2020-2021 City Model Slideshow

School/Organization: **East Norriton Middle School**

Educator Name: **Mrs. Strickland**

Future City Team Name: **Moonhatten**

Section I

CITY DESIGN

Residential Zone

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

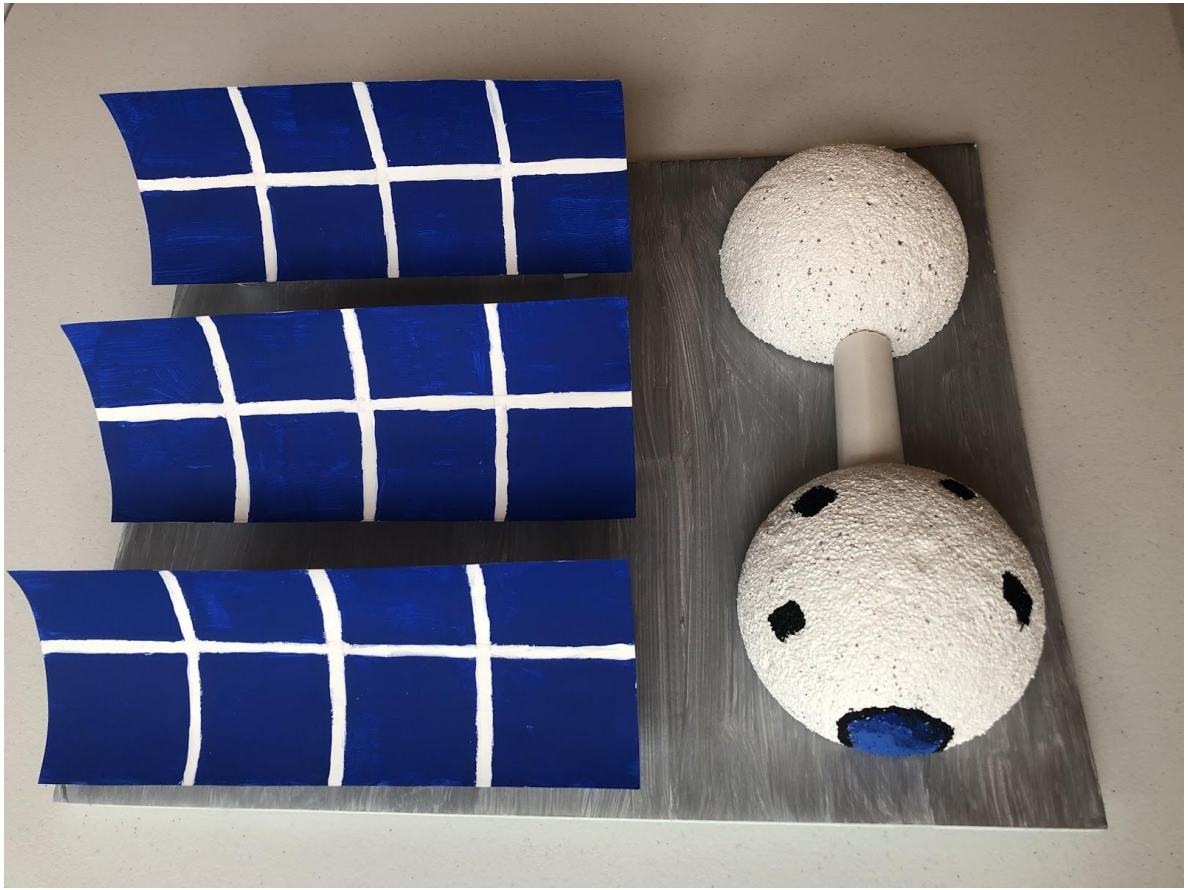
This is a residential area where citizens live. There is stores for shopping in the bubble forcefield. Also there is three apartment complexes. The apartments windows are made out of Athornite and the structure of the building is made out of titanium, on the top of all the buildings are greenhouse which residents use to get fresh air and eat.

