

What's Your Perspective on This?



Architects provide elevations of the buildings they design depicting two-dimensional drawings of the three-dimensional buildings to be constructed. These elevations give views of the building from the front, back, left, and right.

You will be playing the role of architect and builder as you perform the following investigations.

1. On a 3 cm x 3 cm grid, stand Cuisenaire Rods (ranging in heights of 1 cm to 9 cm) on their ends and completely fill in the grid with the rods. These rods will represent buildings on a “city plot” in a downtown area.
2. View the “city plot” from the front, right, back, left, and top and make drawings of these views or perspectives on centimeter grid paper. Label the height of each building in your drawings and color the buildings to match the Cuisenaire Rods.
3. Exchange your drawings with a partner group and use their drawings to build a “city plot”. Check the accuracy of your “city plot” with your partner group. If your “city plot” does not match, your partner group can remove one building that does not match. You will return to the “planning board” and try again.
4. Next, make a set of views for a 3 cm x 3 cm “city plot” and exchange with a partner group. Use Cuisenaire Rods to build the “city plot” from these elevations. Check with your partner group for accuracy.

5. After building “city plots” and drawing elevations of your “city plots”, you will be working with an innovative and interactive software program called “*Building Perspective*” by Sunburst Communications, Inc. designed for grades 4 to adult. In this software program, you will be looking at a “target city” and its views similar to your “city plot” investigations. There are different levels of difficulty ranging from a 3x3 to a 5x5 “target city” plot. Your goal is to completely fill in the squares on a “target city” plot with the correct buildings by color and number. Please note that the numbers of the buildings on the software program match the heights of the Cuisenaire Rods used, but the colors do not match. While working at a computer station, you may want to use the Cuisenaire Rods for a visual representation of the elevations presented in the problem(s).
6. Your instructor will demonstrate how to use the software on the overhead. The software is easy to navigate with help options available. If you need assistance during your investigations, ask your instructor.
7. You are to work with a 3x3 “target city” and then progress to the other level(s).
8. Record your strategies used to successfully complete a “target city” and be prepared to share with the whole group. Compare and contrast strategies used for the different levels.