working together within a classroom easier.

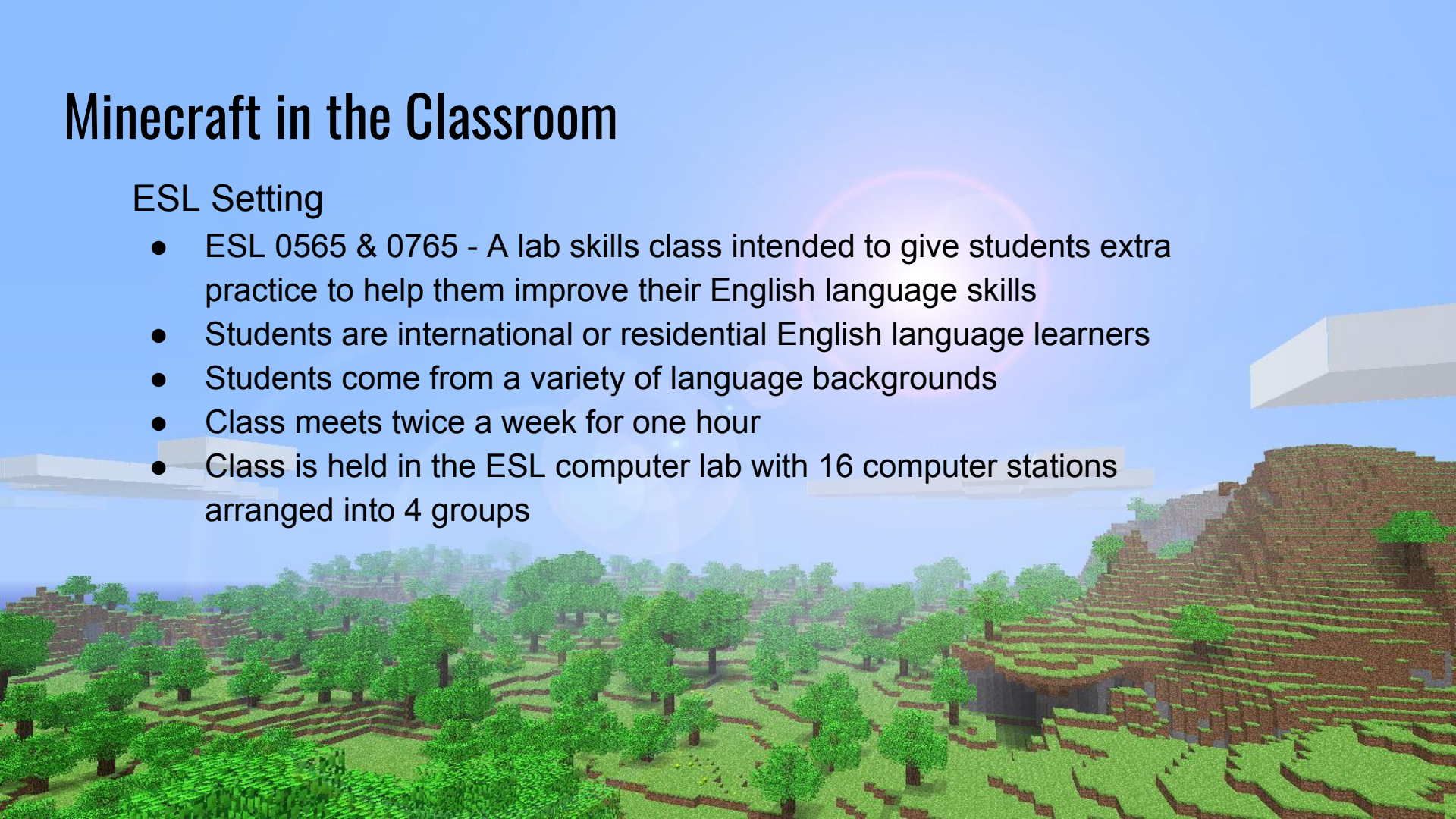
Special items were also added

- Camera
- Portfolio
- Borders
- Slates
- NPCs

Minecraft in the Classroom

ESL Setting

- ESL 0565 & 0765 - A lab skills class intended to give students extra practice to help them improve their English language skills
- Students are international or residential English language learners
- Students come from a variety of language backgrounds
- Class meets twice a week for one hour
- Class is held in the ESL computer lab with 16 computer stations arranged into 4 groups

