



# CIRCUIT BREAKERS AT COLLIER PS

CREATED BY ROOM 5 AND 8

# COLLIER PRIMARY SCHOOL

- We are a small school located in the Como area.
- Our two classes consist of Year 4 and 5 students. Each class has taken on the challenge of Circuit Breakers as part of our Digital and Design Technologies learning.



# ROOM 5: WHAT WE LEARNT FROM CIRCUIT BREAKERS

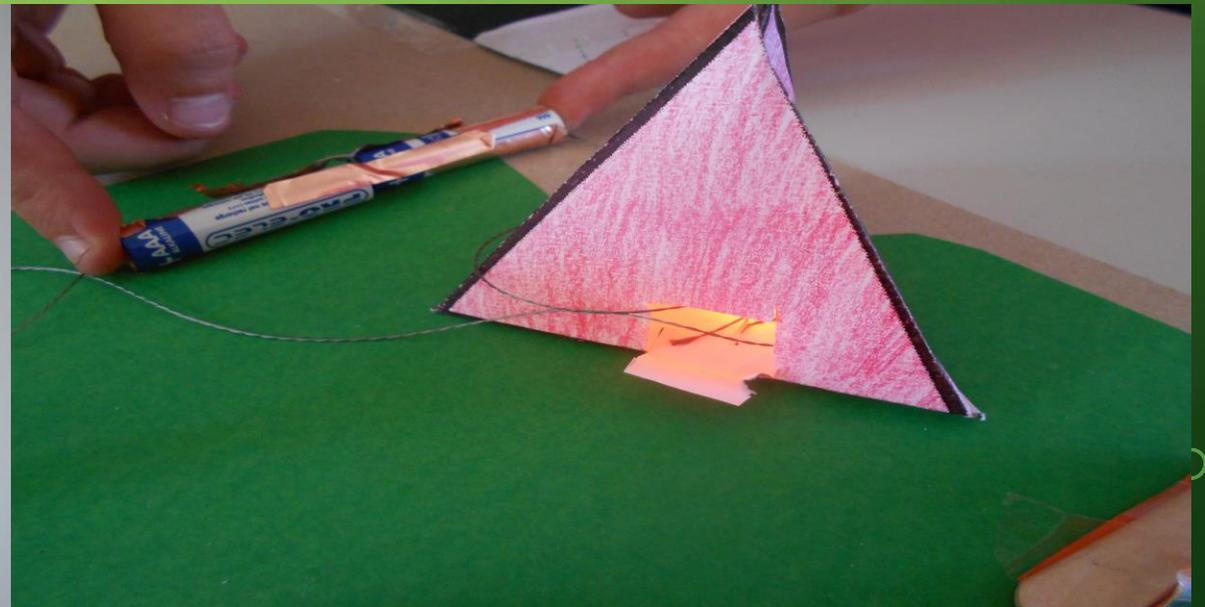
- As a class we learnt:
- To make a circuit you need an unbreakable path, power source and a conductor.
- Micro:bits can be coded to do lots of different things such as making lights flash, patterns, symbols and games.
- Western Power use Micro:bit technology to code street lights and power in our homes
- Western Power controls the street lights and traffic lights, traffic lights go in a pattern for safety reasons.
- Western Power connects over 1 million houses, schools and other places to the power lines.
- When something goes wrong with our power Western Power send out technicians to fix the problem.
- If there are problems stay 8 metres away and call 131087.
- Western Power is looking at reuseable energy and has created battery storage, Western Power have substations and power stations

## ROOM 5: NETWORK OF THE FUTURE

- Our network of the future has many energy saving products. These include electric cars and charging stations, solar panels, wind turbines, battery boxes for power storage and house lights.
- Our network of the future is a local community that could be found in Perth Western Australia. We have included houses, shops, emergency services, recycle plant, airport, camping ground and oval with playground area and amusement venues such as a cinema and aquarium.

