The Perfect Park

Grade Level: 6-8 | Length of Lesson: 120 minutes

Performance Tasks and Other Evidence of Learning:

Students play the role of an architect and use modeling to create the perfect park.

Lesson Plan

Overview

In this activity, the student takes on the role of an architect. The student is presented with the task of creating a community's ideal park with a budget of $750,000. The student is provided with a list of the community's requirements and budget and the student creates an illustrated model of the community park. The student utilizes a data model by creating a spreadsheet of the park costs. Finally, the student creates a flowchart that decomposes the task of seeking community approval for the park.

Primary Objectives

- Students create a model to plan and solve real-world problems.
- Students construct a data model to solve problems.
- Students create a flowchart to model a process.
- Students use multiple models together to determine solutions for a single problem.

Warm-up

1. Have students discuss how architects might use models in their day-to-day work (3-D models, blueprints, data models to show costs, etc.).

2. Why do architects need to utilize models before beginning their work?

Activity

To begin, introduce the task by asking students to read the scenario. Address the requirements and brainstorm possible solutions to the first three bullet points with students.

Have students open a spreadsheet software program and ask them to complete Part 1 using the Community Park Cost List at the end of this document.

Next, have students draw their park model. Direct students to use a digital drawing tool or pencil and paper. Remind them to utilize their data model to dictate what is included in the model.

Finally, have students create their flowchart. Indicate if students should create their flowchart with pencil and paper or using digital tools.

Prompts

You are an architect and Mayor Rose of Thomasville, Florida has asked you to design the perfect community park for them! They have $750,000 to spend. Here are their requirements:

- The playground should be fun for kids and adults of all ages.

- The park should be a place for community members to both relax and be active.

- Consider the climate of Thomasville when creating your community park. Throughout the year, high temperatures range between 70° and 90° Fahrenheit and low temperatures range between 52° and 76° degrees Fahrenheit.

- A parking lot needs to be included in the plans.

Part 1:
Use the Community Park Cost List to determine which items you will use in your park design. Create a data model using a spreadsheet program to show Mayor Rose the cost of each item and the final cost of the entire park.

Part 2:
Draw a model of the park. What will your park look like when it is built? Your teacher will ask you to use pencil and paper or a digital drawing tool to create this model.

Part 3:
After taking a look at your park model and spreadsheet, Mayor Rose decides that he wants the community members of Thomasville to approve the park project. You create a basic flowchart of tasks that need to be completed in order to collect the community members' opinions. Your flowchart must include at least 8 processes.

Wrap Up

- Ask students to discuss the various types of modeling they used when responding to the park scenario.
- Discuss with students how modeling can be used to solve problems and particularly how architects use modeling.
- Ask students to explain the differences between a data model and a flowchart.

Extension Activities

- Have students write an explanation for what they included in their park, focusing on how the climate impacted their decisions.
- Have students use grid paper and coordinates when drawing their playground model.
- For enrichment purposes, increase the playground requirements from Mayor Rose.
- Have students present their park models to the class.

STANDARDS

All curriculum found on Learning.com is aligned to applicable national and state standards. For detailed information on standard alignments, please email **standards@learning.com**.

Community Park Cost List

Park Components	Cost
Trail construction	$25,000.00
Playground	$50,000.00
Restrooms	$28,000.00
Olympic-size swimming pool	$250,000.00
Skateboard park	$25,000.00
Parking lot	$90,000.00
Multi-purpose turf field	$275,000.00
Picnic area and shelters	$180,000.00
Baseball field	$196,000.00
Tennis court	$51,000.00
Basketball court	$41,000.00