Grade: 4th and 5th

Subject: Music and Science

Build a Song in MinecraftEDU

Background: You have been learning about notes on the scale and how to play those notes on an instrument. You have also been learning about rhythms and pitches.

Design Challenge: Design and build Mary Had a Little Lamb using a note block path with the following materials:

• Note blocks = pitch	• Repeaters = extend power; delay time between note blocks
• Red Stone = power supply	• Grass Blocks
• Gold Blocks = quarter rests	• Button or Lever = switch for power

Criteria:

- The song should be recognizable with rhythms and pitches
- Use a snake pattern to build the note path (Note path should be no longer than 5 note blocks long before turning the path back around)
- Make red stone circuit that can play music using note blocks.
- Use buttons or levers to provide on/off switch for power

Brainstorming and Planning Questions to consider:

1. What Minecraft materials will represent rhythms and pitches?
2. How will create a note path?
3. What will the signs or info blocks have written on them?
4. How will each group member contribute in the virtual world?
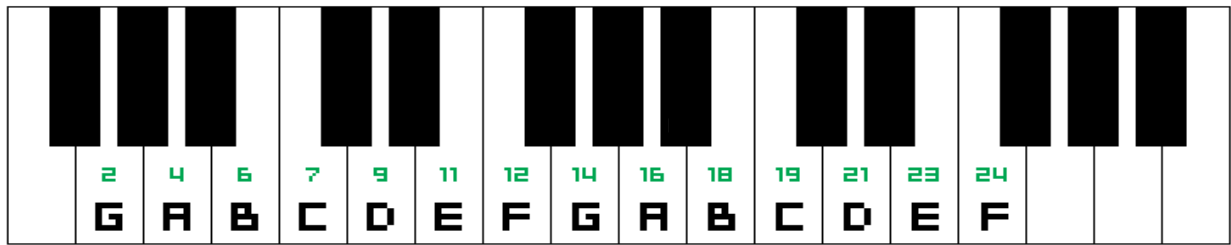5. What are the expectations of each group member?

Process

Group Members and File Name:

Computer Name:

Problem to Solve:

State the problem in your own words.

MINECRAFT NOTE BLOCK REFERENCE

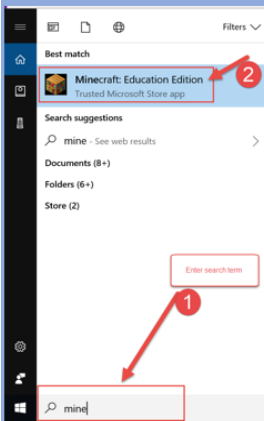| 2	4	6	7	9	11	12	14	16	18	19	21	23	24
G	A	B	C	D	E	F	G	A	B	C	D	E	F

**GREEN NUMBERS REPRESENT THE NUMBER
OF RIGHT-CLICKS NEEDED TO SET THAT NOTE
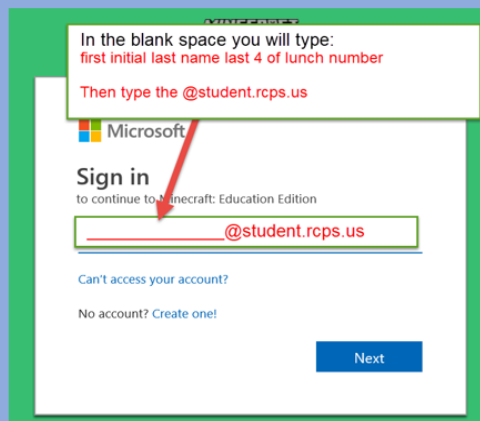(NEW BLOCKS ARE ALREADY AT SETTING #1)**

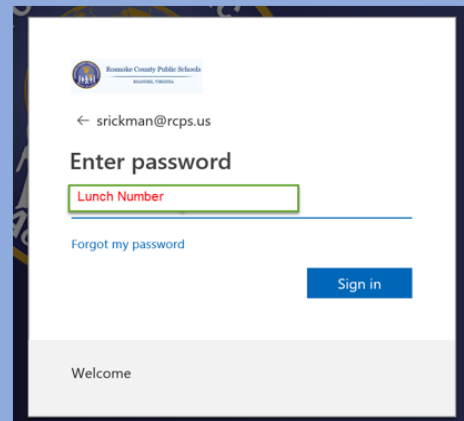Use this space to figure out your notes to Mary Had a Little Lamb

Technical Details

- Open MinecraftEDU
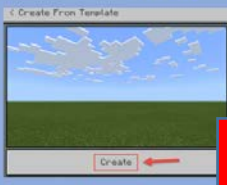- Enter school email
- Enter lunch number

In the blank space you will type:
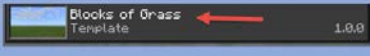first initial last name last 4 of lunch number

Then type the @student.rcps.us

Microsoft

Sign in
to continue to Minecraft: Education Edition

_____@student.rcps.us

Can't access your account?

No account? Create one!

Next

Roanoke County Public Schools
ROANOKE, VIRGINIA

← srickman@rcps.us

Enter password

Lunch Number

Forgot my password

Sign in

Welcome

- Hit Play
- Hit Create New
- Choose Create

Play
Settings
Library
Educator Resources

Create New

- Choose Blocks of Grass

Blocks of Grass
Template   1.0.0

- Rename World

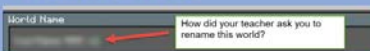World Name   How did your teacher ask you to rename this world?

Create From Template

Create

Double check that Default game mode and Difficulty are set as Creative and Peaceful before hitting Create.
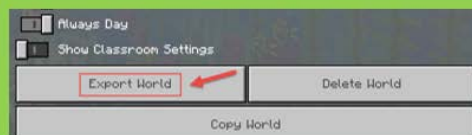
Default Game...
Creative

Difficulty
Peaceful
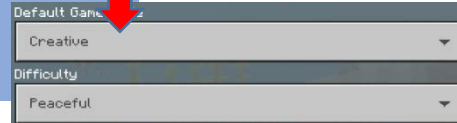
Export World

- Press Esc
- Hit Save and Quit

Resume Game
Settings
How to Play
Save & Quit

- Click the pencil icon next to your world name

Worlds
Creative   1/15/2019
               0.24MB

- Scroll to bottom and select Export

Always Day
Show Classroom Settings
Export World   Delete World
Copy World
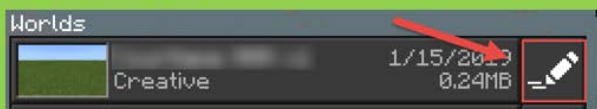
- Your teacher should tell you the location where you will save the world.

Brainstorm (Explore) Ideas to Meet the Design Criteria

Questions to consider:

1. What Minecraft materials will represent

2. How will create a note path?

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?

Design Drawing and Plan for Building Prototype

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 building the song is indicated.					
Students discussed and answered the brainstorming questions.					
Student reflected on the project and evaluated their own work.					
Project					
The song should be recognizable with rhythms and pitches					
All group members contributed to the construction of the song.					
If time permits, record a video tour of your song using 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.					