OUR RAINFORESTS AND DEFORESTATION (HIGH SCHOOL)

CONNECTIONS

- Computer Science
- Engineering Design
- Systems and System Models



MINECRAFT BIOME EXAMPLE

IEP ACCOMODATIONS

- Self-paced learning
- Frequent breaks
- Standing desks
- Cloze notes for observations (notes through links)
- Shared powerpoint for instructions and discussion guide

ELL ACCOMODATIONS

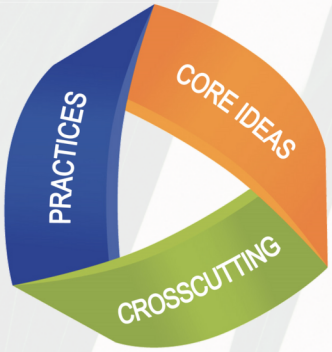
- Home language Minecraft tutorial
- Note-taking in home language

HIGHER LEVEL THINKING QUESTIONS

- What are the cause and effect relationships around trees and deforestation?
- How do these relationships change through different biomes?

SC.HS.7.2.F

Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.



Science and Engineering Practices:
Developing and Using Models
Disciplinary Core Ideas:
LS2: Ecosystems: Interactions, Energy, and Dynamics
Crosscutting Concepts:
Systems and System Models

Engage: (15 minutes)
Have students familiarize themselves with Minecraft software by going through a tutorial on Minecraft education and allow time for some free play.
Explore: (15 minutes)
Have students explore different biomes in the Minecraft universe. Prompt students to investigate how to chop down trees and plants and document the processes needed to grow them back. Note the cause and effect relationship.
Explain: (20 minutes)
Using the observations from the 'Explore' section of the lesson, have students note and write about the cause and effect relationship but add their observations on the time and effort involved in both processes.
Elaborate: (10 minutes)
Have students build a sustainable solution to tree cultivation or a reforested area in their biome. Through this simulation, have students investigate and analyze the different growth rates of different trees in the software, the cause and effect relationship as well as any impact on biodiversity seen in the simulation.