Commercial Zone

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

This is the Moonhatten Town Hall. This is where city meetings are held. We have a democracy and elected officials to help make decisions. The domes of the town hall are made of anorthite, but most of the areas of the town hall are underground and connected to other parts of the city by tunnels.

Industrial Zone



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

This is the solar farm we will use to power our city on the moon. It consists of solar panels, buildings for storing energy in batteries, and a utility grid for distributing power. On Earth the wiring is above ground whereas on the Moon the grid wiring has to be underground because the cold will make energy flow slower and meteors will destroy the wires.

The main building will distribute the power to the city, and store excess energy in batteries for the night when the solar farm can't produce energy.

Infrastructure Example 1

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

We need to have a steady water supply for our city in order to keep its inhabitants healthy. This water plant pumps water up from the depths of the moon and brings it to the surface where it is then filtered and stored.

Infrastructure Example 2

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

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

Water evaporated from minerals on the moon is stored in tanks above residential areas. Some of this water will be used to hydrate plants, that are growing on rooftop gardens and are able to grow with either sunlight, when available, or LED grow lights powered by resered solar power, when the area of the moon is dark.

City Services Example 1

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

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

This is Moonhatten's underground hydroponic facility. This is where residents grow healthy produce using LED lights powered by above ground solar panels. Access to fresh fruits and vegetables help Moonhattenites stay healthy.

City Services Example 2

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

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

This is a skate/hoverboard park that is located in our underground gym facility. It is important to ensure that our residents stay healthy and keep moving - especially due to the lack of gravity on the moon, which can cause loss in bone denisty.

Transportation Example 1

What type(s) of transportation systems are shown here?:

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

This is a portion of our Lunar Elevator. It is anchored on the moon and has a cable that rests about 30,000 feet above the Earth's surface. The Lunar Elevator is powered by solar power and is a much cheaper way to transport people and materials to and from the Earth and Moon.

Transportation Example 2

What type(s) of transportation systems are shown here?:

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

The transportation center is the main source of transportation in Moonhatten. It is a series of tubes with a central station. Train-like vehicles are powered by a combination of Helium 3 and solar power. There are also areas where residents can walk and hoverboard.

Living on the Moon (Resource #1) Example 1

Identify the Moon resource shown here:

This is a look at part of our underground mining facility where we extract Helium 3, the resource we use to power our city as well as use in medical practices here on the moon as well as on Earth as we export Helium 3..

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 key in keeping our transportation system up and running 24-7. Moonhatten residents work all different shifts to keep our city moving, so they need to be able to get back and forth to and from work and school.

Living on the Moon (Resource #2) Example 1

Identify the Moon resource shown here:

This is an example of one of the domes engineers designed out of anorthite, one of our important moon resources, to ensure that citizens of Moonhatten are safe.

Living on the Moon (Resource #2) Example 2

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

This is an auto miner an example of how moon rocks and other moon resources are collected.The machine is made up of igneous rocks, a mineral that is all over the moon.

