Mains  20 mins - choose ONE only
MAKE.................................................................................. 20 mins
You will need: A4 paper, sticky tape, books.
Many buildings use columns to help hold them up. What shape do these columns need to be?
1. Take 3 pieces of A4 paper.
2. On each piece of paper and tape the long sides together, make sure there is a 6cm overlap.
3. You should now have 3 cylinders. Take 1 cylinder & shape it into a triangle. Take the final cylinder and shape it into a square.
4. Now you have 3 different shaped columns.
5. Now test the strength of each column by carefully adding books to the top.
Which shape is the strongest?
Next time you go to a big building or a parking garage, look out for the columns in the building.

EXPLORE.............................................................................. 20 mins
You will need: your imagination.
Roma likes to dance in her spare time. Create a dance to show how The Shard was constructed. Indian classical dancing, ballroom & latin are Romas favourite dance styles, but choose any style.
Feb 2009 - the old building is demolished to make room for The Shard and construction begins
Oct 2009 - a concrete core is poured to make a stable centre for the building
May 2010 - the concrete core is at 80m high and cranes begin to add metal and glass to the outside
Nov 2010 - The Shard becomes the tallest building in London, builders keep adding the glass exterior
Feb 2011 - the concrete core reaches its final height
Mar 2012 - The Shard reaches its final height when the spire is added to the top
Jun 2012 - The Shard is opened to the public

Meal Plan #032
Roma Agrawal
First released Spring term 2018

Starters  5-10 mins
Snack, Cackle & Pop.................................................. 2 mins
Snack: grab a snack before you begin!
Cackle:

Pop: Stemillions Playlist on Spotify
bit.ly/stemillionsplaylist

Meet Her.......................................................... 5 mins
Roma is a Structural Engineer who constructed The Shard, the tallest building in the UK and the fourth tallest in Europe. She is also an active campaigner for women in engineering.
Watch: bit.ly/032MeetThem
Discuss:
★★ What do you think of Roma’s job?
★★ If you could design any building, which one would it be?

Desserts  5 min
Share with us ................................................... 1 min
Upload photos on Twitter or Instagram and tag @Stemettes and #Stemillions.
Ask Them.......................................................... 2 mins
Got a question? Ask Away! bit.ly/Ask-Away
Digest................................................................. 2 mins
Digest this Meal Plan - complete this form.

This resource is created by Stemettes under CC BY-NC-SA.
Copyright reserved Stemettes 2020. Stemettes is a registered trademark.