GROUNDS FOR PLAY

Design and build a playground with structures for children with different interests

POSSIBLE BUILDING MATERIALS

- Paper towel/ Toilet paper rolls
- Recycled shoe boxes/ Small boxes
- Egg cartons
- Clean recycled containers
- Miscellaneous packaging materials like bubble wrap, styrofoam inserts, empty tape rolls
- Sticks/Tree bark

TOOLS

- Scissors
- Tape/Glue
- Stapler

TESTING MATERIALS

To test the playground:

- A small figurine to see how "people" will fit on, around, and between structures

SET UP THE PROBLEM

1. Parks and playgrounds need to be designed so that children of different ages, sizes, abilities, and interests can enjoy the space.

2. Build a prototype (small, sample version) of a park or playground that has a variety of activities to entertain a variety of children.

Tip: select a small figurine before you start creating to use as a guide for building structures that fit the figurine and to use for testing the size and layout of the structures.

ENGINEERING BACKGROUND

Structural engineers design and analyze structures to make sure they can hold weight and stand up to all types of different uses.

LEARNING GOAL

We use *spatial reasoning* to visualize and navigate the world around us. During this design challenge, children will use spatial reasoning to determine the orientation of parts and how they fit together. They will need to think about where to put pieces of their park design so that they fit in the space and so that there is room for children to use the space and structures.

✔ TIPS FOR ADULTS

Before building: Ask children what they already know about parks and playgrounds and have them brainstorm structures that will attract children of different ages or abilities "What types of play structures will you build? How will children play on them? Are there structures for different types of playing?"

After they build their prototypes, ask them to explain the layout of their playground "Tell me why you put each of the structures in its place? Will the spacing of the structures work well if there are lots of children in the playground?"

And if there is anything else they wish the playground had "What else should this playground have to make it work for lots of children?"

Be sure to use spatial language such over, under, on, and next to as you are asking questions. And, if it's helpful for younger children, you can show pictures of playgrounds to inspire their planning.

Bay Area Discovery Museum

THINK, MAKE, TRY

For more ideas visit: BayAreaDiscoveryMuseum.org/ThinkMakeTry