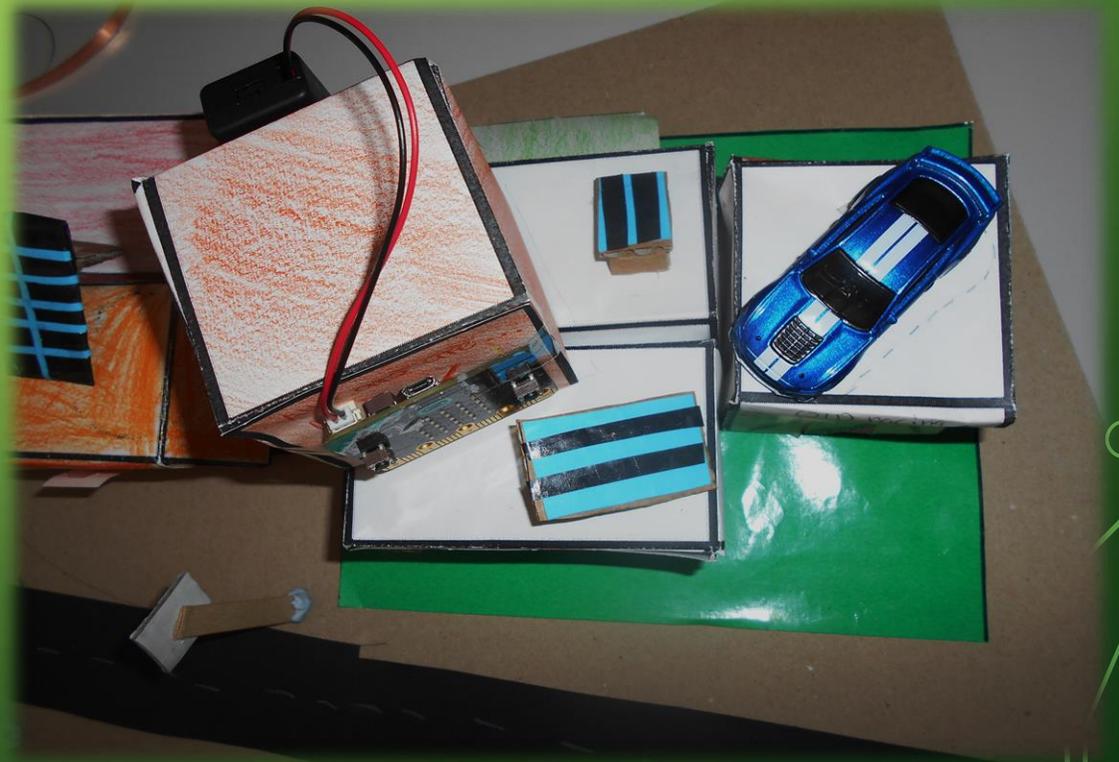
## KALE AND CHARLIZE ROOM 5

- As part of our future community we built solar panels, street lights, also we made a campground with some battery powered lights. The wind turbines get electricity from the sun which then goes into the campground to make the lights for night.



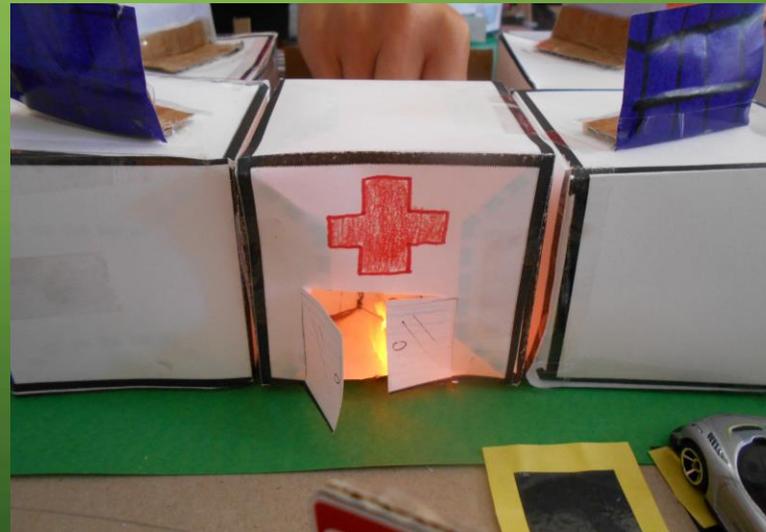
# LENNY AND EVA ROOM 5

- For our future community we built a house with solar panels and a car shop that sells electric cars. We used our micro:bit on our car shop by coding it to flash “ 10 % OF ALL CARS” . The car shop also had solar panels.



