

# Dr. Tessa Lau

First released Autumn Term 2018



Meal Plan  
**#054**  
30 mins

## Starters 5 - 10 mins

**Announcements..... 1 min**  
STEM events/competitions (check OtotheB), share achievements and welcome new members.

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

**Snack:** Percy pigs. Yummy

**Cackle:**

**Why did the robot  
cross the road?  
Because he was  
programmed to do it.**

**Pop:** 'Kiss & Make Up' Dua Lipa & BLACKPINK

**Meet Her..... 5 mins**

Dr Tessa Lau is the Chief Robot Whisperer at Savioke, Inc. where she is creating new generation of user-friendly robots that work safely, securely and reliably in human environments. Her goal is to revolutionise service robots. Dr. Lau holds a PhD in Computer Science.

**Watch:** [Meet Tessa in this video](#)

**Discuss:**

- ★ If you could make a robot, what would it do?
- ★ What do you think was the best bit about Tessa's job?
- ★ Before you watched Dr. Tessa's video, what did you think a Robot Whisperer did?

## Desserts 5 mins

**Share with us ..... 2 mins**

Upload photos to MightyNetworks or Twitter

## Mains 20 mins - choose ONE only

**MAKE..... 20 mins**

Humanoids, like Sophia, are robots that look and behave like humans. In this activity you will make a [robotic hand](#). Firstly draw round your hand onto a piece of cardboard and cut it out. Now mark all the joints on your hands and score these with scissors or fold neatly. Cut straws into small pieces and tape one piece between each joint leaving small gaps and tape one straw at the wrist. Cut 5 long pieces of string, and thread one piece through each finger and then thread through the wrist straw. You should now be able to control your hand. How easy is it to control your hand? If you created an arm with a tube of paper is it easier or harder?

Post photos of your creations on MightyNetworks or Twitter and tag @Stemettes.

**EXPLORE..... 20 mins**

[Robots and computers process images](#) using electrical signals. To encode an image, a computer uses binary to turn an image into a series of 1's or 0's. Take a simple shape /image and place a piece of 1cmx1cm gridded tracing paper over the top. If the square has more than half of the image in it, code it as a 1, if the square contains less than half of the image, code it as a 0. Once you've coded the entire image, write down the series of numbers on each line and pass the code onto another person. The next person should get a new piece of paper and colour in any square with a 1, and leave any with a 0, what image have you got?

**Ask Her..... 1 min**

Post any questions to the Agony Aunt Topic

**Digest..... 2 mins**

Do [#054 Digest](#) on MightyNetworks or [bit.ly/digest054](http://bit.ly/digest054)