Big Idea – What Population Data Can Reveal

Exponents show how numbers **grow quickly** — multiplying again and again.
In real life, **communities also grow**, and sometimes that growth happens faster than the resources—like schools, housing, healthcare, or jobs—can keep up. By studying exponential growth, we can understand how communities change and explore ways to make sure **every group has access to what they need to thrive**.

Math + Equity Example

City population in 2000 = 10,000
If the population doubles every 10 years (2^n):

- **2010** → 10,000 × 2^1 = 20,000

- **2020** → 10,000 × 2^2 = 40,000

- **2030** → 10,000 × 2^3 = 80,000

This shows how quickly needs can multiply when populations grow.
Communities must plan for **equitable access** to schools, transportation, healthcare, and affordable housing so that growth benefits everyone—not just a few.

Data Reflection

Circle or underline the word that stands out to you:
growth | access | fairness | planning | inclusion

Share Your Thinking

The word I picked is: _____

I picked this word because:

_____

_____

_____

Reflection:

How does this word connect to what we are learning about population growth and equity today?

_____

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Student Equity Reflections

1. What does this math example show about how quickly a population can grow?

_____

_____

2. In the example, how many people live in the city by 2030?

_____

_____

3. Why can rapid population growth create challenges for fairness and resource access?

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4. What could community leaders do to make sure all groups benefit when a city grows?

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