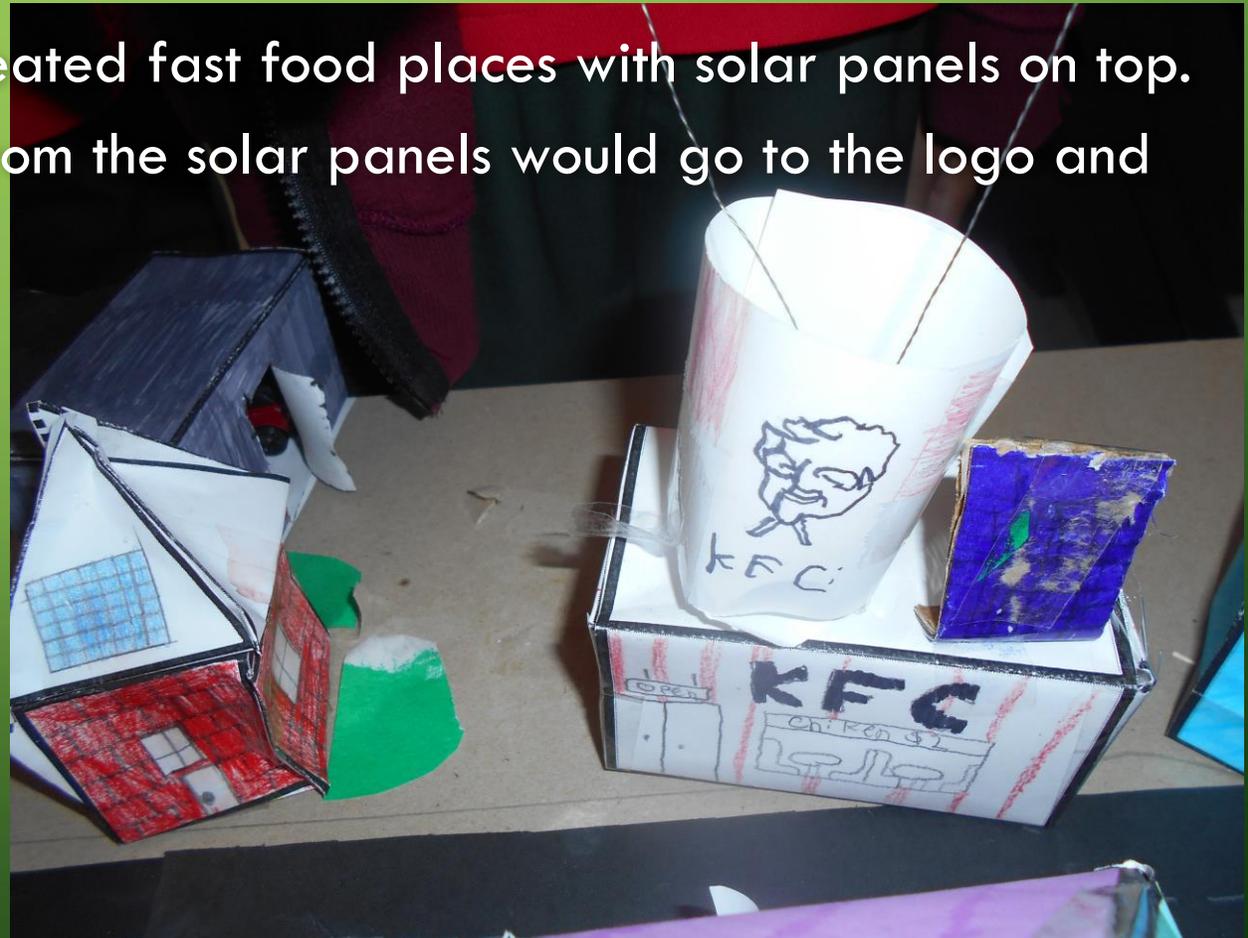
# RUBY AND MICHAEL ROOM 5

In our future community we built a recycling plant which got its power from the solar panels on the roof. We also built a hospital with an electric car charging station which gets its power from the sun channelled through the solar panels on the roof. The hospital is illuminated with an LED circuit.



# CHRISTIAN AND FINN ROOM 5

- In our future community we created fast food places with solar panels on top. In the night all of the power from the solar panels would go to the logo and make it light up.



# MEILANI AND BEVAN ROOM 5

- In our future community we built a supermarket and a hairdresser. Our