

# MINECRAFT

EDUCATION EDITION

[HTTPS://EDUCATION.MINECRAFT.NET/](https://education.minecraft.net/)

## MINECRAFT MENTORS

[HTTPS://EDUCATION.MINECRAFT.NET/COMMUNITY/CONNECT-WITH-OTHERS/](https://education.minecraft.net/community/connect-with-others/)

## LESSON PLANS

[HTTPS://EDUCATION.MINECRAFT.NET/CLASS-RESOURCES/LESSONS/](https://education.minecraft.net/class-resources/lessons/)

## MY LESSONS

[HTTPS://EDUCATION.MINECRAFT.NET/US/ER/DEAN-VENDRAMIN](https://education.minecraft.net/us/er/dean-vendramin)

## MY RESOURCES

[HTTP://DEANVENDRAMIN.WEEBLY.COM/MINECRAFT-IN-THE-CLASSROOM.HTML](http://deanvendramin.weebly.com/minecraft-in-the-classroom.html)

# MINECRAFT IN THE MATH CLASSROOM

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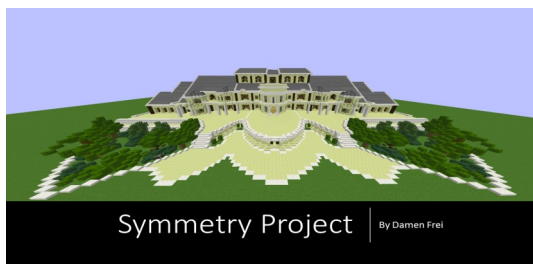
# MINECRAFT IN THE MATH CLASSROOM



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# MINECRAFT MATH - SYMMETRY



Symmetry Project | By Damien Frei

Lesson Plan

Discussion

My Notes

## Learning Objectives

Outcome: SS9.4 - Saskatchewan Curriculum Guidw Demonstrate understanding of line and rotation symmetry. [C, CN, PS, V]

## Guiding Ideas

- What does symmetry look like?
- What types of symmetry are there?
- What are transformations?

## Student Activities

1) Go to this link  
<https://minecraftbuildinginc.com/how-to-create-your-own-minecraft-pixel-art-template/>  
 and create a pixel art presentation using one or a combination of the following types of symmetry horizontal, vertical, oblique, or rotational.

2) You will need to replicate your 2D pixel art grid in Minecraft in 3D.

## Performance Expectations

Using Sway or Power Point Create a presentation based on the following:

Minecraft Pixel Art Grid - 1 2 3 4 5 (print out or save screen shot)

Show Evidence of Symmetry - 1 2 3 4 5

(horizontal, vertical, oblique, or rotational)

Create Pixel Art in Minecraft - 1 2 3 4 5

Show Symmetry, Order of Rotation, and Angle of Rotation - 1 2 3 4 5 (use signs)

# MINECRAFT MATH - SLOPE



Slope Project | By Santana Alexson-Sparvier

Lesson Plan

Discussion

My Notes

## Learning Objectives

Outcome: WA20.9 - Saskatchewan Curriculum Demonstrate concretely, pictorially, and symbolically (with and without the use of technology) an understanding of slope with respect to: rise over run rate of change solving problems. [C, CN, PS, V]

## Guiding Ideas

- How does the concept of slope affect the making of a roller coaster?
- How does rise over run relate to slope?
- What different types of slope can you find?

## Student Activities

Your team has decided to bid on a contract to design a roller coaster for a new theme park. The park owners want to build a rollercoaster that includes ups and downs from gradual to steep.

## Performance Expectations

Part 1 – Planning (10 Marks)

- Sketch out a rollercoaster with at least three ‘bumps’ with different slopes (3 Marks)
- Figure out the potential slope of each ‘bump’ (6 marks)
- What are some of the challenges / problems you think may happen (1 Mark)

Part 2 – Construction (25 Marks)

- Test and Tweak potential slopes (3 x 5 marks)
- Use signs to show slopes of at least three different ‘bumps’ (3 x 2 marks)
- Will it work (4 marks)

Part 3 – Analysis (10 Marks)

- What problems occurred when building your rollercoaster? (2 Marks)
- How did you solve them? (4 Marks)
- How did different slopes effect the ride? (2 Marks)
- What did you learn about slope? (2 Marks)

Create an Office Mix Screencast and answer all questions on the screen cast plus take us on a ‘ride.

# MINECRAFT MATH - SURFACE AREA



Surface Area Project | By Miguel Cruzat

Lesson Plan

Discussion

My Notes

## Learning Objectives

Outcome: SS9.2 - Saskatchewan Curriculum Extend understanding of area to surface area of right rectangular prisms, right cylinders, right triangular prisms, to composite 3-D objects. [CN, PS, R, V]

## Guiding Ideas

- What is surface area?
- How do you calculate surface area?
- What formulas can you create for surface area?

## Student Activities

Instructions

1) Using Minecraft Creative Mode create the following:

- a shelter with a flat roof of your size (make a door but pretend that it is part of the blocks when calculating surface area )
  - a pyramid of your size (don’t make it too big)
  - any structure with a surface area of 25 m<sup>2</sup>
  - any structure with a surface area of 50 m<sup>2</sup>
2. After you complete each structure, you are to take a screenshot (use print screen which copies them)
3. Then go to sway or power point and make a card/slide deck with your images and your math.
4. Share me the sway/ power point when done.

## Performance Expectations

Evaluation

Structure One - 1 2 3 4

Structure Two - 1 2 3 4

Structure Three - 1 2 3 4

Structure Four- 1 2 3 4

Total /16

Each structure must have screenshot and math!