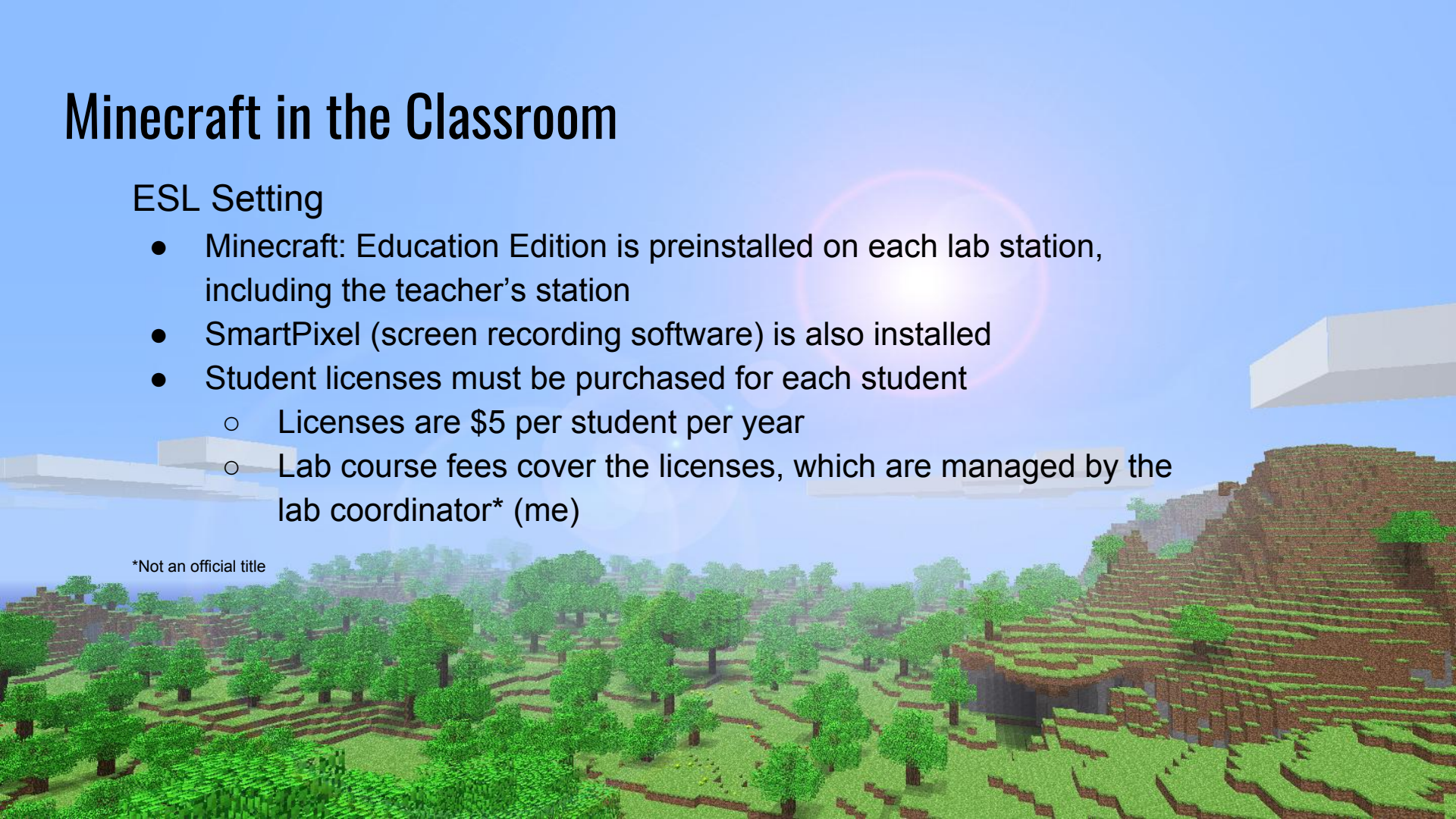


Minecraft in the Classroom

ESL Setting

- Minecraft: Education Edition is preinstalled on each lab station, including the teacher's station
- SmartPixel (screen recording software) is also installed
- Student licenses must be purchased for each student
  - Licenses are $5 per student per year
  - Lab course fees cover the licenses, which are managed by the lab coordinator* (me)

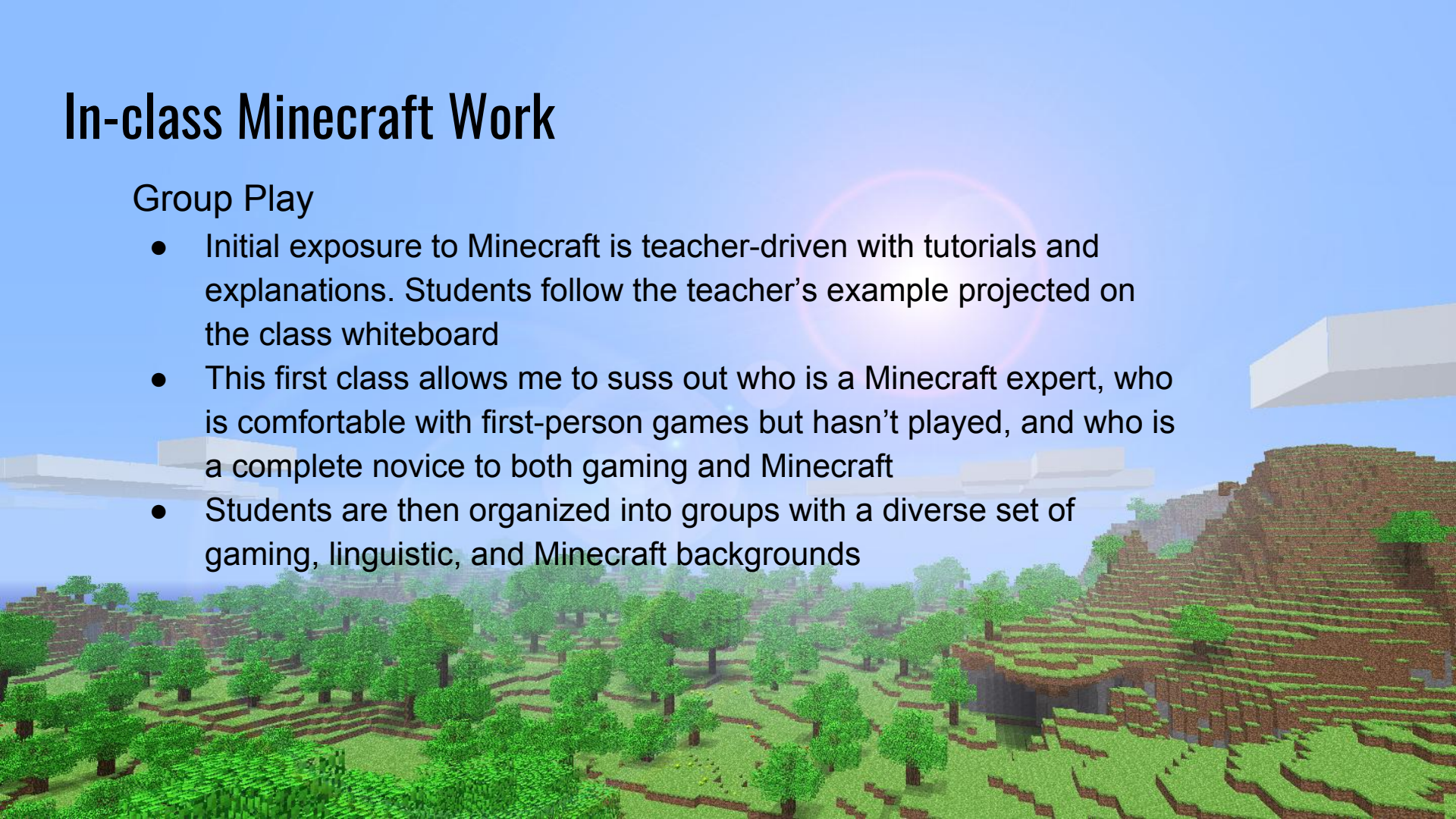
*Not an official title



In-class Minecraft Work

Group Play

- Initial exposure to Minecraft is teacher-driven with tutorials and explanations. Students follow the teacher's example projected on the class whiteboard
- This first class allows me to suss out who is a Minecraft expert, who is comfortable with first-person games but hasn't played, and who is a complete novice to both gaming and Minecraft
- Students are then organized into groups with a diverse set of gaming, linguistic, and Minecraft backgrounds