supermarket is energy smart because we have added solar panels to the roof and the same as are hairdresser.



# MADDY AND REECE- ROOM 5

- In our future community Reece and I made a fire station. It has solar panels and hybrid fire trucks. It has two water tanks. We created a circuit using the led light to make light for the top of the station.



# LAHTIA AND KEVEANA ROOM 5

- In our future community Keveana and I built a basket ball court that included a oval. We created a house with solar panels to save energy. We also made battery boxes for storing power.



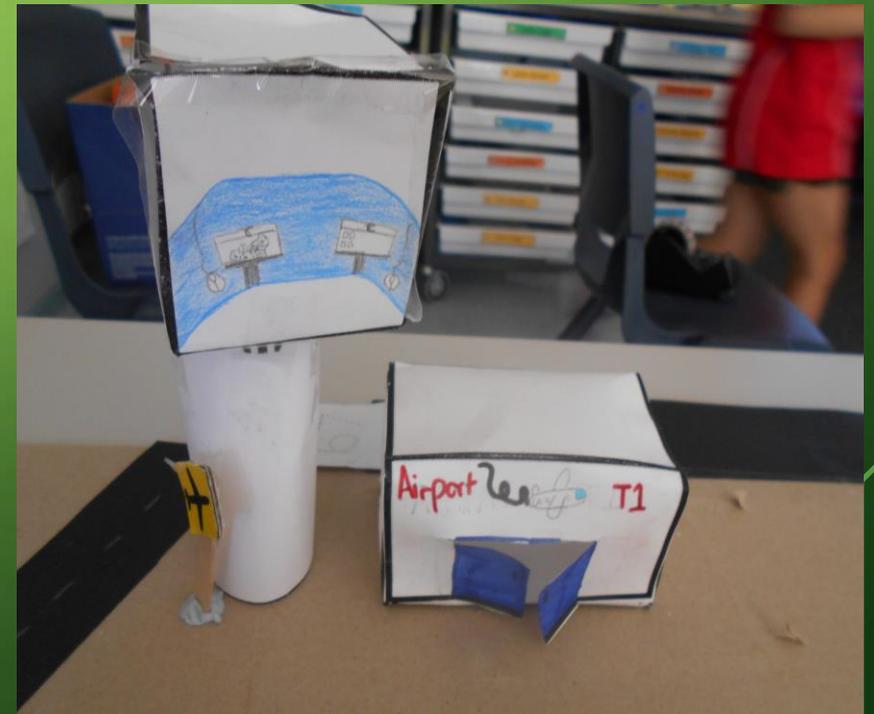
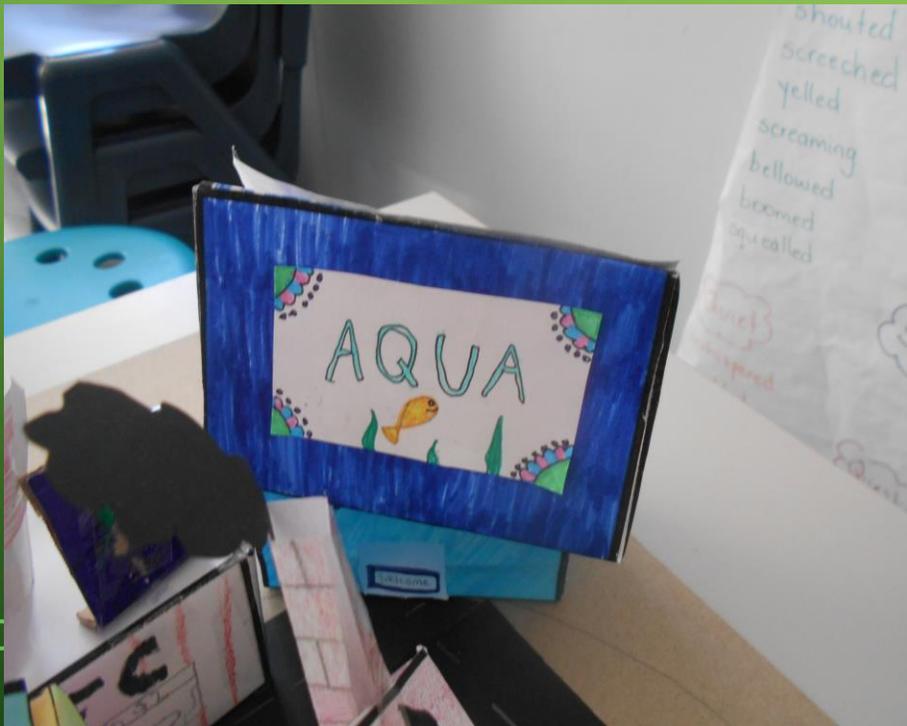
# NICHOLAS AND RYU AND ALLEGRA ROOM 5

