

# At home with Lottie



By Paula McMahon

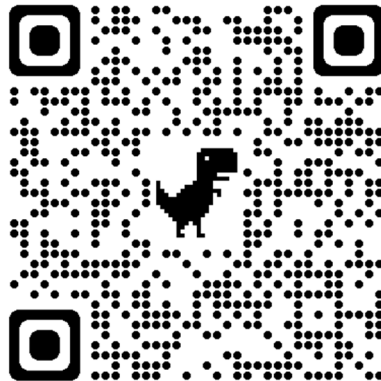


# #WESLottieTour

The WES Lottie Tour takes 'Lottie' to many different locations with lots of different engineering friends who show Lottie the work they do in engineering and related careers.

Its primary aim is for Lottie to inspire and encourage young girls (and boys) to think of careers in engineering and STEM subjects.

Read more about it at [www.weslottietour.org.uk](http://www.weslottietour.org.uk) and download all the Lottie Books for free at [www.weslottietour.org.uk/resources.html](http://www.weslottietour.org.uk/resources.html).



Thank you to Elizabeth Donnelly for vital contributions to the book.

Lottie and Paula had adventures together when Lottie came to stay with Paula.

Since Lottie's visit was during lock-down they spent lots of time at home.

Lottie was very interested in Paula's work as a Civil Engineer.



Paula helps look after an important road and its bridges.



What things do you find interesting?



Paula explained that Civil Engineers create the things we all need every day.

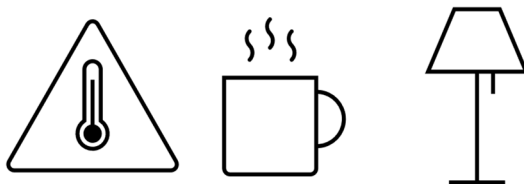
Lottie wanted to know about Paula's job.

Lottie had lots of questions.





What do you use water and energy for?



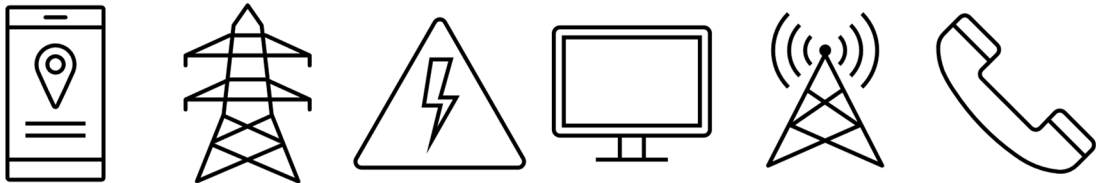
Lottie wondered about communication – do Engineers help people talk to each other?

Paula explained they do by putting cables underground or onto special masts called pylons.

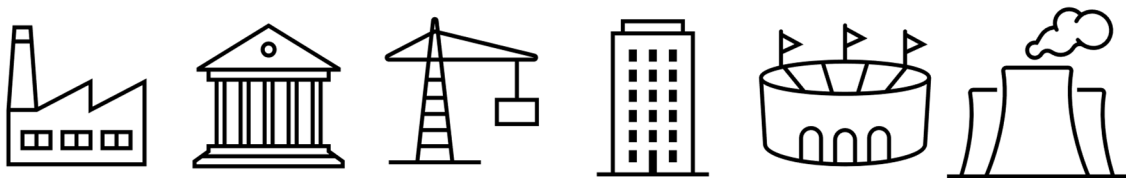
Lottie realised there were many ways Engineers help people talk in different ways.



Lottie and Paula on a video call



Can you think of things Engineers make?





Paula explained that transport means helping people get from one place to another.

Lottie found out that during lock-down many people started walking and cycling more.

Lottie thought this was good exercise. Paula said it also helped keep the air clean.



# INTERESTING FACT

Paula wants to shop less to help the planet.



