

Big Idea – Urban Design Impacts Health and Access

Scale drawings and similar figures help us **compare sizes and distances fairly**. In many cities, some neighborhoods are designed with **easy access** to parks, schools, and stores, while others lack sidewalks, safe routes, and nearby services. By using scale and measurement, math helps us see how **urban planning impacts fairness, safety, and opportunity**—and how improving design can support **community equity**.

Math + Equity Example

Map Scale: 1 inch = 1 mile

- **Neighborhood A** → School is 2 inches away on the map = **2 miles**
- **Neighborhood B** → School is 5 inches away on the map = **5 miles**

Neighborhood B students must travel **more than twice as far** to reach school.

Scales and figures reveal how **distance, design, and location** can create unequal access to essential places like schools, grocery stores, and parks.

Data Reflection

Circle or underline the word that stands out to you:

access | fairness | opportunity | community | design

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 walkable and underserved neighborhoods today?

Student Equity Reflections

1. What does this math example show about how access can differ between neighborhoods?

2. Which neighborhood has to travel farther to reach school? How many more miles is it?

3. How can data like distance and scale help city planners design fairer communities?

4. What could be added to underserved areas to make them more walkable, safe, and fair?