- In our future community we built a cinema with a ticket box and popcorn cart. We created a circuit to light up the cinema, we had some difficulty making it work.



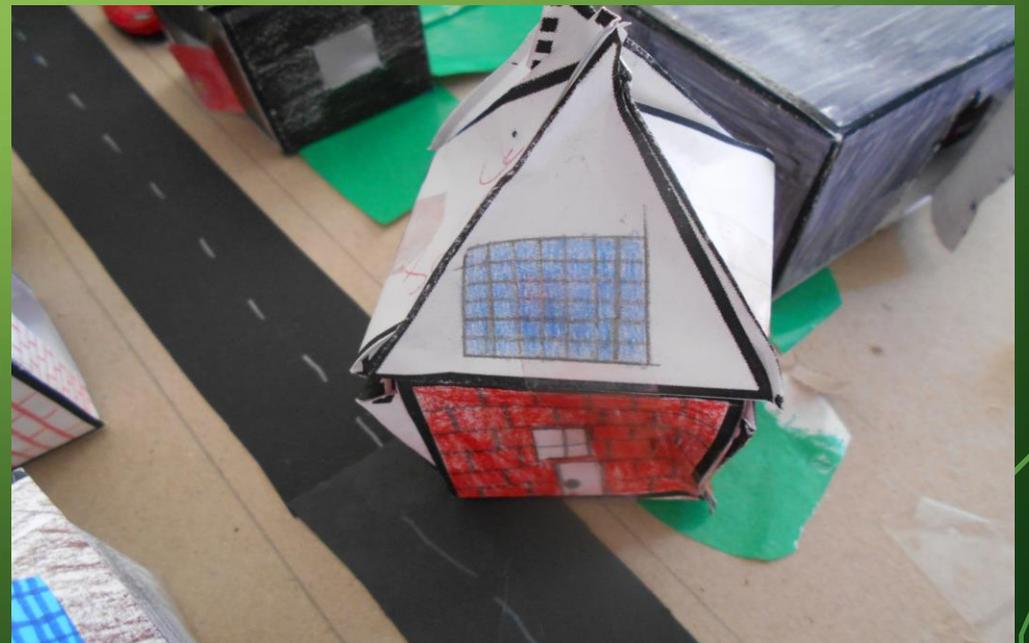
# SCARLETT AND VIOLET ROOM 5

- In our future community we built an aquarium and an airport. The airport has solar panels to help store energy to be used more efficiently.