In-class Minecraft Work

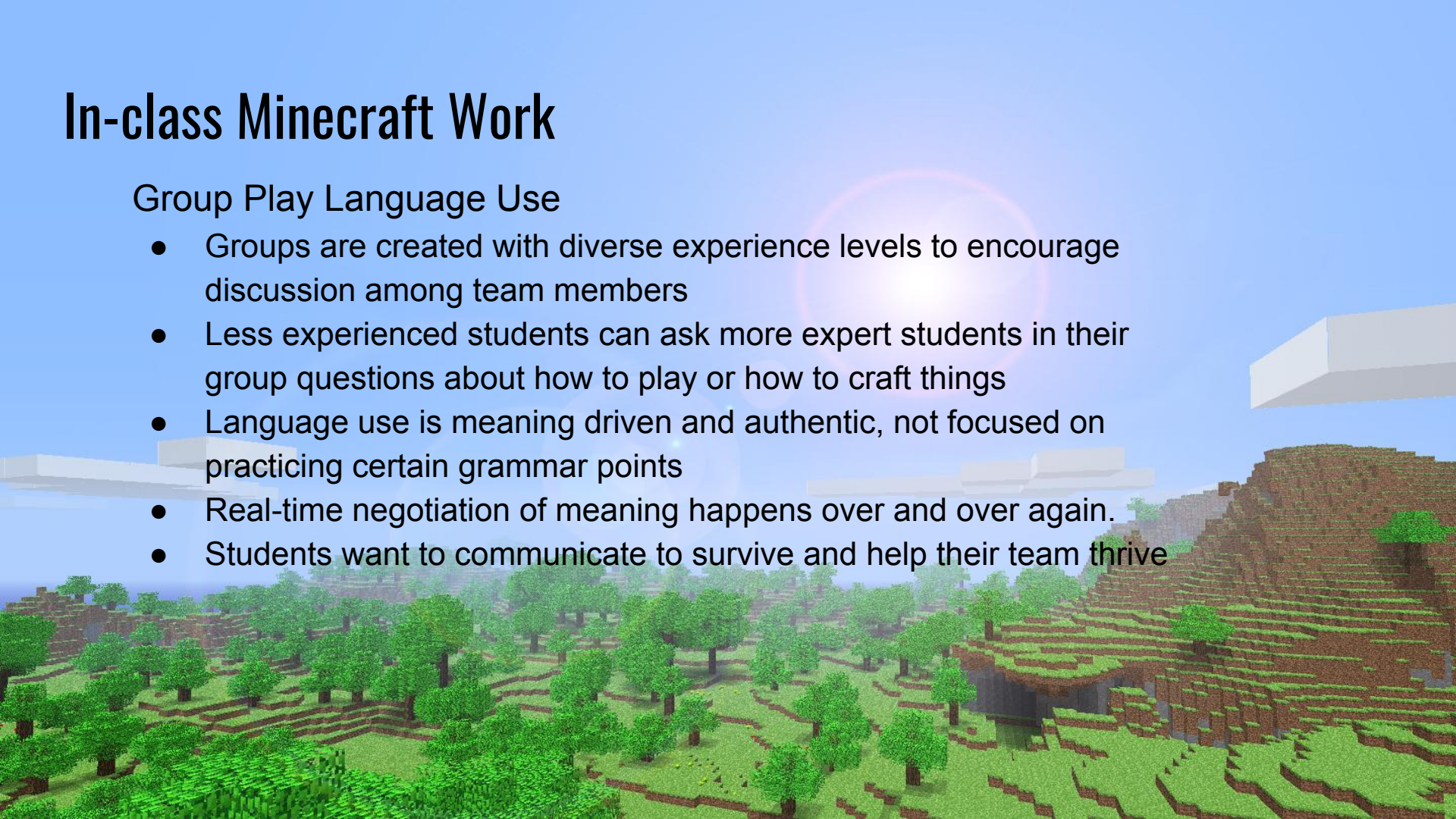
Group Play

- A significant portion of our time spent in Minecraft is in team survival mode
- Teams are separated into locations roughly 1 km apart from each other within the same world (each block represents a meter)
- Their focus initially is survival. Later, they can work on PvP (player vs player) tactics or exploration if they choose

