



2020-2021 City Model Slideshow

School/Organization: **Collingswood Middle School**

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Future City Team Name: **Gravity Hill**

Delete all PURPLE text before submitting the slideshow for judging. Keep text that is black.

Deliverable Details

- This slideshow is your chance to present your model. Whether your team created a single model or multiple segments, here is where you show off the future city you designed to the judges.
- Choose photos of the various segment(s) that best show the requested content.
- Do not change the size of text boxes in this template. All written text must fit within the boxes and *cannot* be smaller than size 14 in Calibri (or equivalent) font.
- When finished, save the slideshow as a PDF and upload to the Online Portal at FutureCity.org.

Section I
CITY DESIGN

Residential Zone



What is important for the judges to know about your residential zone?:

It would be made up of twelve condos in a two by six grid with roads in between for travel, and with each condo being four floors tall. However, in the model I made one condo for the sake of demonstration. The large silver building with the green top is astronaut housing specifically catered for them to live and work there.

There are also apartments centered around the commercial district for those who want to live in a busy shopping center. They are densely packed and have a lot of rooms for our citizens, and it is great for those who want to work in the commercial district without having such a long commute. There is also a hotel with the same design, but meant for tourists.

Commercial Zone



What is important for the judges to know about your commercial zone?:

The commercial zone is made up of the the apartments, the mall, and the hotel. The hotel is a place ment for tourist to stay the night incase they need to. The mall is an essential part of this complex which still stands as the tallest building group. Around the mall and apartment complex are skyways that let residents easily move around the area and get some exercise.

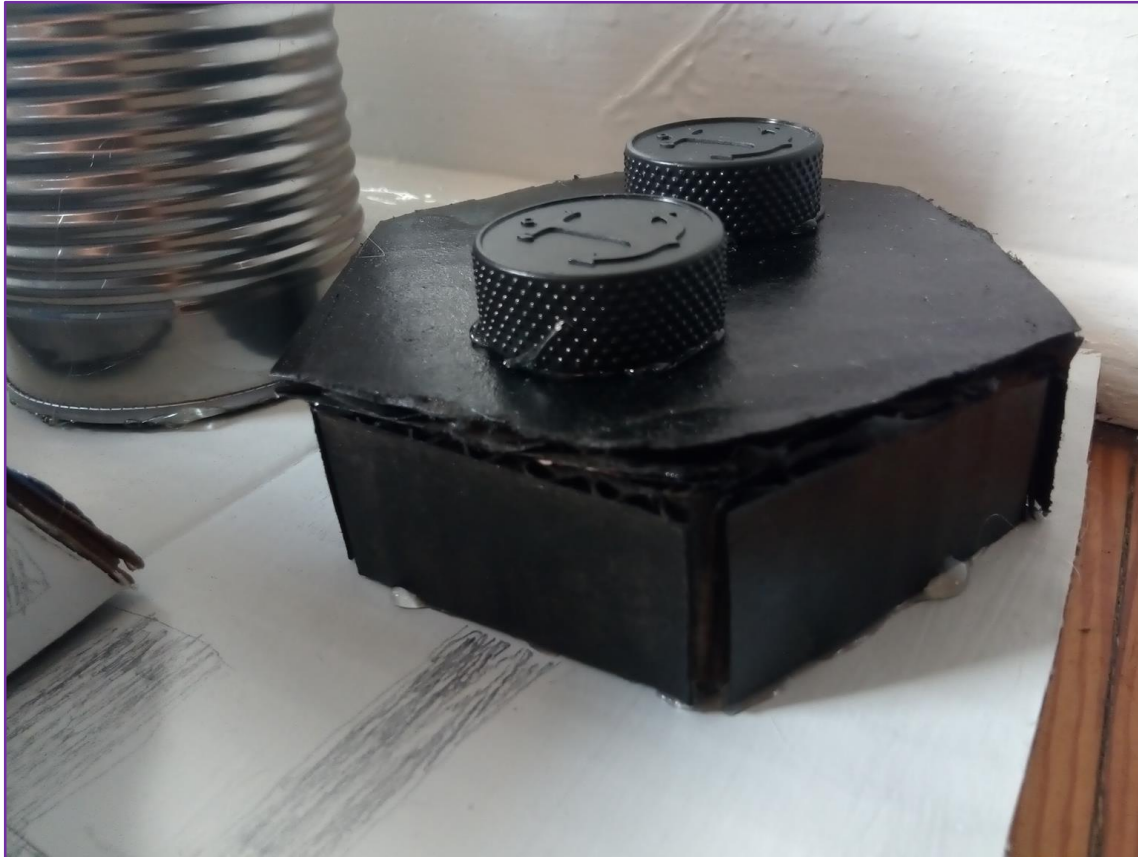
Industrial Zone



What is important for the judges to know about your industrial zone?:

