ACTIVITY SHEET

TALLEST TOWER DESIGN

OVERVIEW

Watch **What's an Engineer? Crash Course Kids #12.1** (https://youtu.be/owHF9iLyxic).

Use recycled newspaper and tape to build the tallest freestanding tower that can be both tall and strong enough to withstand a windstorm. Consider the materials you have to use to make your tower strong. How can you make newspaper strong? Then create a windstorm to see if your tower can stand tall!

BACKGROUND INFORMATION

Structural engineers mainly focus on creating "shells" for structures such as buildings, bridges and tunnels. Structural engineers ensure that their designs and materials selected **can stand environmental conditions** like Canadian winters and heavy snowfall in areas such as Gander, Newfoundland and Labrador or the strong winds called "Chinook Winds" that Calgary, Alberta sees each year.

MATERIALS

- ◯ Recycled newspaper (4 or 5 sheets)
- ◯ Tape
- ◯ Ruler or metre stick
- ◯ Scissors
- ◯ Paper (plain or lined for planning!)
- ◯ Pencil
- ◯ Timer or clock

FOLLOW UP

If you were to complete this challenge again, what would you do differently? What tips could you give the next person to complete the challenge?

Post an image of your tallest freestanding tower on Facebook or Twitter and tag @pinnguaq!

STEP-BY-STEP INSTRUCTIONS

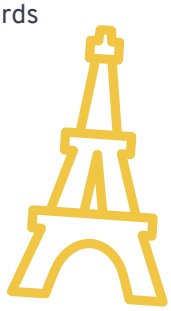
STEP 1: Brainstorm ways to build your tower.

STEP 2: Use paper and to draw your tower design prior to building it.

STEP 3: Start the clock! Have a timer ready and see how long it will take you to build your tower.

STEP 4: Begin building your tower! This step is based on the design in which you selected from your brainstorming session!

STEP 5: Measure your tower from the floor to top of the tower. Then measure out 1 ruler length from the base of the tower and begin the wind stimulation. Blow air for 5 to 10 seconds towards the tower to see if it can withstand the environmental condition.



STEP 6: How could you change your tower design? What building techniques would you use next time?