



Starters 5-10 mins

Snack, Cackle & Pop..... 2 mins

Snack: grab a snack of your choice!

Cackle:

MY MAIN AREA OF EXPERTISE IS, OF COURSE, STRING THEORY.



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Pop: Stemillions playlist on Spotify:

bit.ly/stemillionsplaylist

Meet Her..... 5 mins

Merritt Moore is a ballet dancer and Quantum Physicist. She has danced as a member of the Zurich Ballet, Boston Ballet, English National Ballet and London Contemporary Ballet Theatre while graduating with honours in Physics at Harvard, and graduating with a PhD in Quantum Optics at Oxford University.

Watch: bit.ly/038MeetThem

Discuss:

- ★ What did you think of Merritt's video?
- ★ What is your favourite topic in physics?

Desserts 5 min

Share with us 1 min

Upload photos on [Twitter](#) or [Instagram](#) and tag @Stemettes and #Stemillions.

Mains 20 mins - choose ONE only

MAKE..... 20 mins

You will need: sticky tape, skewers, sweets.

Quantum physicists believe that particles can also appear as waves. To demonstrate how waves travel you will need 2 metres of tape, skewers and sweets.

Follow the instructions below:

1. Attach one end of the tape to a door handle or chair (something sturdy).
2. Along a strip of tape, line up the skewers spaced 5cm apart.
3. Pull the tape tight and gently lift one skewer and let go - watch the wave!
4. Put some sweets on the end of the skewers - what happens to the wave now?
5. What happens to the wave if you only put sweets on half the skewers?
6. What if you lift a skewer from both ends and let go?

This is a helpful video: bit.ly/038make

EXPLORE..... 20 mins

You will need: pens, A4 paper.

In quantum mechanics, there is a theory called 'The Many Worlds Interpretation'. This suggests that there are many different universes where we exist. Draw a timeline of one day at the weekend detailing everything you did. Draw other timelines, imagining the following scenarios:

- ★ What if you had feet for hands?
- ★ What if there was no electricity?
- ★ What if we lived on Mars?

Ask Away..... 2 mins

Got a question? Ask Away! bit.ly/Ask-Away

Digest..... 2 mins

Digest this Meal Plan - [complete this feedback form.](#)