STEMillions

Dr Ozak Esu

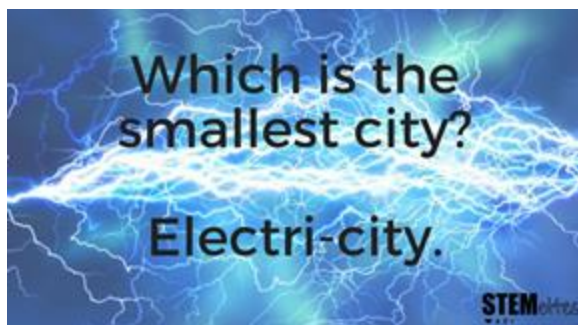*First released Spring Term 2018*

Starters *10 mins*

Announcements......................................3 mins
Check OtotheB and Announcements on MightyNetworks for the latest news.

Snack, Cackle & Pop............................... 2 mins
Eat: Jaffa Cakes, yummy!
Listen: 'God's Plan' by Drake
Science Joke:

Meet Her.. 5 mins
Dr Ozak Esu is an electrical engineer at Cundall. She designs sustainable solutions for buildings. In December 2017 she was named IET's Young Woman Engineer of the Year.

Watch... 2 mins
https://www.youtube.com/watch?v=MOrOPeL-82k

Discuss after the video 3mins
* ★ What is the role of an electrical engineer?
* ★ How many electrical items are in the room you are in?
* ★ What is electricity?

Mains *15 mins - choose ONE only*

MAKE... 15 mins
Take the layout of your school/ college and design it to be more environmentally friendly. Think about:
* ★ Sustainable energy sources
* ★ How to stop heat escaping
* ★ Recycling

EXPLORE... 15 mins
Read the instructions below to create circuits:

1.) Members stand in a circle, you are now a circuit. One member is a battery; all batteries have a positive (left hand) and a negative end (right hand)

2.) Everyone else is a wire conductor full of electrons. Distribute any object to each member including the battery - these represent electrons

3.) Closed Circuit: everyone pass electrons to their right/negative end. Continue passing electrons to the right, this is how electrons flow in closed circuits

4.) Open Circuit: spread members out to create a gap so they can't pass the object. When a switch is off the circuit is open; when the switch on, the circuit is complete - can you create this?

5.) Short Circuit: create a line of members between the battery and last member in the circuit. This will create an intersection where some members will not pass the object (a short circuit).

Draw diagrams of the circuits you created.

Desserts *5 mins*

Digest.. 2 mins
Do the #033 Digest on OtotheB and MightyNetworks or bit.ly/digest033

Share with us .... 2 mins
Upload a photo of your MAKE or EXPLORE to the online forum. Or tweet/instagram it (remember to tag us @stemettes).