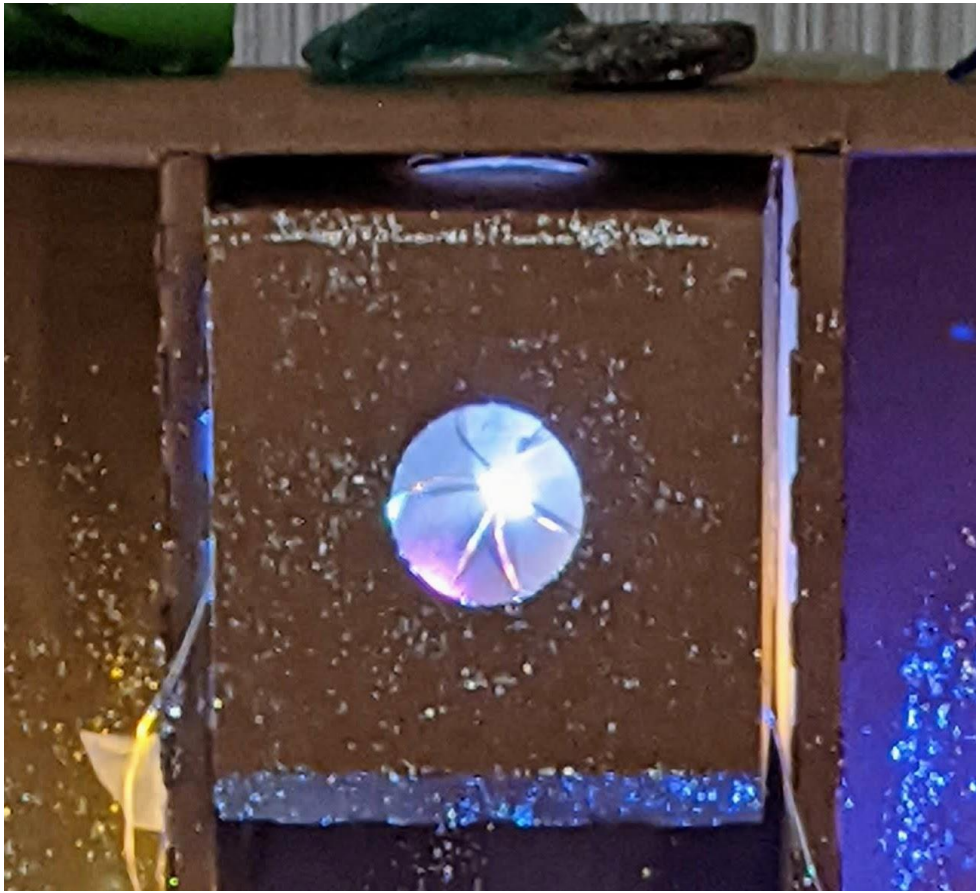
The auto miner is powered by helium 3, and is capable of mining anorthite, lunar rocks, and silicates which are found throughout the lunar rock.

The auto miner can continue to mine until the observer on the auto mine sees that the capacity is almost full then it returns back and vacuums all the remaining minerals.

