



Cup Tower Challenge

Materials: set of paper/plastic/styrofoam cups, measuring tool (optional)

Background Information: Engineers are people who design and build things. They not only plan and build their designs, but they also test and improve their creations. A tower is a structure that is taller than it is wide. Many towers are built for something other than for people to live in.

STEM Career Connection: Civil engineers create, improve and protect the environment in which we live. They plan, design and oversee construction and maintenance of building structures and infrastructure, such as roads, railways, airports, bridges, harbours, dams, irrigation projects, power plants, and water and sewerage systems.

Literature Connections: *Rosie Revere, Engineer* and *Iggy Peck, Architect* by Andrea Beaty, *The Most Magnificent Thing* by Ashley Spires, *Bigger! Bigger!* by Leslie Patricelli

Challenge:

1. Start with a set of 10 cups.
2. Create the tallest tower you can using the cups.
3. Get 10 more cups. Create the tallest tower you can with this number of cups.
4. Keep adding cups in sets of 10 to create the tallest tower possible with each number of cups.
5. Measure your tower. Is it taller than you? Is it taller than the adults in your family or group? How tall is it in feet? In inches? In centimeters?
6. Extensions:
 - a. Redo the activity using different sizes of paper and plastic cups.
 - b. To change up the challenge a little bit, you can add another material like notecards or craft sticks.
 - c. You can also add goals (tower must be a certain height or width, etc.) or limitations (tower can only use a certain number of cups, tower can only be five cups wide, etc.).