Our industrial sector is an central part of our economy. Because of this, we take many precautions to keep our miners safe and have our factory work as efficiently as possible. The whole mining operation from start to finish is owned by the community under a State-owned enterprise called Lunar Technologies LLC so that it's the people who can profit. To get our goods from the mine to the factory we have a highly advanced conveyor belt. Once in the metals, water, and helium 3 are extracted from the mine they will be sent to storage, the fusion reactor nearby, or flown back to earth for a profit.

Infrastructure Example 1



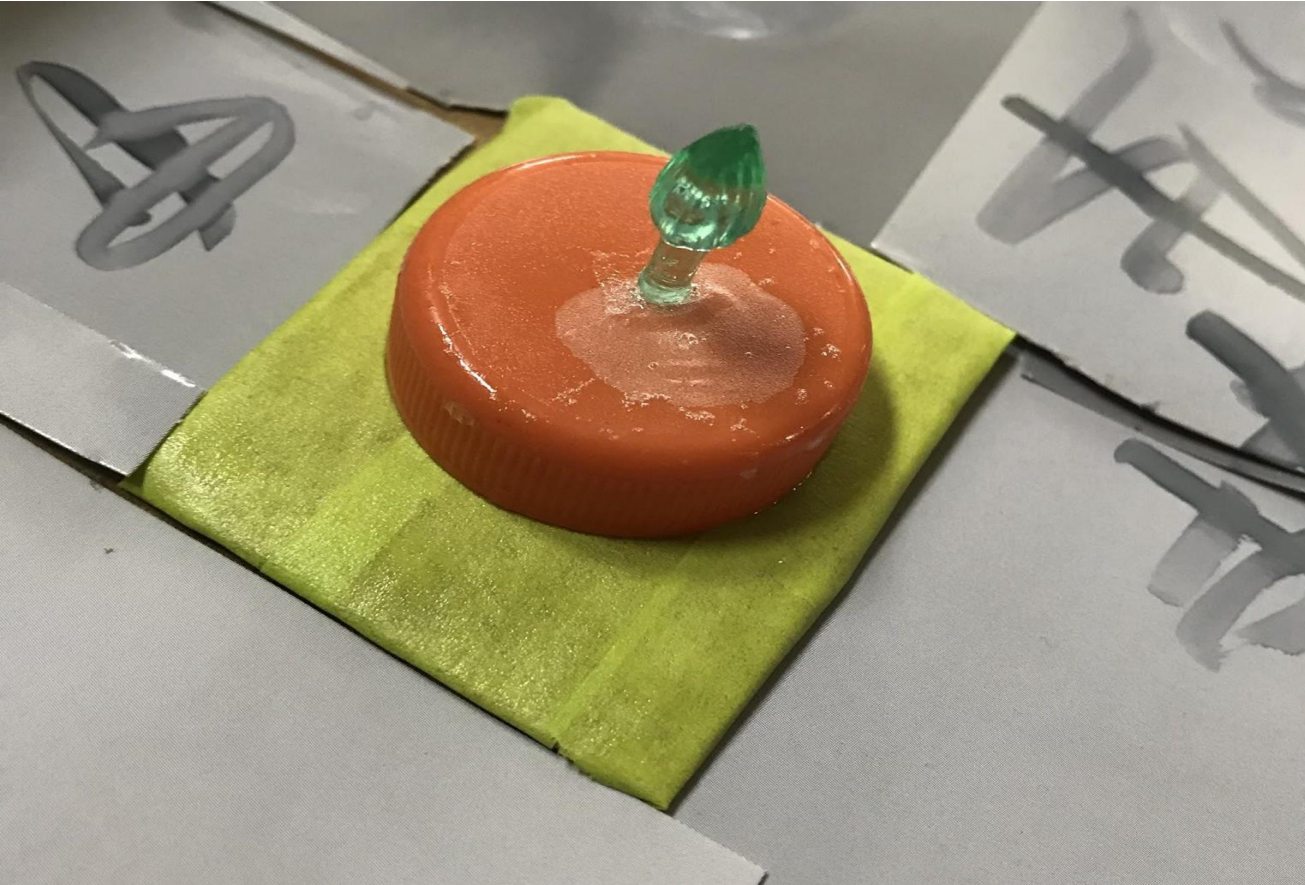
What type(s) of infrastructure are shown here (water, power, utilities, etc.)?:

Power Plant

How are these related to the realities/challenges of living on the Moon?:

In this ever expanding technology filled time especially on the moon, electricity is an necessity to our citizens. To keep up with all this energy demand we have a state of the art Fusion Reactor that runs on Helium 3 that comes from our very own mines. Because we control the entire process from the mine to the reactor, this is the cheapest fusion energy in the solar system which is great for our budget and our citizens.

Infrastructure Example 2



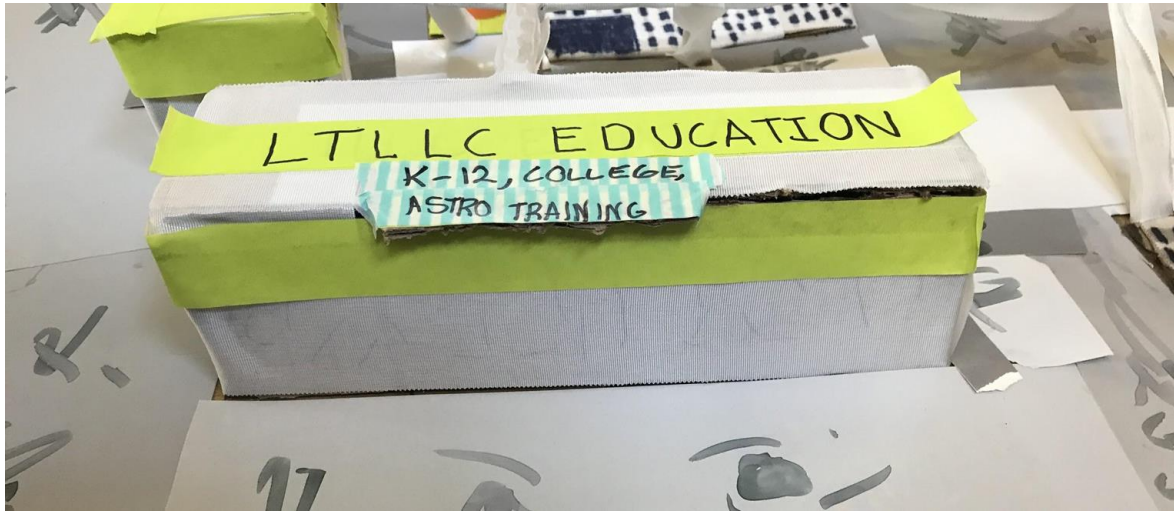
What type(s) of infrastructure are shown here (water, power, utilities, etc.)?:

Defense/Meteor Protection

How are these related to the realities/challenges of living on the Moon?:

They provide a safe place free from meteor and asteroid damage. There are two lasers on them that are automatic but can be turned off if required, as well as be switched to manual control mode.

City Services Example 1



What type(s) of city services are shown here (health, education, etc.)?:

Education.

What do you want the judges to know about your city's operations?:

The education system insists of K-12, College, and an Astronaut Training system. We have trained teachers that have a high understanding of the city. Within the astronaut system we have one astronaut from the city come and give lessons to both young kids that are interested and college students that want to become an astronaut.

City Services Example 2



What type(s) of city services are shown here (health, education, etc.)?:

The Center provides space for farming food and keeping health.

What do you want the judges to know about your city's operations?:

Floor 1:
On the first floor, this is where all of the animals are raised for food. our main animal here is fish. The density of water is the same on the moon . Because of this, the fish will still need the same strength they need to swim on Earth, so the meat will stay as "meaty" as it was on Earth.

Floor 2 and 3: The second and third floors contains areas where people can rent out their own farming spaces for food, they will be able to grow their own food here.

Transportation Example 1



What type(s) of transportation systems are shown here?:
The transportation system shown here is the hover car/bus.
What do you want the judges to know about your transportation system(s)?:

Our hoverbus uses a unique system where it uses magnets it levitate. To move forward and back, you have to rotate the magnets on the car to be facing back, so the bus gets propelled forward. Same goes for going backwards. Since the track is a big loop, it only needs to go forward and backward.