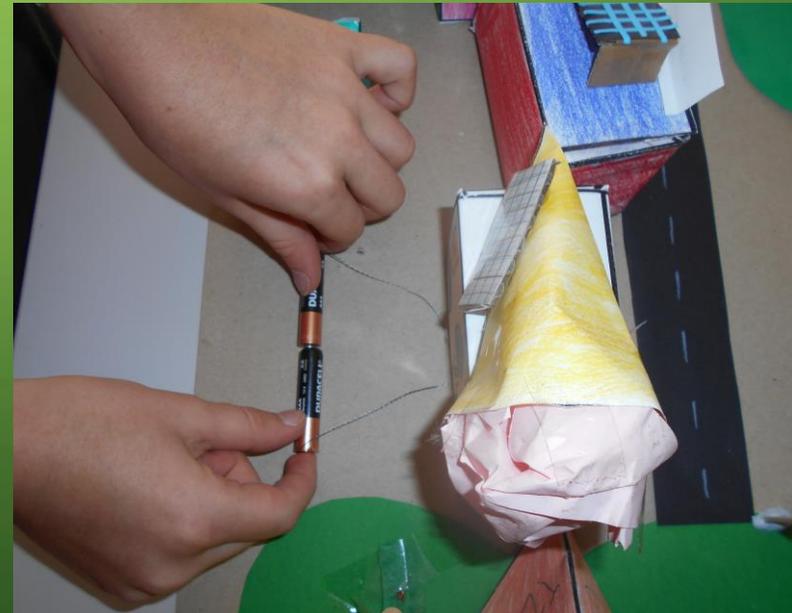
# JACOB AND YUSUF ROOM 5

- In our future community we built a house with solar panels to store energy from the sun. As well as an airport with an LED light to light up the end of the tarmac.



# AMBER AND DARCY ROOM 5

- In our future community we built a sweet shop. We made a circuit with a LED light to light up the shop to welcome people in.



# ROOM 8 – WHAT WE LEARNT FROM CIRCUIT BREAKERS

- We learnt:
- How solar panels and wind farms work and what the future will look like.
- How to use a mirco:bit, and how to code on it.
- How power travels through a circuit; it needs to be unbroken.
- How to turn on LED lights.
- That power is in our everyday community. Without it, we can't survive!
- The importance of solar in the future. When houses don't use all the energy they go into storage for other houses to use.

## ROOM 8 – NETWORK OF THE FUTURE

- We have named our network of the future “Collier Town” We have included some energy saving products; such as electric cars and charging stations (we have converted the Puma Fuel station into an electric car charging station).
- We have put many solar panels on houses, hospitals, shops.
- We have a wind turbine, water tank storage and solar panel farm collecting valuable renewable energy from the elements.
- We have included houses, shops, “sustainable energy farm,” a park with a playground area and fountain, hotels, library, school, university, hospital and a COVID-19 testing station (near the hospital of course!)

## CARA AND LAURA – ROOM 8



We made the library with solar panels. Our community has water tanks, wind turbines and shops and a school.

Our favourite part was making the library and houses and planning how to make the city and all the infrastructure that went in to planning it.

# LIVIA AND JUSTINN – ROOM 8



We made a lot of roads and marked in the lines. We also made the ice cream and coffee shop.

Our favourite part was when we got the LED lights to light up.

# HOLLY AND SISI – ROOM 8



We made the wind farms, water tanks, and the STOP and GIVEWAY signs for the traffic flow.

Our favourite part was constructing the solar panel field with the wind turbines and water tanks.

