Unleashing Innovation Through STEM Education
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Lesson: Place Value	Name:
Teacher:	Date:

Place Value City Project

MA.7.NSO.2.1 – Whole Numbers, Decimals, and Fractions

Big Idea

Design a city where each building represents a number. Show place value using whole numbers, decimals, and fractions.

Learning Goal

I can explain the value of digits in whole numbers, decimals, and fractions.

Materials

- Cardboard / paper
- Markers / crayons
- Ruler
- Labels
- Recycled materials

Project Steps

1. Create a city layout (roads, buildings).
2. Whole Numbers: Example 4,582 → 4,000 + 500 + 80 + 2
3. Decimals: Example 0.45 → 4 tenths + 5 hundredths (45/100)
4. Fractions: Example 1/4 = 0.25
5. Comparison Street: 0.5 > 0.05, 1/5 > 1/10, 0.45 > 0.405
6. Label everything clearly.

Student Checklist

☐ 2 Whole numbers
☐ 2 Decimals
☐ 2 Fractions
☐ Comparison street
☐ Labels complete
☐ Ready to present

Sentence Frames (ELL Support)

"The digit __ is in the __ place, so its value is __."
"This number is greater because __."

Rubric (50 points)

Whole Numbers – 10
Decimals – 10
Fractions – 10
Comparison – 10
Creativity – 10

STEM Night Display

• Add a title board
• Use bright colors
• Practice explanation
• Be ready to answer questions

Reflection

What did you learn?

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What was challenging?

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