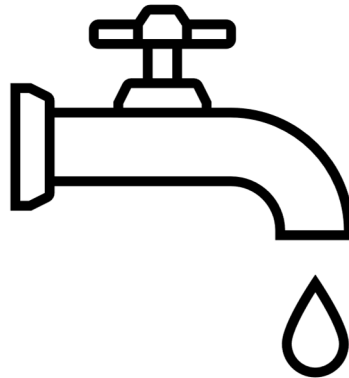
She buys things that last a long time and uses up every drop in each bottle.

What things do you like shopping for?

Paula explained that water has a very long journey before it gets to her house.

After being pumped from a river, lake or dam it needs to be cleaned.

It then goes through pipes to get to your tap.



# INTERESTING FACT

Paula wants to save water.



She uses her small sink when only a small amount of water is needed.

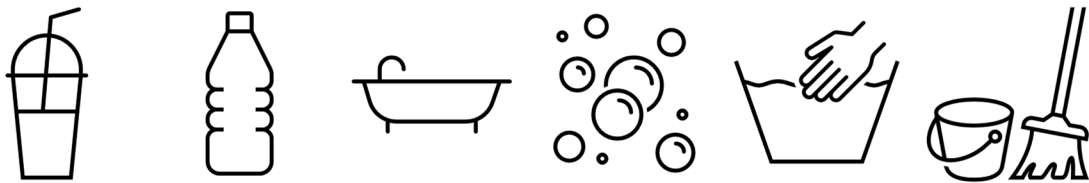
What other things travel a long way?

Lottie asked what happened to the water after it goes into the sink.

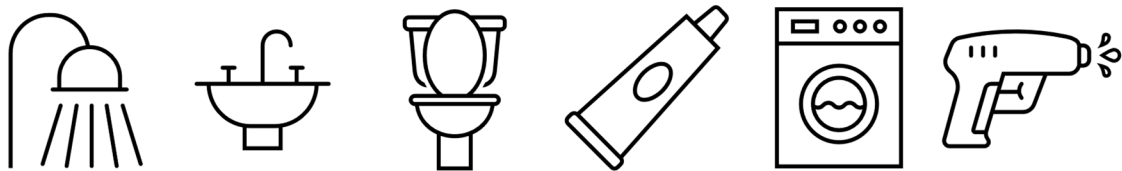
Paula explained it goes to a sewage treatment plant to be cleaned.

Lottie was not sure she wanted to know what happened to the water she flushed down the toilet!





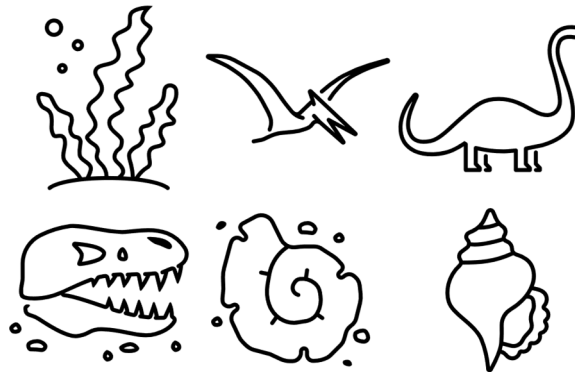
What makes dirty water in your house?



Paula explained to Lottie energy in the home often comes from burning fuel.

Lottie was very surprised this is mostly from dinosaurs and plants that died many, many years ago.

That is why it is called a fossil fuel.



Why do you think Paula keep the lids on her pans when she boils water?





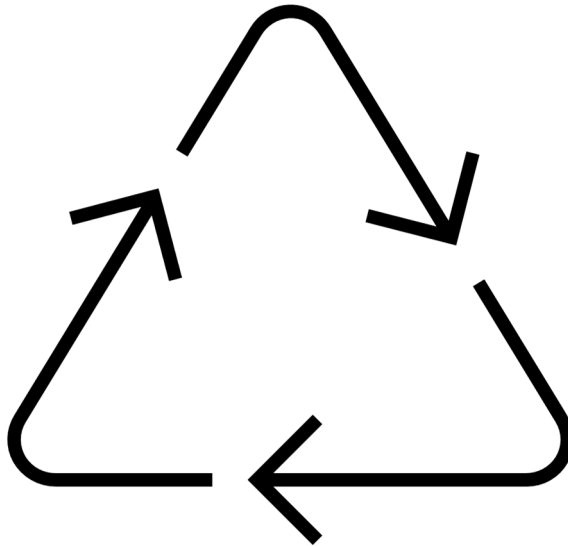
Lottie wanted to know more about electricity.

