

Subject (grade): Workplace and Apprenticeship Math 20 (WA20)

Lesson Title: Start-up & Planning Stage of your Place

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Desired Results:

Objectives/Outcome(s)/Indicator(s):

20.10: Extend and apply proportional thinking to solve problems that involve unit analysis and scale.

(f) Determine, using proportional reasoning, the dimensions of objects, given scale drawings or models.

(g) Construct models of 3-D objects, given the scale.

(h) Draw, with or without technology, a scale diagram of 3-D objects.

Procedures:

1. In this project you will do this individually, partners or in groups of three to four. Everyone will choose a place to explore, and if you are in partners or groups you will decide on what you will recreate in Minecraft.
2. First, what you will need to do is create a scale from the actual to Minecraft. Then, you will design a plan to recreate the building (if you are in a group) or a room (if you are by yourself or with partners).
3. This could take two to three classes to choose a place and design the Minecraft structure of the place.
 - a. List the students in the groups (see in materials for the document for listing)
 - b. Record what students will be recreating.

Additional Procedures:

If students finished the planning stage of this project, continue to the lesson two, "Finding Surface Area & Volume of your Place"

Key Understanding ('I can' statements):

1. I can do this individually, with partners, or in a group.
2. I can choose a place to recreate.
3. I can choose a scale.
4. I can design the structure.

Materials:

The students will need the following document:

- Minecraft Plans

This will be where all the work will be done:

- Scale
- Surface Area
- Volume
- Cost
- Loans
- Laptop (if students want to do it online)
- Workbook

Yourself (teacher) will need:

- Listing

Resources:

Chapter Five of the textbook: Scale Representation.

5.1: Scale Drawings and Models.

5.2: Two-Dimensional Representation.

5.3: Three-Dimensional Representation.

Minecraft Plans (**Found under Worksheets**) at www.yarnbender.ca/edtc/recreation-in-minecraft

How to go about using Microsoft Word or Google Docs to create your design:

[Recreation in Minecraft](#)

Adaptions/ Differentiations:

Some adaptations/differentiations for this lesson:

- Allowing students to type up their plans inside Word or Docs.
- If students need more time to finish their plan give them that extra time to work on it.
- If students are having trouble finding a scale to use, help them to figure out that scale.
- If a student is having trouble deciding on what place to recreate, give them examples of what to do. (Ex. A store, Park, Greenhouse, or Classroom)

Management Strategies:

Here are some management strategies for this lesson:

- If groups are fooling around and not focusing on their plans:
 - Tell them they will need to do it individually, or
 - You can start working.