



The Water Tower

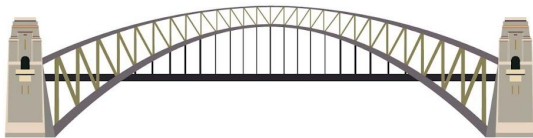




What is engineering?



“The application of knowledge and creativity to the needs of humanity”





The Brief

1. Design and build a **prototype** water tower that:
 - Can hold a plastic cup on top of its structure at least 1 metre in height and free standing on the floor.
 - Can hold a the cup and be filled with water (on judging this will be slowly poured in);
 - Can remain standing for 3 seconds
2. As a team, demonstrate your prototype.





Equipment List



- 1 plastic cup
- ~~1 metre of string~~
- 1 small roll of sellotape
- 1 newspaper
- 1 pair of scissors

You can NOT use anything else in your construction.





Marking criteria

- Planning- this needs to be on A3 paper (/5)
- Quality and prototype performance- Judging is based on height (cm)of tower from floor to brim of the cup x amount of water (mL)added (ranking 1-4)
- Teamwork (/5)





Health and safety briefing

1. Keep your work station tidy.
2. Cutting equipment must be used with care and not on whiteboard tables.
3. Tell me if there are any breakages, spillages or accidents.
4. You are responsible for your safety and care of your team.





Group Planning

- Draw your ideas and write notes to explain some of the features of your designs.
- In 10 minutes you can ask for clarifications but as a class you only get 3 questions!
- Your teacher will view these and judge these based on the detail.

10 minutes



Time to Build- trial- problem-solve

- In 25 minutes you will be asked to step away. Cups must be empty on judging as we will add water on judging. You will determine how much water you add.
- You may wish to trial it though!

25 minutes





Judging

- Planning- this needs to be on A3 paper (/5)
- Quality and prototype performance- Judging is based on height (cm)of tower from floor to brim of the cup x amount of water (mL)added (ranking 1-4)
- Teamwork (/5)

15 minutes





Tidying up

Whilst the final judging calculations are in progress:

- Collect your team's equipment and neatly place it on the side bench
- Put any unused resources back to the side bench
- Place rest in the red bin.





And the winner is...

