Grade: 5th
Subject: Science

Ocean Floor Minecraft Edu

Background: You have been learning about the features of the ocean floor. Use what you have learned to create Minecraft models of the features that can be toured by others. Record a tour using screen recording in PowerPoint.

Design Challenge: Design and build a model of each of the features of the ocean floor (including Continental shelf, Continental slope, Continental rise, Abyssal Plain, Trench) in Minecraft with your group. Each model will need to have a clear path that other students can "travel" through to take a tour of your ocean floor. Each of the features need to be labeled with signs, boards, or info blocks – must also include info on the geological, physical, and biological characteristics.

Criteria:

- All parts of the ocean floor must be evident and represented in the model.
    - Continental shelf
    - Continental slope
    - Continental rise
    - Abyssal Plain
    - Trench
- Each model will need to have a clear path that other students can "travel" through to take a tour of your ocean floor.
- Signs or information blocks must be used and be correct, informative, and placed near the features of the ocean floor.
- Geological, physical, and biological characteristics are included in the model and information is provided on signs.
- All group members contributed to the construction of ocean floor model.
- If time permits, record a video tour of your model using Office Mix.

Process

Group Members:

Computer Info:

Problem to solve:

State the problem in your own words.

Brainstorm (Explore) Ideas to Meet the Design Criterial

Questions to consider:

1. What Minecraft materials will represent the various parts of the ocean floor?

2. How will you create a path? How will you deal with low lighting on the ocean floor?

3. What will the signs or info blocks have written on them?

4. How will each group member contribute in the virtual world?

5. What are the expectations of each group member?

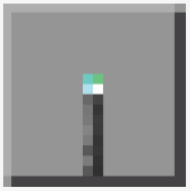
Minecraft Edu Tools

Spawn Point: 2027, 63, -260

Regular TNT is ineffective under water. Craft underwater TNT using Sodium + TNT.

	Underwater TNT		Sodium + TNT, will create an alternate version of TNT which will damage blocks even when underwater.

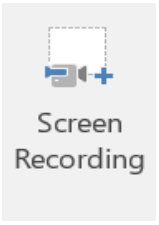
Underwater torches help with visibility underwater.

	Underwater Torches		Combine magnesium with a torch to create an Underwater Torch. This kind of torch can be used underwater.

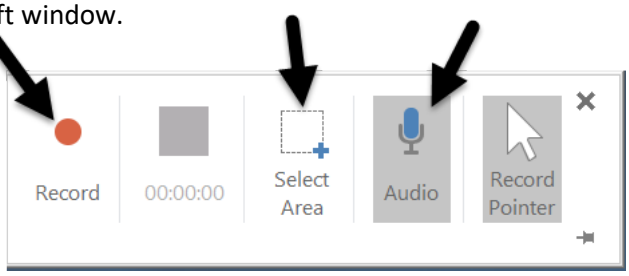
Present Project

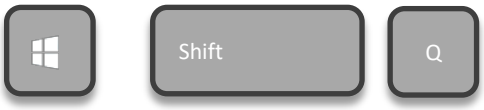
Option 1: Recording a Tour in Minecraft Using PowerPoint

Step 1: Open PowerPoint and Record:



- Pause Minecraft by pressing Esc
- Launch Powerpoint
- Choose **Insert>Screen Recording**
- Click **Select Area** and drag the box around your Minecraft window.
- Make sure the microphone (Audio) is selected.
- Press **Record**.
- To stop, press Windows key + Shift + Q.





Step 2: Save the Recording

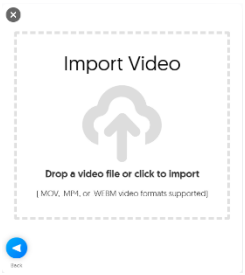
- Right click on the screen recording you just created.
- Choose **Save Media as…**
- Save it to the Projects Folder (Make sure to label it with your name!)

Step 3: Upload to Flipgrid

- Go to www.Flipgrid.com
- Enter the Flip Code: **MinecraftProjects**
- Enter your lunch number.
- Choose the topic.
- Click **+**
- Choose **Options.**

- Choose **Import Video.**

- Click and find the video.
- Choose **Open**.
- Finish Following the prompts to submit.



Option 2: Record a Tour in Flipgrid (use an iPad)

- Launch the app
- Enter a Flip Code: MinecraftProjects

- Enter your lunch number

- Click to add response
- Click to record video
- Click
- Click to take a Selfie
- Add (optional)
- Click to submit

Test, Evaluate (After Testing the Design), Redesign Plan (Repeat this step as often as necessary.)

Testing: What was tried? What was the result?
Evaluating: Does it meet one or more of the design criteria?
Redesigning: What changes could we make for a design that meets more of the criteria?

Rubric:

Criteria Assessed	No Evidence 0	Attempts to meet criteria shows limited understanding 1	Meets some criteria with room for improvement 2	Meets most criteria with room from improvement 3	Meets all criteria 4
Guided Portfolio					
The problem is restated.					
A clear plan for the Ocean model is indicated.					
Students discussed and answered the brainstorming questions.					
Student reflected on the project and evaluated their own work.					
Project					
All parts of the ocean floor must be evident and represented in the model. (Continental shelf, Continental slope, Continental rise, Abyssal Plain, Trench)					
Each model will need to have a clear path that other students can "travel" through to take a tour of your ocean floor.					
Signs or information blocks must be used and be correct, informative, and placed near the features of the ocean floor.					
Geological, physical, and biological characteristics are included in the model and information is provided on signs.					
All group members contributed to the construction of ocean floor model.					
If time permits, record a video tour of your ocean floor model using PowerPoint or Flipgrid.					
Oral Presentation/Group Work					
The student uses grammatically correct language.					

The student uses clear and specific vocabulary to communicate ideas.					
The student speaks clearly.					
The student uses appropriate volume and pitch.					
The student speaks at an understandable rate.					
The student worked cooperatively with his or her group and was an effective group member.					