The charging station provides electricity into the magnets to make the busses reach maximum speed. Also, they provide a spot to board the hover buses.

Transportation Example 2



What type(s) of transportation systems are shown here?:
Mechanical transportation the requires little to none human effort.

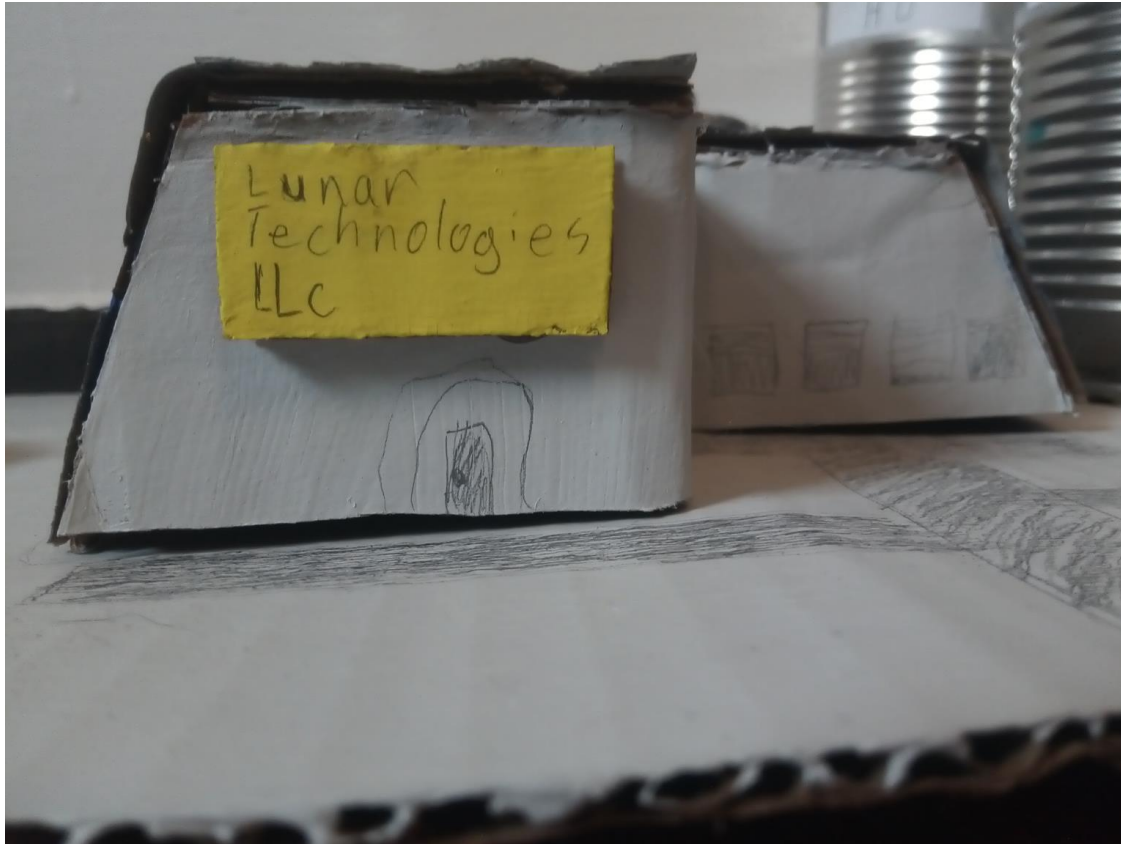
What do you want the judges to know about your transportation system(s)?:

The skyways are indoor tunnels with built in conveyor belt almost like a giant treadmill. Though you aren't strapped in to the machine there are rails that you hold on to because of the speeds it can reach. There is also stops with buttons when there is multiple paths to take. The skyways are connected to everything but the condos and some industrial sections. There are two bases (one shown in image) that connect from one end of the city

to the other

Living on the Moon (Resource #1)

Example 1



Identify the Moon resource shown here:

Helium 3

What is important for the judges to know about this resource within your city?:

Helium 3 is an abundant element on the moon and can be found deep in our mines. Once refined it can be sent to our home plant on different cargo rocket lines. Helium 3 is extremely in demand back at Earth for their own Fusion Reactors, medical treatments, and more.

← The Factory where the Helium 3 is refined.