In-class Minecraft Work

Group Play Language Use

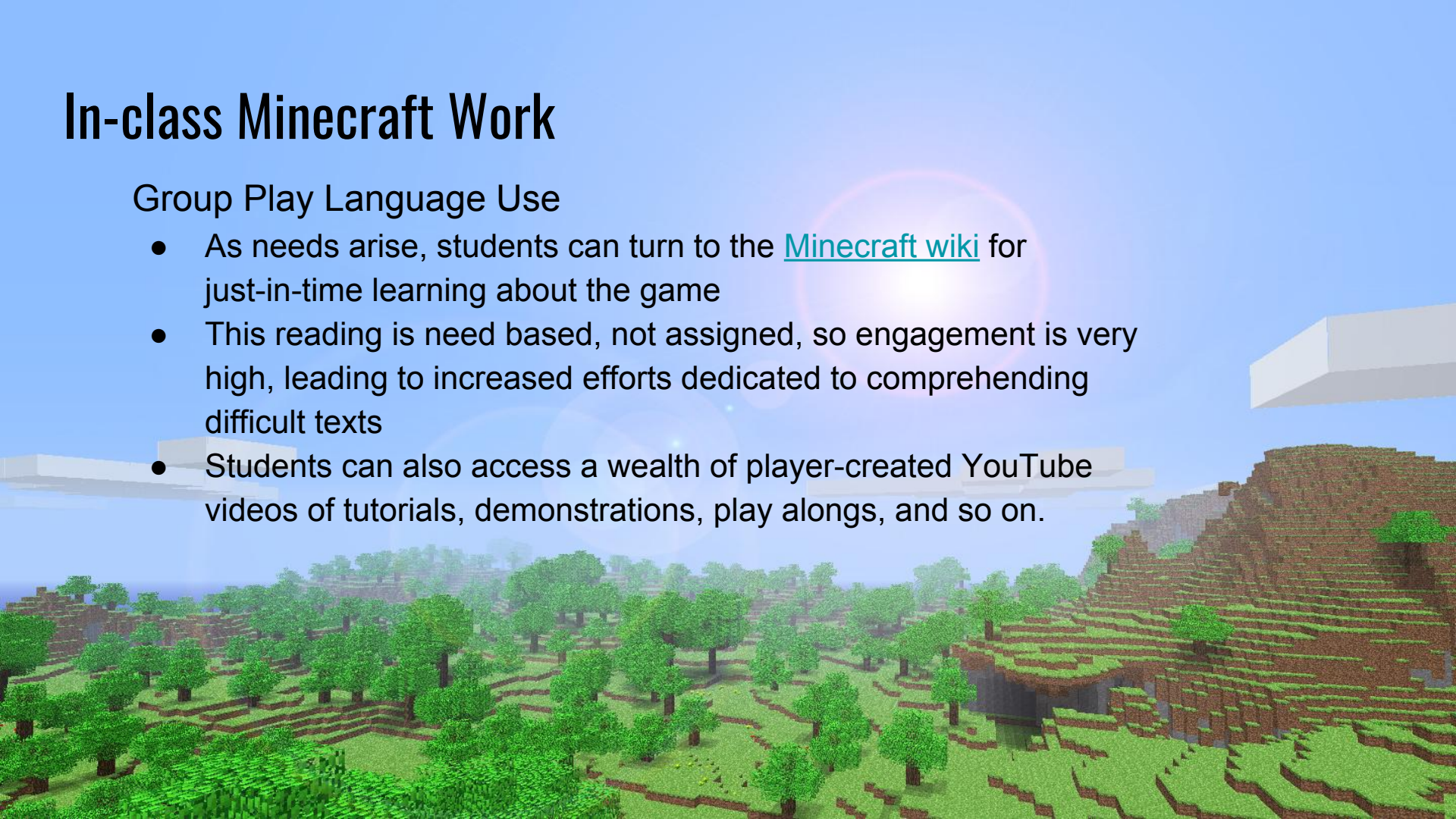
- Groups are created with diverse experience levels to encourage discussion among team members
- Less experienced students can ask more expert students in their group questions about how to play or how to craft things
- Language use is meaning driven and authentic, not focused on practicing certain grammar points
- Real-time negotiation of meaning happens over and over again.
- Students want to communicate to survive and help their team thrive



In-class Minecraft Work

Group Play Language Use

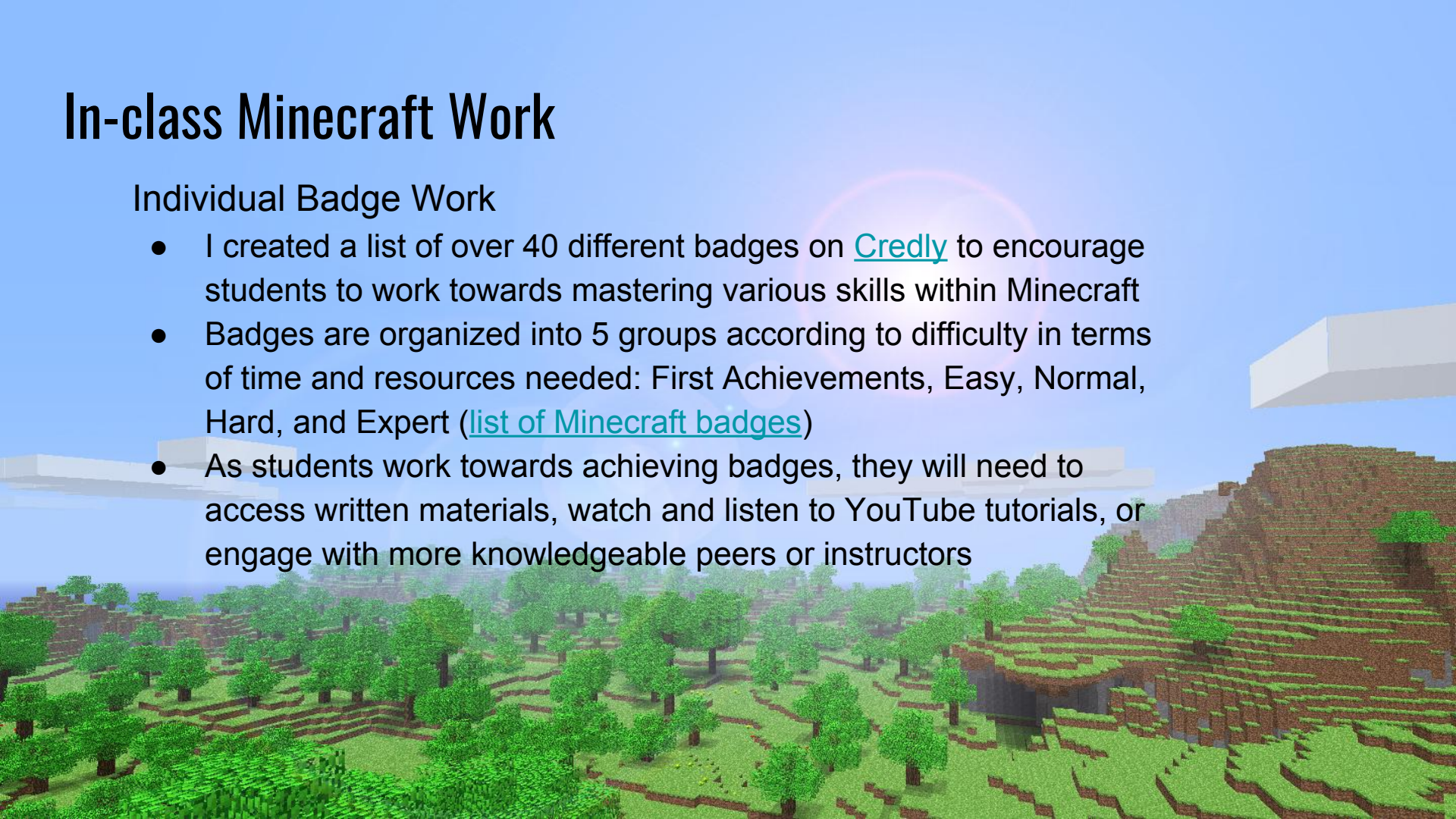
- As needs arise, students can turn to the Minecraft wiki for just-in-time learning about the game
- This reading is need based, not assigned, so engagement is very high, leading to increased efforts dedicated to comprehending difficult texts
- Students can also access a wealth of player-created YouTube videos of tutorials, demonstrations, play alongs, and so on.