Section II

BUILD IT: QUALITY, SCALE, AND MATERIALS

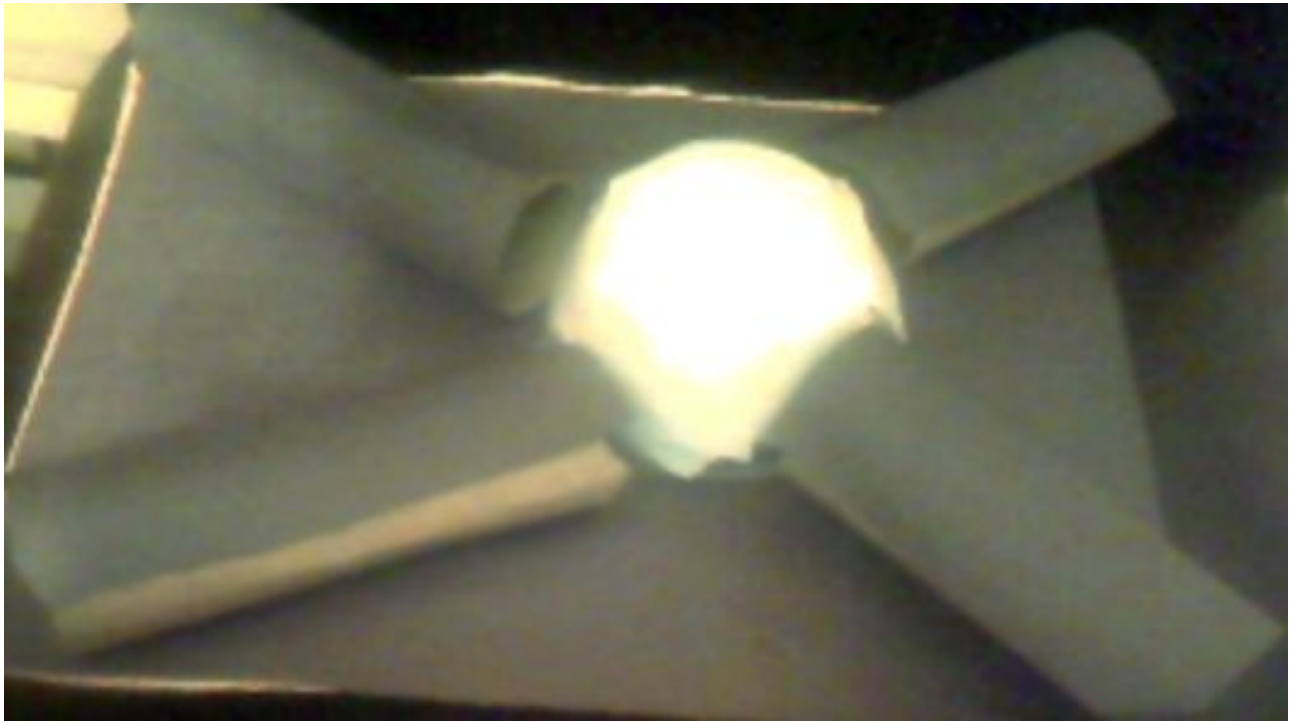
Innovative Material & Use Example 1



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

I painted cardboard with sliver glitter paint and used battery operated christmas lights and glow sticks to create a futuristic feel for an underground Helium 3 mine.

