# Minecraft Master Planner: From Blueprint to Build!

## Lesson Details

- **Subject:** Design, Planning, Math (Basic Geometry & Counting)
- **Age Group:** 6-8 years old
- **Estimated Time:** 45-60 minutes

## Materials Needed

- Grid paper (paper with squares on it)
- Pencil and eraser
- Colored pencils, crayons, or markers
- Access to Minecraft (Creative Mode is best for this) OR a set of building blocks (like LEGOs or wooden blocks)
- (Optional) A simple ruler

## Learning Objectives

By the end of this lesson, you will be able to:

- Explain why making a plan before building is helpful.
- Draw a simple plan (a "blueprint") for a Minecraft structure on grid paper.
- Create a list of materials needed for your plan.
- Build your structure in Minecraft or with blocks, following your own blueprint.

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## Lesson Plan

### 1. Introduction: The Problem with Creepers (5 minutes)

#### Hook

**Educator says:** "Have you ever been building something really cool in Minecraft, maybe a super-tall tower or a cozy little house, and you run out of wood right in the middle? Or a Creeper comes along and blows up a wall, and you can't remember exactly how you built it? It's so frustrating! Today, we're going to learn a secret that real-life builders and expert Minecraft players use so that never happens. It's called making a **blueprint**!"

#### State Objectives

**Educator says:** "By the end of our lesson today, you will be a Master Planner! You will learn how to draw a map for your building, figure out all the stuff you need before you start, and then build your amazing idea perfectly."

## 2. Body: Learning to be a Master Planner (25 minutes)

### Part A: I Do - Making a Plan for a Simple Hut (7 minutes)

**Educator says:** "First, watch me. I'm going to plan a very simple, small hut. A blueprint is just a drawing of what you want to build, seen from the top and the side. I'm going to use this grid paper where every square is like one block in Minecraft."

1. **Model Drawing:** On a piece of grid paper, draw a simple 5x5 square. "This is the 'top-down' view, like if I was a bird looking at my hut from the sky. This shows me how big the floor will be."
2. **Model the Side View:** Next to it, draw a rectangle that is 5 squares wide and 4 squares tall. "This is the 'side view.' It shows me how tall my walls will be. My hut will be 4 blocks high."
3. **Model the Materials List:** "Now, I need to figure out what materials I need. Let's pretend I'm making it all out of oak wood planks. I need to build four walls."
    - "One wall is 5 blocks wide and 4 blocks high. 5 times 4 is 20. So I need 20 blocks for one wall."
    - "Since I have four walls, I need about... 80 blocks for the walls! And maybe 25 blocks for the roof (5x5). I'll write that down: **Materials List: Oak Wood Planks - about 105.**"
4. **Recap:** "See? Now I have a plan! I know exactly what it will look like and what I need to get before I even place one block."

### Part B: We Do - Planning a Cooler House Together (8 minutes)

**Educator says:** "Okay, now let's do one together! Let's plan a house that's a little cooler. Let's make it a rectangle shape and give it a door and a window. You help me decide."

1. **Ask Guiding Questions:** Use a new piece of grid paper. Ask questions to get the learner involved.
    - "How many blocks long should our house be? How many blocks wide?" (Draw the top-down view together based on their answer).
    - "How tall should the walls be?" (Draw the side view).
    - "Where should the door go? Remember, a door takes up two blocks, one on top of the other. Let's mark a 'D' on our side view where the door will be."
    - "Should we add a window? A window can be a 2x2 square of glass. Where should it go?" (Mark a 'W' for the window).
2. **Create the Materials List Together:** "Great! Now for our materials list. What do we need to build this?" (Guide them to list wood/cobblestone for walls, glass for the window, and a door). "Let's count the blocks together to see how much we need."

### Part C: You Do - Design Your Own Creation! (10 minutes)

**Educator says:** "Now it's your turn to be the architect! You get to design your very own small building. It could be a house, a tower, a shop for a village, or anything you can imagine. First, draw your blueprint and make your materials list. Remember your top-down view and your side view."

- Provide the learner with grid paper, a pencil, and colored pencils.
- Let them work independently, but stay nearby to offer help if they get stuck.
- Remind them to think about doors, windows, and what materials they want to use (wood, stone, wool, etc.).

**Success Criteria for this step:**

- You have a drawing of what your building looks like from the top.
- You have a drawing of what one wall looks like from the side.
- You have a list of the different kinds of blocks you will need.

### 3. Conclusion: Blueprint to Reality! (15 minutes +)

**Summative Assessment: The Grand Tour**

**Educator says:** "You have your master plan! Now for the best part. It's time to build it. Open up Minecraft (or get your building blocks) and use your blueprint and materials list to build your creation."

1. The learner builds their structure based on their plan. Encourage them to refer back to their paper often.
2. Once finished, ask the learner to give you a "tour" of their new building.

**Recap and Reflection**

**Educator says:** "Wow, that looks amazing! Let's talk about what we did."

- **Ask questions to reinforce learning:**
  - "What do we call the plan you draw before you build?" (A blueprint!)
  - "How did your blueprint help you while you were building?" (It told me the size, shape, and what I needed).
  - "Was it easier to build with a plan than without one? Why?"

**Educator says:** "You did an incredible job today. You learned how to think like a real builder by making a plan first. Now you can design anything you want, and you'll always know exactly how to build it. You are a true Minecraft Master Planner!"

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## Differentiation and Adaptations

- **For Struggling Learners (Scaffolding):** Provide a pre-made outline of a simple house on grid paper and have them add details like the door, window, and roof type. You can also help them count the blocks for their materials list.
- **For Advanced Learners (Extension):** Challenge them to design a more complex structure with multiple rooms, a second floor, or a garden. Ask them to calculate the exact number of blocks needed for every part of their build and "gather" them in their inventory in Creative Mode before they start building.
- **Classroom Adaptation:** Students can work in pairs to design a structure together (Think-Pair-Share). The "You Do" portion is individual drawing. Building can be done with physical blocks if computer access is limited. Students can do a "gallery walk" to see each other's blueprints.
- **No-Tech Version:** The entire lesson can be completed with grid paper and building blocks like LEGOs. The final build becomes a physical model instead of a digital one.