In-class Minecraft Work

Individual Badge Work

- I created a list of over 40 different badges on Credly to encourage students to work towards mastering various skills within Minecraft
- Badges are organized into 5 groups according to difficulty in terms of time and resources needed: First Achievements, Easy, Normal, Hard, and Expert (list of Minecraft badges)
- As students work towards achieving badges, they will need to access written materials, watch and listen to YouTube tutorials, or engage with more knowledgeable peers or instructors



In-class Minecraft Work

Individual Badge Work - First Achievements

The Photographer - Take a picture of yourself, and take a picture of another player.

In-class Minecraft Work

Individual Badge Work - Easy Achievements

The Architect - Build a house in Minecraft. The house must have the following elements to qualify: a door, a window, a bed, a crafting table, a furnace, a chest, and a roof. You can make the house out of any materials you want.

In-class Minecraft Work

Individual Badge Work - Normal Achievements

I Am Iron Man - Make and wear a full set of iron armor: helmet, chestplate, leggings, and boots.

In-class Minecraft Work

Individual Badge Work - Normal Achievements

The Monster Slayer - Collect at least one of each of the following trophies by killing monsters to get them: rotten flesh (from a zombie), bone (from a skeleton), spider eye (from a giant spider), gunpowder (from a creeper).

In-class Minecraft Work

Individual Badge Work - Hard Achievements

The Archaeologist - Find at least 5 of the following remnants of a past civilization: abandoned mineshaft, desert well, desert temple, dungeon, igloo, jungle temple, ocean monument, stronghold, village, witch’s hut.

In-class Minecraft Work

Individual Badge Work - Hard Achievements

The Pixel Artist - Create a pixel-art installation.

In-class Minecraft Work

Individual Badge Work - Expert Achievements

The Dragon Slayer - Defeat the Ender Dragon.

In-class Minecraft Work

Individual Badge Work - Expert Achievements

The Suicidal Selfie - Take a selfie with a creeper.

Out-of-class Language Use

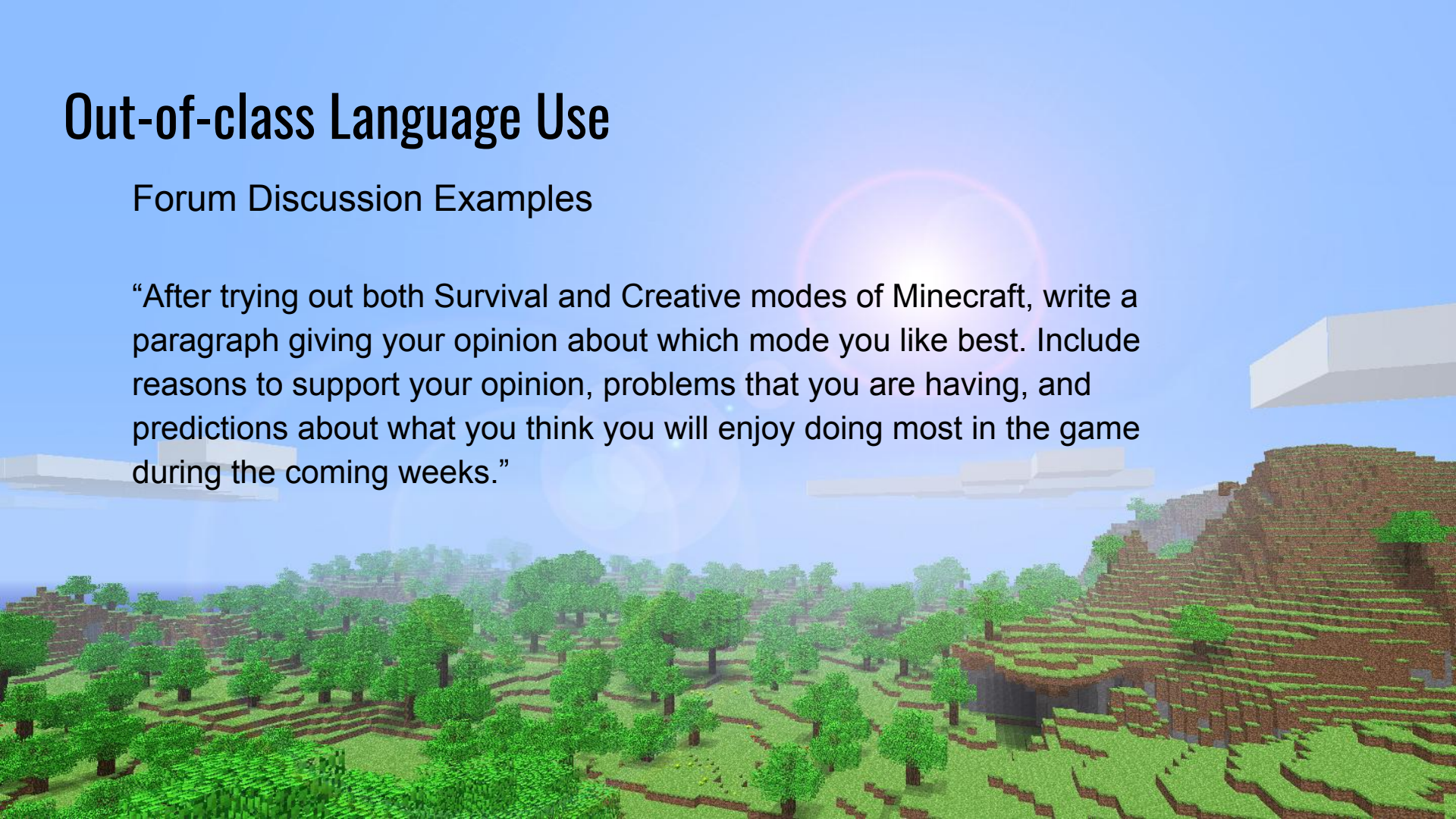
Forum Discussions

- Students post in weekly forum discussions in response to prompts about their Minecraft activity and experience.
- Students are required to respond to classmates' posts
- Discussion boards create opportunities to write for an audience and to read and respond to student posts.
- Some posts require students to read other posts, research helpful extracurricular links (Minecraft wiki articles or YouTube tutorials), and share what they have found with others.

