

MEET THEM

15 MINS



Ling has a degree in Civil Engineering with Computing and a PhD in Air Quality Modelling. Now, Ling's research looks into the **environmental impacts of the aviation industry**.

First watch Ling talk about her career in Aviation.

Discuss:

- Any thoughts about the video?
- What do you think of Ling's career?
- What do you think civil engineering is?



ACTIVITIES

40 MINS

MAKE

Ingredients: glass jar, tin foil, ice, scrap paper, matches, adult supervision.

Ling has a PhD in Air Quality Modelling, in this experiment, we will make smog in a jar. Smog, or smoke fog, is a type of intense air pollution and this is what Ling is looking to avoid with the aviation industry.

1. Firstly, rinse your jar so there are some water droplets on the inside of your jar.
2. Make a tin foil lid for the jar by squishing foil over the top of the jar. Leave this to one side. Place ice on top of the lid to make it cold.
3. Now, ask an adult to light a match and carefully set fire to a small scrap of paper. Quickly place the paper in the jar.
4. Now place the tin foil lid on top of the jar and place the ice back on top of the lid.
5. Watch the smog form in your jar.

Watch [this video](#) for the explanation of why smog forms.

A bit lost? [Watch the video to follow along.](#)

OR

EXPLORE

Ingredients: paper, pens, colouring pencils.

Ling's research looks at the environmental impacts of aircrafts on the environment. In this activity, you will design an aircraft of the future and make it as environmentally friendly as possible. You could create a plane, helicopter or even a rocket. Think about:

- Where does the aircraft get its energy from?
- The equipment onboard
- The pollution caused by takeoff and landing
- The materials the aircraft is made out of

Draw your new aircraft and label all the features. Present your ideas to everyone in the class.



Extension: Research some features on planes, rockets or helicopters that you can include in your aircraft design.



NEXT STEPS...

If you're aged 4-18 and you're inspired to create a Scratch project on the themes covered here, submit it to the About Us coding competition by 23:59 GMT on 19 December 2021 for a chance to win some amazing prizes. You can also enter the poetry competition on the same theme by submitting a poem. Find out more and enter online at aboutus.earth.