Paula said electricity can come from burning fossil fuels but can also come from wind, waves, water or even the heat from the ground.

We all use electricity for lots of things around the house. We need to use it wisely.



Lottie wondered what the meaning of this symbol was.



Do you know what it means?

Hint: the symbol has three parts, one means recycle

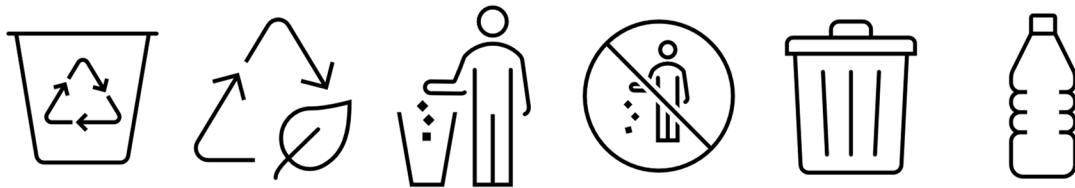
Paula explained we should not waste things.

Many things that are rubbish that cannot be used again can be recycled.

Lottie was very impressed with Paula's recycling bins so was a kitten. Can you spot him?



You may have seen similar symbols in lots of different places.



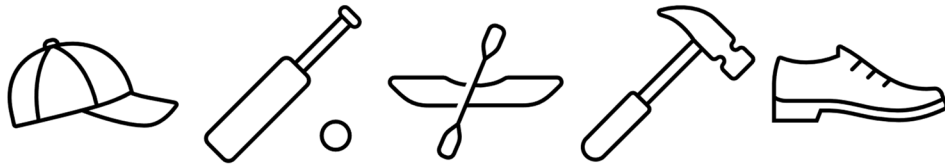
Where have you seen the symbol or one like it?

Sometimes Paula no longer needs things she has had for a very long time.

If she cannot reuse them, she tries to find other people who can.

Lottie was pleased to help Paula give clothes and furniture to people who need it.





What things can be used by more than one person?



# INTERESTING FACT

Engineers try and save energy in lots of ways.

The Archimedes Screw at The Tees Barrage moves water uphill in a way that uses less energy.



## A little bit about Paula



Paula did not know what she wanted to do when she was a small girl. She always enjoyed solving problems.

Her first job was as an Apprentice for the local council where she trained to be a Civil Engineer.

Paula has worked very hard and has done lots of interesting things.

Paula enjoys working as a Civil Engineer for Sir Robert McAlpine.



## **Paula and Lottie say goodbye for now**

Paula and Lottie hoped you enjoyed reading this book about our time at home together.

We both hope you are inspired to reduce waste and recycle what you cannot use again and again.

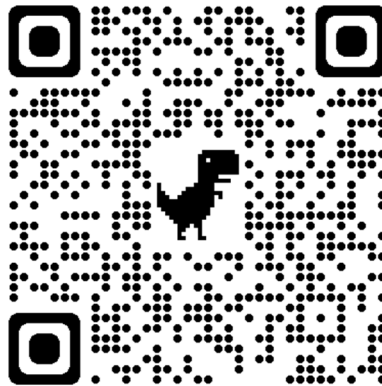


# The WES Climate Emergency Group

The Women's Engineering Society (WES) have a special group set up in response to the Climate Emergency declared by the UK Parliament in September 2019.

Paula leads this group of engineers and scientists who work in many different types of jobs.

Everyone shares ideas about how they can help work towards the United Nations Sustainability Goals (UN SDGs).



<https://www.wes.org.uk/content/climate-emergency-group>