Out-of-class Language Use

Forum Discussion Examples

“After trying out both Survival and Creative modes of Minecraft, write a paragraph giving your opinion about which mode you like best. Include reasons to support your opinion, problems that you are having, and predictions about what you think you will enjoy doing most in the game during the coming weeks.”



Out-of-class Language Use

Forum Discussion Examples

“This week, research something on Minecraft and come tell the class what you found. You can research something for one of the badges, something that you have been wanting to learn how to do, or something that you think would help the class.”

Out-of-class Language Use

Forum Discussion Examples

“On Thursday, we will be learning about how to earn badges. In your post this week, talk about which badges you want to learn. Which ones look interesting or fun? What will you need to learn in order to earn them? Which badges do you think you will have a hard time earning?

After you post, read and reply to the posts of at least 3 other students. Find a link to share that might help them earn their badge.”

Minecraft Projects

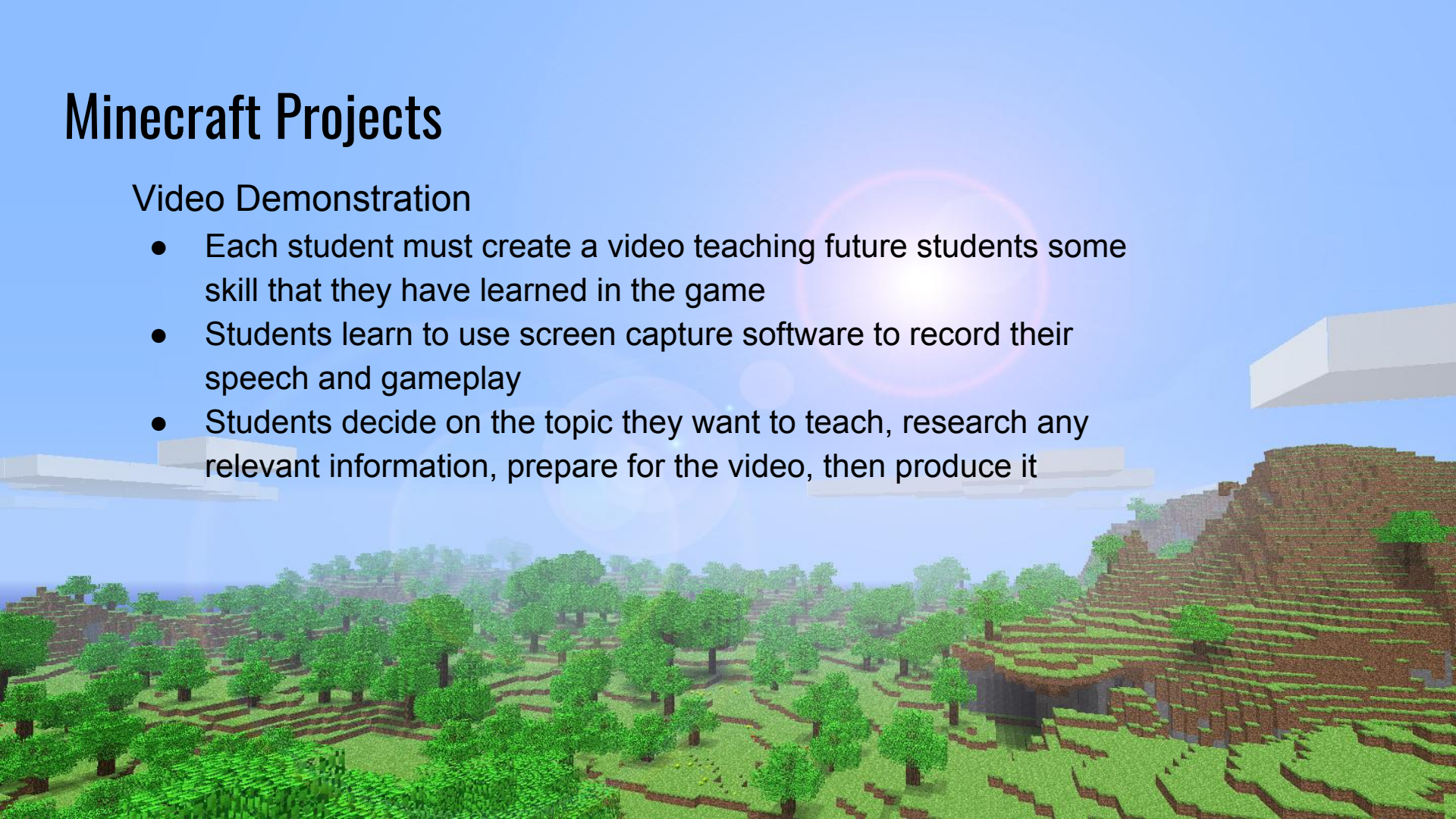
The Class Wiki

- Students contribute to a wiki about the game during the semester
- They collaborate to write about what they know about the game
- Some have complex, detailed knowledge; some have more basic understanding and skills
- Wiki remains active for the next semester's students to learn from and contribute to
- Provides opportunities to read English and produce informative, academic English writing

Minecraft Projects

Video Demonstration

- Each student must create a video teaching future students some skill that they have learned in the game
- Students learn to use screen capture software to record their speech and gameplay
- Students decide on the topic they want to teach, research any relevant information, prepare for the video, then produce it