Living on the Moon (Resource #1)

Example 2



What is important for the judges to know about this element of your model?:

Helium 3 is the main export for our city and is therefore a very important part of our model.

We've made a mine, refining factory, storage, fusion reactor, and a trucking area to take it to the rocket pad. Since there is so much needed at Earth we will need to export it quickly, which is where this rocket pad comes in.

← The rocket pad where helium 3 can be exported to Earth. The rocket pad also exports water, food, and other resources.

Living on the Moon (Resource #2)

Example 1



Identify the Moon resource
shown here:
Lunar Ice

What is important for the judges
to know about this resource
within your city?:

Whether it's in our citizens
homes as running water, in the
greenhouse irrigation system, or
separated into hydrogen and
oxygen for rocket fuel water is all
around our city.

← One of our Greenhouses that
uses locally sourced water.

Living on the Moon (Resource #2)

Example 2



What is important for the judges to know about this element of your model?:

Although we don't export water to Earth, rocket fuel is in high demand. Once we purify the water we can separate it into its elements hydrogen and oxygen. Since we have such little gravity here on the moon, it makes a great stop from Earth and onward to the outer solar system for refueling and repairs if necessary.

← The water tank that holds purified water for the city.

Section II

BUILD IT: QUALITY, SCALE, AND MATERIALS

Innovative Material & Use Example 1



Choose one recycled or reused item and describe how you used it creatively in your model:

I used a Tea Light to recreate a laser setup, it was an extra Tea Light for a ceramic christmas tree. The light is glued on top of a gatorade cap. Since its semi-clear and green it shows a laser being ready to destroy incoming asteroids and meteorites. The lasers are used to shoot down meteorites and asteroids and this design can help keep the city safe

Innovative Material & Use Example 2



Choose another recycled or reused item and describe how you used it creatively in your model:

Two of our main resources extracted from our mine are Water and Helium 3. These are also very important for the survival of our city since we need fresh water and energy (from the helium 3). Since we want to be self sufficient we have several back up tanks.

To make both of these tanks we wanted to make something cylindrical and recycled. As we were digging through recycling bins we found several old cans. At the time they were very dirty and needed a shine. Once scrubbed down they were given labels and glued down.

Innovative Material & Use Example 3



Choose another recycled or reused item and describe how you used it creatively in your model:

I took the top of a water bottle for the parks, and made an airlock to safely secure the oxygen in all of the parks. I also took the body of a water bottle and used it to make a dome shape around. Both of these examples I used for all parks and stadium included. The athletics park has materials in stock for playing futuristic low gravity sports, the stadium is similar just made for serious events and sports. The public park is a place where anyone can go for a jog, jump around and enjoy low gravity, or just relax.

Public Park-Left, Athletics Park-Middle, Stadium-Right

Example of Scale



Scale used in model (e.g., 1"= 10', or 1"=22'): 1"=108" (9')

Structure 1

What type of structure is this?:

It is a condo.

What size is the structure on the model?: 4" by 3" by 1"

What size would this structure be in real life?: 9' by 27' by 36'

Structure 2

What type of structure is this?:

It is an astronaut house.

What size is the structure on the model?: 9" by 5" by 6"

What size would this structure be in real life?: 81' by 45' by 54'

Moving Part



URL link to team's moving part video: <https://youtu.be/ibSJJ-bVsJk>

This is the conveyor belt in the industrial sector that takes the raw moon rock and sends it quickly to the factory to be refined. It was built with tape around two chopstick ends that is pulled with a fishing line.

Section III

JUDGE ASSESSMENT OF MODEL

Futuristic Technology Example 1



What is important for the judges to know about this example of technology?:

The hover buses are one example of futuristic technology used for transportation. It runs on a magnetic track, the magnets tilt forwards and backwards to propel the bus forwards and backwards using electromagnetic waves. The hover bus gets charged whenever it stops at either boarding station. People can board the buses either at the boarding station or request the hover buses presence at specific location along the track. If our citizens can afford it, they can purchase their own hover bus. Although the hover bus is a great transport option, feel free to use the hover buses and skyways any time.

Futuristic Technology Example 2



What is important for the judges to know about this example of technology?:

The solar farms provide electricity to our city using futuristic solar technology that takes the small amounts of sunlight the city will get and turns it into high power electricity. There are astronauts assigned to each of the solar farms, they make sure they are all connected and taking in all the sunlight possible.