A Walk in the Park

Getting Started

There are parks in nearly every community. Different parks attract different people and have different uses. For this project, you will design a new park for your community. The type of park is up to you. You will use what you've learned about congruence to help you meet certain requirements for your park.

Activities

Researching

Learn about what goes into designing and planning a park. What features make an ideal park? Different communities have different requirements. Look for specific requirements in your community. Learn about the process of building a new park from scratch.

Planning

Make a list of the features that make an ideal park. Then add notes about which of these elements you would like to include in your park. Explain why you want to include each feature.

Designing

You will design your park from an overhead view set on a coordinate plane. The center of your park will be at the origin of the coordinate plane. You will use geometric figures to represent the elements of your park, like gardens, benches, parking, and activity areas.

Your park design must include the following:

- a walkway in Quadrant I that is translated to form another walkway in Quadrant IV
- two benches—one that is rotated 90° from the other
- a restroom building reflected across the x-axis
- Other elements to consider include walkways, seating, bike paths, restrooms, and activity areas. Each new design must have a congruent feature that is translated, reflected, or rotated from another design.

Modeling

Sketch the overhead view of your design on graph paper. If possible, construct the final design of your park using a computer program. Be sure to label the different shapes to indicate what they represent in the design.

Explaining

Write an explanation of each translation, reflection, and rotation in your design.

Finishing the Project

You're almost ready to present!

Project Checklist

Have you gathered together the parts of your project?

- the research you conducted on how to design and plan a park
- your graph paper sketch
- the computer-designed park
- your explanation of your design

Reflect and Revise

Review your project with a friend or family member. Does your design accurately include all the necessary elements? Does your explanation clearly describe each translation, rotation, and reflection in your design? If necessary, make changes to improve your design or explanation.

Scoring Rubric

3	The student presents research from reliable sources. The park shows an understanding of geometric congruence. The explanation further completes this understanding.
2	The student does some research. The park is thought-out and detailed. The explanation shows an understanding of general geometric concepts.
1	The student provides research, a model, and an explanation that need improvement. The provided design is incomplete.
0	The student leaves out or does not complete major elements of the project.

Your Evaluation of the Project

Evaluate your work, based on the Scoring Rubric.

Your Teacher's Evaluation of the Project