## City Planning

A city planner helps lay out things that make a city livable for people. Planners decide where parks, fountains, buildings, and roads should go in a city.


One city planner was Robert Moses. He was responsible for many construction projects in New York City. He also planned and built 658 playgrounds in the city.

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## Your Project Plan a Dog Park

Dog parks are one kind of place that city planners design. Research dog parks near where you live. Design a new dog park. Choose at least five things to put in your dog park, such as fountains or picnic tables.

The park's area should not be greater than 100 square meters, and the park can be any shape but a square. Draw all the fun things included in your park. Write the measurements of each side of the fenced-in park, and write the park's total area.


## Community Gardens

A community garden is a piece of land used for growing food, flowers, or other plants. People in a neighborhood take care of the garden. Each person might maintain a section of the garden.


Community gardens first started in the United States in the 1890s. In Detroit, vacant lots were changed into gardens. Other cities, such as San Francisco and Boston, started community gardens after the success in Detroit.

## Your Project Design a Community Garden

You will design a community garden. Research a community garden like Bartlett Park Community Garden in St. Petersburg, Florida. Bartlett Park has many garden plots, a greenhouse, a well, a patio, and even some chickens. Make a list of 10 things you want to grow in your community garden.


The land for your garden needs to fit rectangular plots with the following areas (in square feet): $10,10,12,12,16,16$, and 21 . No two garden plots can have the same length and width.

Draw a picture showing the community garden and its 7 garden plots. Write the measurements of the sides of each plot. Make sure to write what is grown in each plot.

Finally, present your design of a community garden to your class.

## Carpentry

Carpenters build and repair buildings. They also install kitchen cabinets, build stairs, make desks and chairs, and put up walls in buildings.


Carpenters work with tools and supplies such as hammers and nails. They also use saws, drills, and sanders when building things.

Carpenters use math. Measurements must be precise for building walls or tables. Math that is not correct could lead to a crooked wall or an uneven floor.

## Your Project Draw a School Floor Plan

Pretend you will design an entire new floor in your school.

Before you begin, take a walk around your school. Make a report about the number of rooms. See whether the rooms are the same size or next to each other. Make sure to include the hallway between the rooms.

Now, draw a design for the new floor in
 your school. It should hold 7 classrooms. The measurements of the classrooms are in meters and should be $6 \times 4,6 \times 6,7 \times 6,8 \times 6,8 \times 7,9 \times 3$, and $9 \times 5$. As you draw your design, find the area of each room.

## Card Games

In one card game, eight cards are dealt to each player. The rest of the cards are placed facedown on the table. The top card is then turned faceup to start the game.

The goal of the game is to be the first to get rid of all your cards.
You have to match cards with their number or pattern. If you have a match, you can get rid of the cards that match. If not, you have to pick up a card.


## Your Project Make an Area Game

Make an area game, using number cubes. Write the rules for your game. This is the only rule you must have: One player has to give measurements of an area.

For example, roll two number cubes. If you roll a 3 and a 6, write down 36. Then tell the measurements of a rectangle with an area of 36 square units.


Make sure that your game includes at least 2 other players and that there is a winner after playing the game.