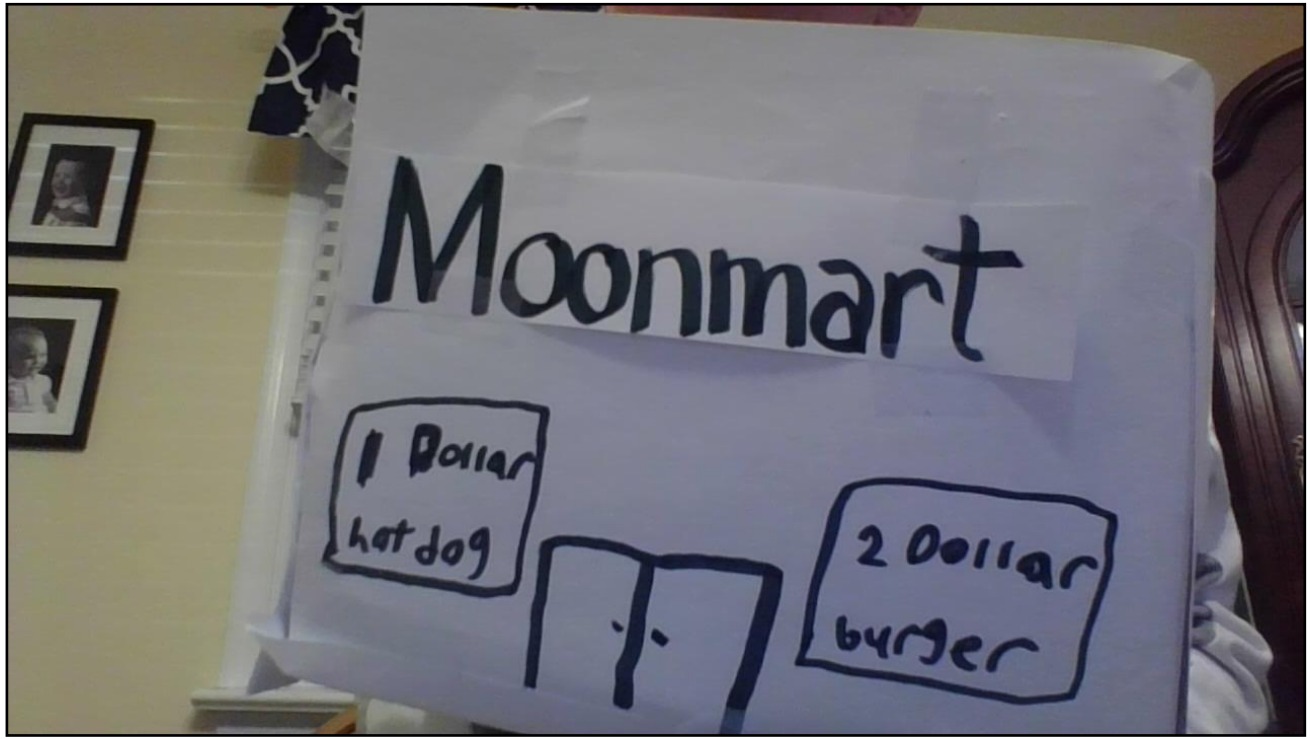
Innovative Material & Use Example 2



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

This greenhouse is for growing plants. The toilet paper tubes are where the plants are. Due to the fact that there is no clear place for sunlight, the dome in the middle collects the sunlight and transfers it for energy to help the plants grow.

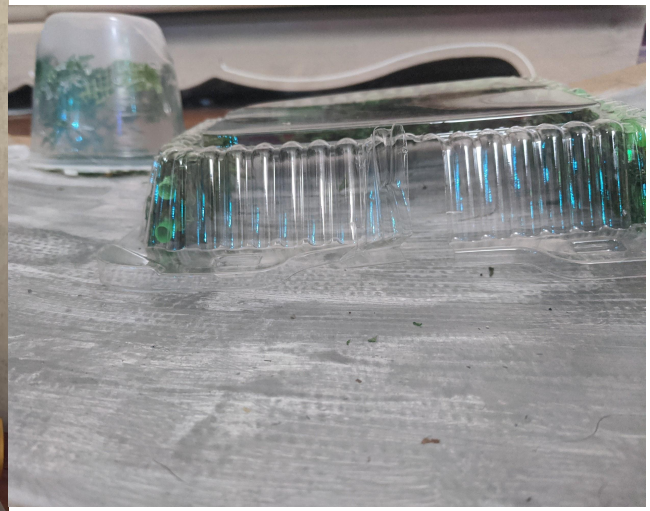
Innovative Material & Use Example 3



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

Even Moonhattenites need a place to shop. Welcome to the MoonMart - like a Moon Walmart. It is another place for people to work as well. It is constructed simply out of cardboard and paper.

Example of Scale



Structure 1

What type of structure is this?: An apartment building and solar power facility.

What size is the structure on the model?: 1” = 10’

What size would this structure be in real life?: The apartment building is a 10 story building.

Structure 2

What type of structure is this?: Underground hydroponic farm.

What size is the structure on the model?: 1” = 5;

What size would this structure be in real life?: 10 feet tall.

Moving Part

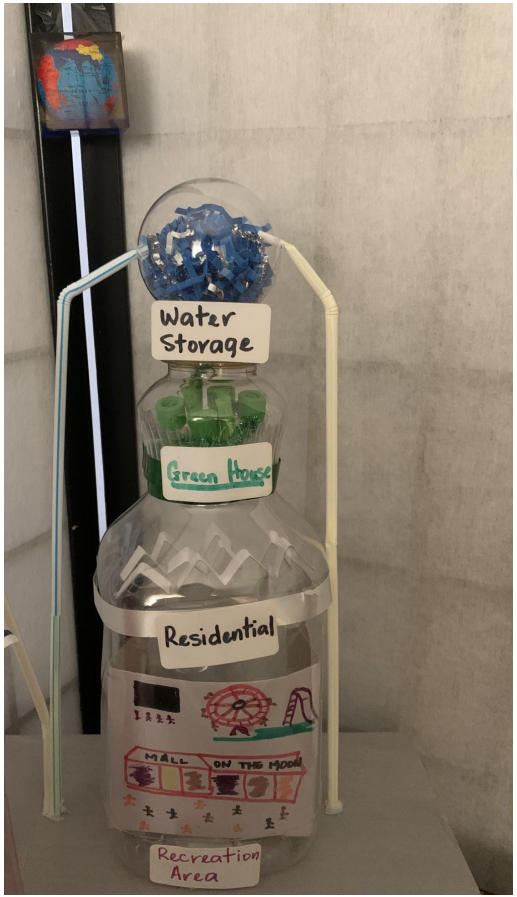
- Insert a link to a video of your moving part.
- Make sure your video is posted on a publicly available platform for judges to access (such as YouTube).
- Video cannot exceed 1 minute.
- Be sure to mention your city/team name.
- Show the moving part in action.
- In the video, share what role the part plays within your city and how you built it.