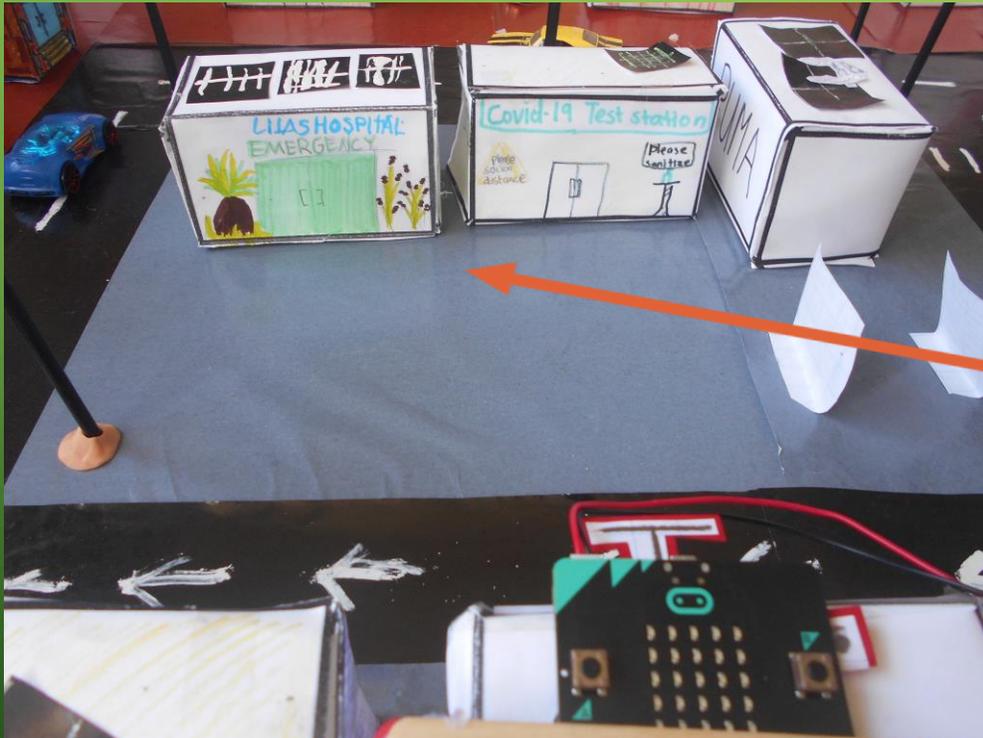
This is our “sustainable energy farm”

# HEATH, ZANE AND TAYSHARN – ROOM 8

We coded the Mirco:bit as a “Sale” sign above the Scooter Hut shop to advertise. We also made the circuits to light up the LEDs using the batteries for the houses. Our favourite part was how we coded the Mirco:bit.



# HIBA, EVIE, LILA – ROOM 8



We made the hospital and the COVID-19 testing station. It included solar panels for electricity use.

Our favourite part was making the hospital and building the community. We learnt that technology powers our everyday community.

# AMELIA AND OLIVIA – ROOM 8

We made the school and the university. Education is VERY important in our town. We also used LED and batteries to light up our university. The solar panels are operated by the sun. Our favourite part was making and decorating everything. It was great fun!



# ROCKY-BELLE AND HOLLY – ROOM 8

We included a university, school, houses and a sustainable farm. We made a lot of the houses. We put solar panels on our houses because we wanted it to be energy efficient. Our favourite part was making and decorating the houses.



# JACOB, JAI AND LEVI – ROOM 8



We made the restaurant –  
“Schindler’s Italian”, a hotel with  
a “helipad” and a house.  
We enjoyed making it and  
playing with the mirco:bits.

# DYLAN, JOCELYN AND FINN

We made the big “Welcome to Collier Town” sign to welcome visitors to our community. We made lots of bits and pieces and did a lot of gluing when other teams had finished decorating. Our favourite part was learning how to code the mirco:bit.



# ESTRELLA AND LANDI – ROOM 8

We made the park with the water fountain. The water is recycled back into the lake. It also included a sand pit for children to play in. We really enjoyed the program and it was fun planning it and making it.