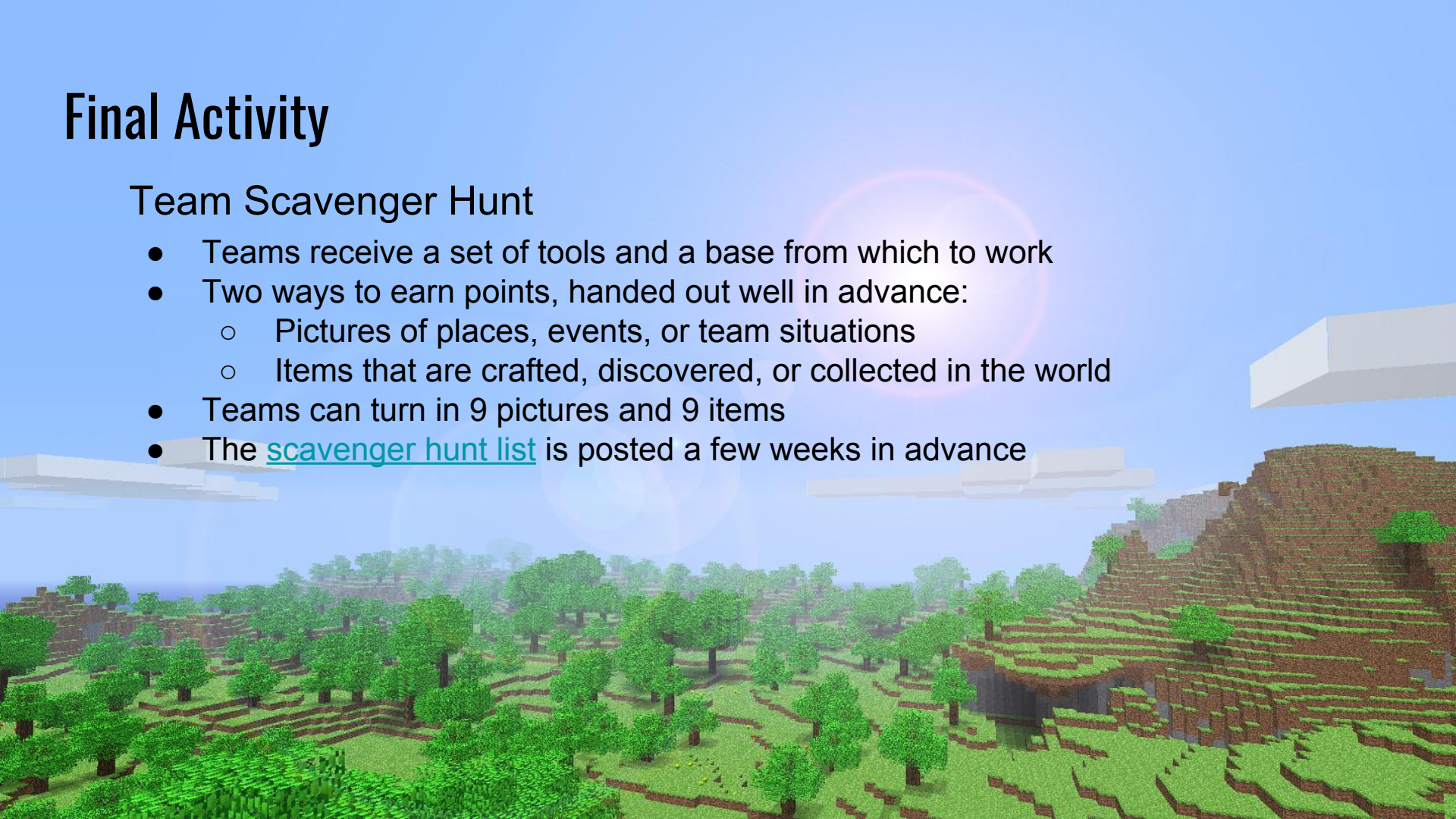
Minecraft Projects

Video Demonstration Example

Final Activity

Team Scavenger Hunt

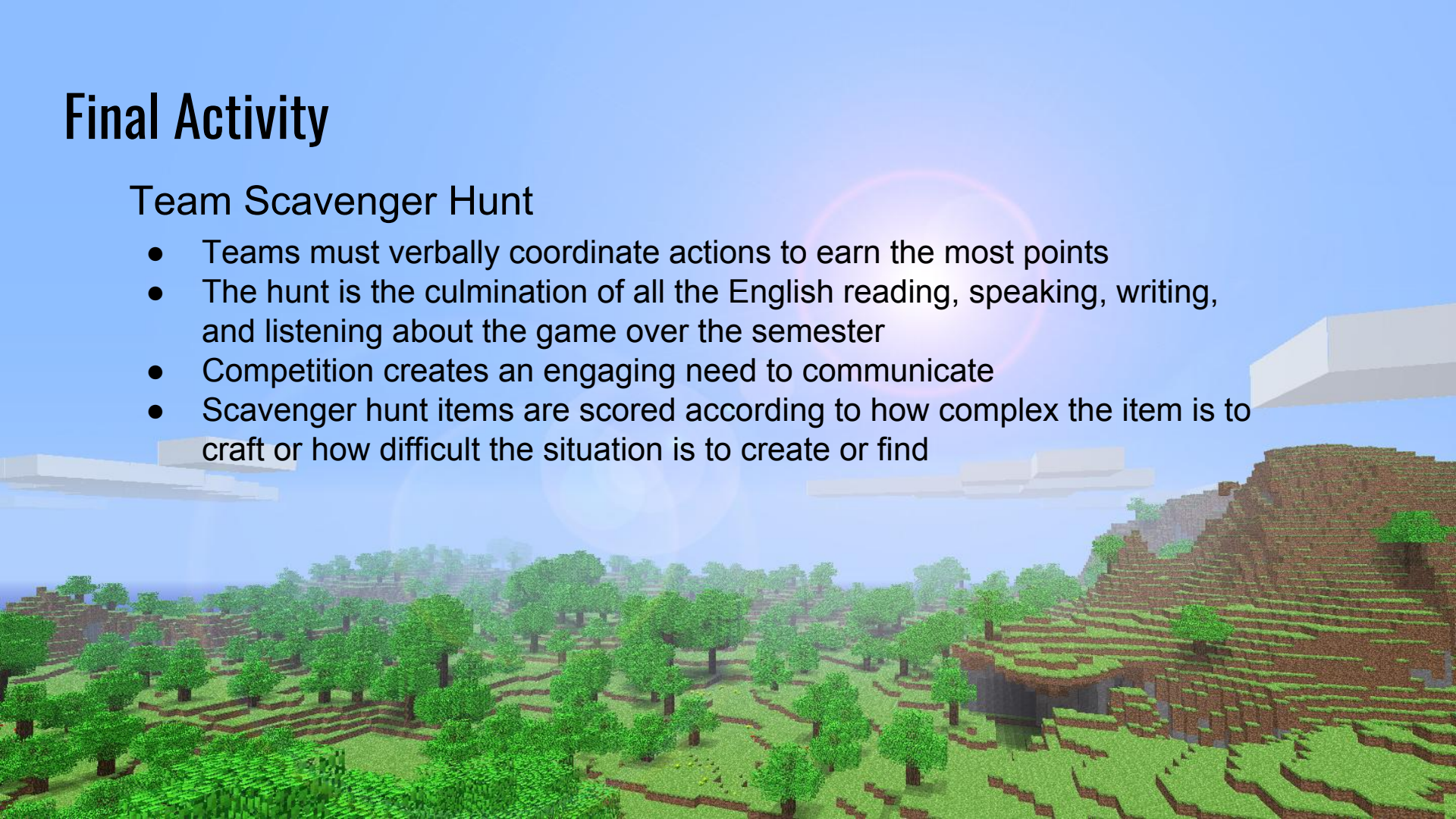
- Teams receive a set of tools and a base from which to work
- Two ways to earn points, handed out well in advance:
  - Pictures of places, events, or team situations
  - Items that are crafted, discovered, or collected in the world
- Teams can turn in 9 pictures and 9 items
- The scavenger hunt list is posted a few weeks in advance