URL link to team's moving part video: NO MOVING PART :(

Section III

JUDGE ASSESSMENT OF MODEL

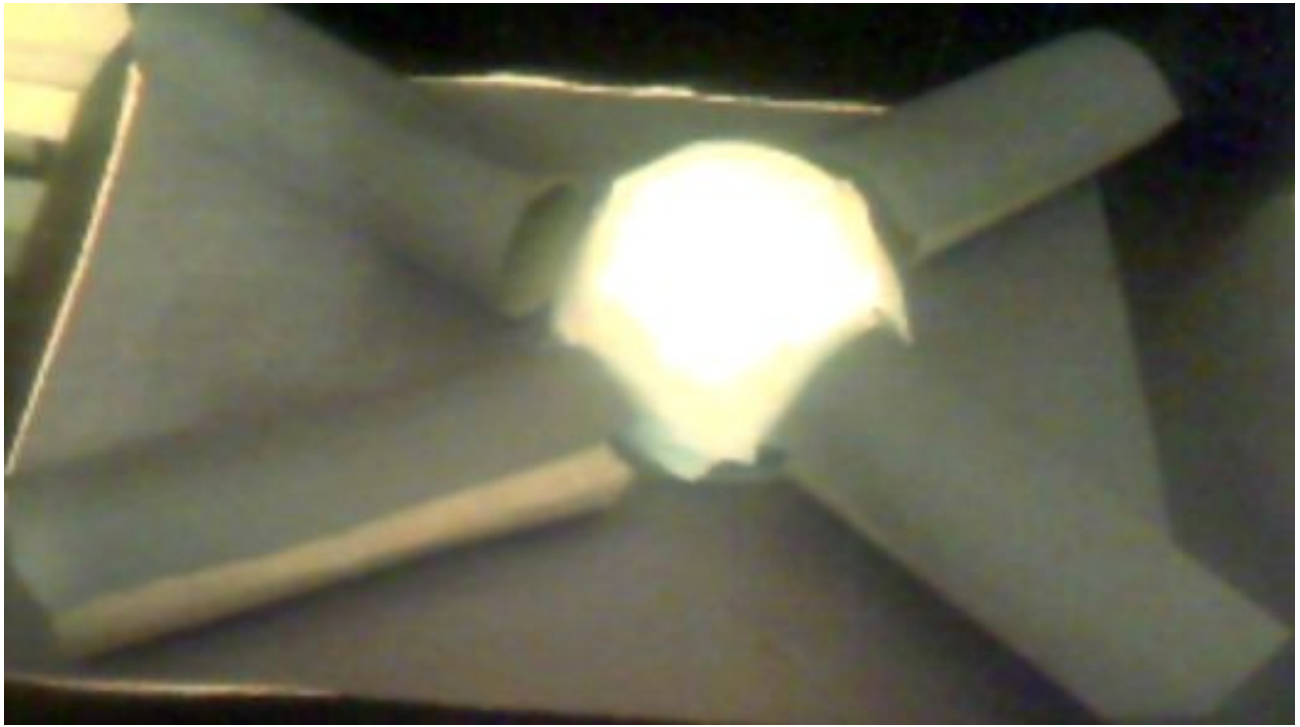
Futuristic Technology Example 1



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

Due to the high amount of small water particles on the moon, residents could use that to their advantage. While mining and transporting the moon's rocks and ores, water particles would be collected as well. If we use a solar power heat chamber, we could evaporate the particles from the rocks and create H2O for Moonhatten residents to use.

Futuristic Technology Example 2



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

We are capturing the sun’s rays and using them to our advantage in our above-ground greenhouses that helps to feed the citizens of Moonhatten. The strength of the sun continues to power this greenhouse even for the four days when the sun isn’t shining on the South Pole of the moon.