**“Electric City” – Our Class Innovation Project**

You have been ‘contracted out’ by the city council to develop our city (Electric City of 6G). As the planners and builders, the people want you to DESIGN and BUILD a city that will be sustainable (use *renewable energy)* AND *help the people in some social cause.*

TASK: In pairs, you are going to design a model of one essential part of a city/town/village. This model should meet the following requirements:

❒ Use both series and parallel circuits to perform a function such as

- lighting up LED lights on a building, moving an object on the ground, spinning a windmill, etc.

❒ Be a realistic 3D structure that represents part of a city in real life

* that is coloured and ‘clean – cut’ with exact measurements (i.e. the houses look identical, the wind farm has the same windmills, a river looks like a river, etc.)

❒ Cannot be larger than the area of ‘land’ given to you and must use the materials

you are given (along with your own materials from home)

* Some of the materials will be supplied to you (i.e., the LED lights, some of the copper wiring, paperclips and fasteners for switches), **but** YOU will need to bring in some from home too

❒ Needs to connect to a renewable energy source in our city

* So, your actual work will use electricity and wires for us to see…but you must show how the MODEL is connected to one of the power sources
* 2-3 pairs will be responsible for designing these energy generators – solar, wind, hydro

❒ It has to **HELP** some social problem in our world (i.e., poverty, environment, healthcare, education, women’s rights, etc.)

* You are free to decide ***how*** it will help (i.e., it could be a building, something moving, an area of new community houses for the homeless, solar powered-offices, etc.)
* This is where you can connect your work to the of the UN Sustainable Development Goals