

# How High Can It Go?

Using the simple materials of paper and tape your students can employ their imaginations as well as experience the Engineering Design Model when they undertake the challenge of seeing, "How High Can It Go?"

## Materials

- 6 inches of masking tape per team for round one
- one piece of copy paper per team for round one
- yardstick for measuring
- additional materials for subsequent rounds

## Design Criteria

Using a single piece of paper and 6 inches of tape, how high a tower can you construct in 10 minutes that will stand for at least 1 minute?

## SCAMPER

**SUBSTITUTE-** Instead of ... I can ...

**COMBINE** - I can bring together ... and ... to ..

**ADAPT** - I can adapt ... in this way ... to ...

**MODIFY-** I can change ... in this way ... to ...

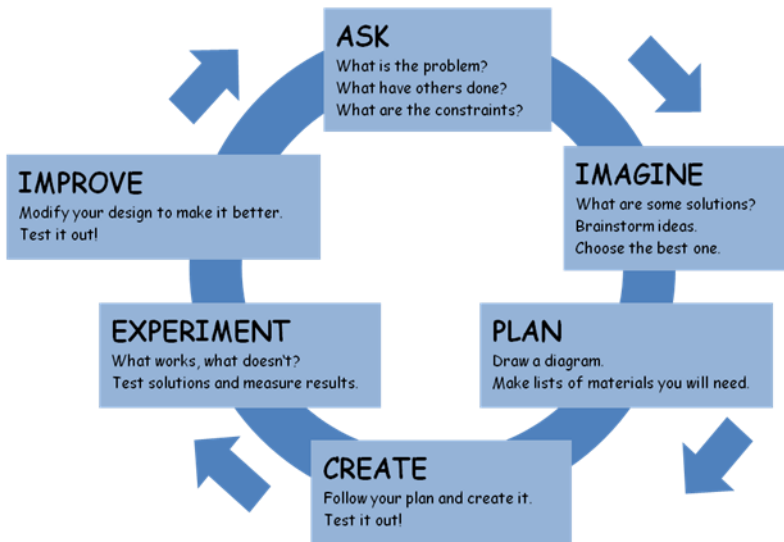
**PUT TO OTHER USES** - I can re-use ...  
in this way ...by ...

**ELIMINATE** - I can eliminate ... by ...

**REARRANGE** -  
I can rearrange ... like this ... such that ...



## Engineering Design Model



Post the design criteria on the board.

Have pairs of students work through the Engineering Design Model answering the questions and creating a plan prior to implementing it. Have them use the SCAMPER process to help generate ideas during the brainstorming section.

They may bend, tear, crumple, roll, and cut the paper while constructing their towers.

Did their solution succeed in meeting the design criteria?

What would they have done differently?

Have them cycle through the design model again taking advantage of the things they learned in their first attempt.



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