Final Activity

Team Scavenger Hunt

- Teams must verbally coordinate actions to earn the most points
- The hunt is the culmination of all the English reading, speaking, writing, and listening about the game over the semester
- Competition creates an engaging need to communicate
- Scavenger hunt items are scored according to how complex the item is to craft or how difficult the situation is to create or find

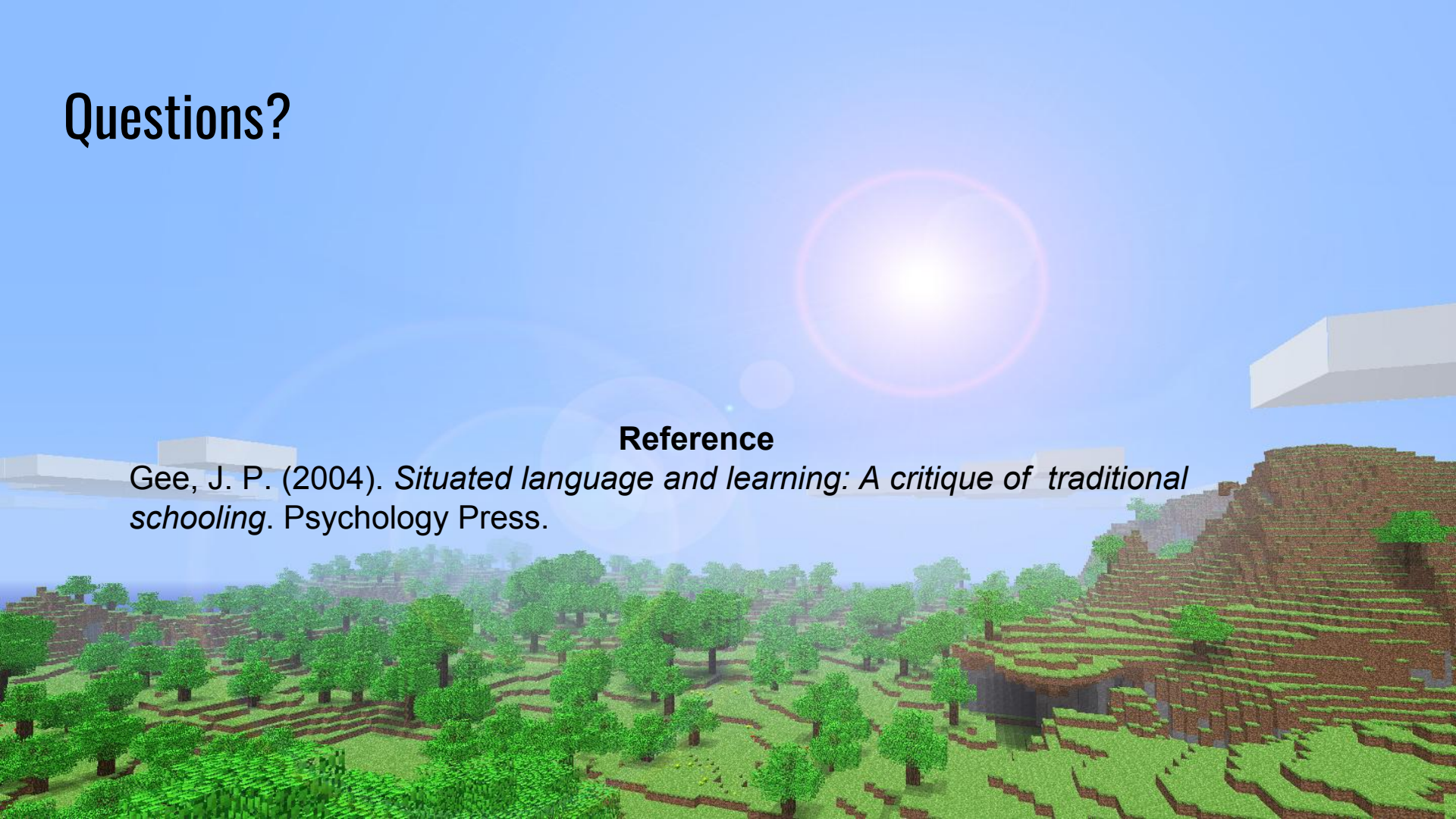


Beyond Minecraft

Many different games present learning opportunities for creative instructors

- *World of Warcraft* - Hugely popular MMORPG. Encourages cooperative guild play. Quests require detailed reading comprehension. Guild forums provide space for written discussions and content creation.
- *Zork* - The most popular interactive fiction series. Game play is entirely textual, requiring focused reading and attention to details. Puzzles are fiendishly difficult, perfect for partnership exploration, discussion, and discovery.

Questions?



Reference

Gee, J. P. (2004). *Situated language and learning: A critique of traditional schooling*. Psychology Press.