

Objective

By the end of this lesson, Vera will be able to understand basic math concepts such as addition, subtraction, multiplication, and division through engaging activities in Minecraft. She will apply these concepts to build structures, manage resources, and solve problems within the game.

Materials and Prep

- Minecraft (Java or Bedrock Edition)
- A computer or gaming device with Minecraft installed
- Access to a creative or survival world in Minecraft

Before starting the lesson, make sure that Vera knows how to navigate in Minecraft and has basic building skills. Familiarize her with the inventory and crafting systems as these will be used in the activities.

Activities

• Building a Math Mansion

Vera will design and build a mansion using specific dimensions. For example, she can create a house that is 10 blocks wide and 8 blocks long. This will help her practice multiplication and understand area.

• Resource Management Challenge

In this activity, Vera will gather resources (like wood, stone, and iron) and keep track of how many she has. She can practice addition and subtraction by calculating how many blocks she needs to gather to build her mansion.

• Treasure Hunt with Math Problems

Create a treasure hunt where Vera has to solve math problems to find clues. For example, if she needs to find 5 diamonds and she already has 2, she will need to solve the equation $5 - 2 = ?$ to know how many more she needs to find.

• Crafting Recipes

Vera will explore different crafting recipes in Minecraft and will have to calculate how many of each resource she needs. For instance, to craft a sword, she needs 2 pieces of iron and 1 stick. This will help her practice multiplication and addition.

Talking Points

- "Do you remember how we can find the area of a rectangle? We multiply the length and the width!"
- "When you're gathering resources, how can we keep track of how many we have? We can add them up or subtract if we use some!"
- "In our treasure hunt, what do you think we should do if we find more clues? We need to add or subtract the numbers based on the problems!"

- "Crafting in Minecraft is like a math puzzle! How many of each item do we need to craft something?"
- "If you build a bigger house, how many more blocks will you need? Let's calculate it together!"
- "What happens if we run out of resources while building? We have to figure out how many more we need!"
- "Can you think of a way to make math fun while playing Minecraft? Let's brainstorm some ideas!"
- "Why do you think math is important in games like Minecraft? It helps us plan and build better!"