DESIGN A TOWN

A combination of engineering and urban development

Curriculum topics
- Engineering/Design
- Problem Solving
- Urban Planning

Subjects
- Engineering
- Physical Science

Grade range: K – 2

Who we are: Resource Area for Teaching (RAFT) helps transform the learning experience by inspiring joy through hands-on learning.

Use problem solving, engineering, and urban planning to design and build a dream town using different types of materials.

*Town Plan*

Town name: _____

Materials

Materials in the kit may vary but generally, this kit contains the following:

- Graph paper (5)
- Craft sticks, jumbo (12)
- Craft sticks, regular (12)
- Craft sticks, extra jumbo, or paint sticks (12)
- Paper bags, small (4)
- Paper cone cups (12)
- Boxes, small (4), medium (4), tiny (4) (12 bags total)
- Cardboard tubes (4)

- Variety of stickers (shapes, other)
- Optional: Colored of patterned paper, plastic containers in various sizes
- Not included: Glue/tape, pencil crayons, markers, scissors, ruler

WARNING: CHOKING HAZARD – Small parts not for children under 3 yrs.

To Do and Notice

1 Brainstorm the elements of a town. Consider problems the town might face such as fire, where to put libraries, schools, hospitals, police/fire stations, etc. Record ideas on a piece of paper.

2 Use graph paper to draw the town layout (see grid on page 1). Be sure to include non-building elements such as trees, roads, parks, and lakes as well as the buildings and other structures. If possible, draw the items approximately to scale.

3 Choose the materials with which to build certain town structures (bridges, homes, buildings, etc.). Some of the materials might be ideal for modeling certain structures whereas others may be ideal for representing flat surfaces (e.g., lake surfaces, grassy fields in parks).

4 Begin construction. Try to include as much detail as possible on each structure. Use small materials and draw in fine details as needed such as windows, artwork, brick, etc.

5 Arrange the structures on a flat surface. Give the town a name and write a short history of the town. Consider these questions: How was it created and who founded it? Why was it designed this way? Which structures are the oldest or newest? What is the town best known for, or what industries or products are made in the town? Be creative!

6 **Share** your town design and history with RAFT! Submit photos/video via email at education@raft.net or on social media (Facebook, Twitter, Instagram).
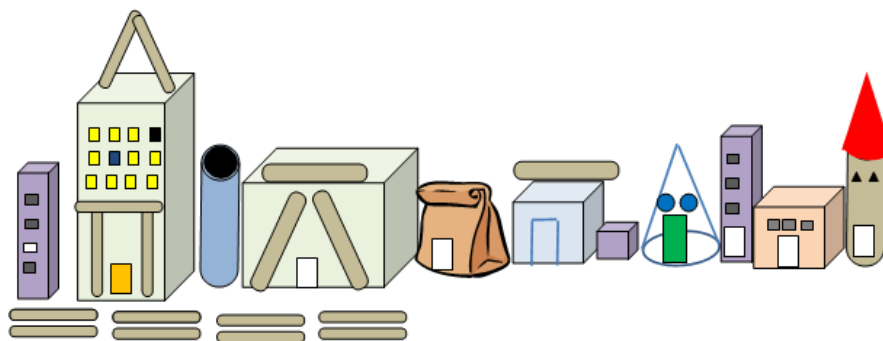
The Content Behind the Activity

This project provides opportunities to use critical thinking skills, learn about urban planning, practice the design process, and develop stronger cognitive skills. The user designs and builds each individual element of a town and engages in problem solving with limited resources (materials). Users draw on their prior knowledge and experiences while expressing their own creativity. With its initial emphasis on brainstorming, this project gives users the experience of sharing their ideas and listening to the ideas of others. This process is a real hands-on approach to working with peers and enhancing communication skills.

Photo: A city model as part of Project Morrinho, Rio de Janeiro, Brazil
Source: https://bit.ly/3auFPT1, Creative Commons license: https://bit.ly/2wZsBju

Reuse

This kit uses 100% reusable materials designed for other uses. To continue making a positive impact in reducing waste, reuse these materials in other projects. Additionally, any unused materials can be collected and delivered back to RAFT.

Feedback

Please comment on this kit by taking this short survey: http://bit.ly/RAFTkitsurvey. Let us know of any material concerns (missing, broken, or poorly fitting parts) as well as any suggestions for improvement.

Visit https://raft.net to view related activities!
Building Center
Design a House
Sand Mosaic
Starchy Structures

Resources

- Architecture lessons for kids - https://bit.ly/2RPnV6z
- Architecture Adventure - https://bit.ly/3a7bElr