2021-2022 City Model Slideshow

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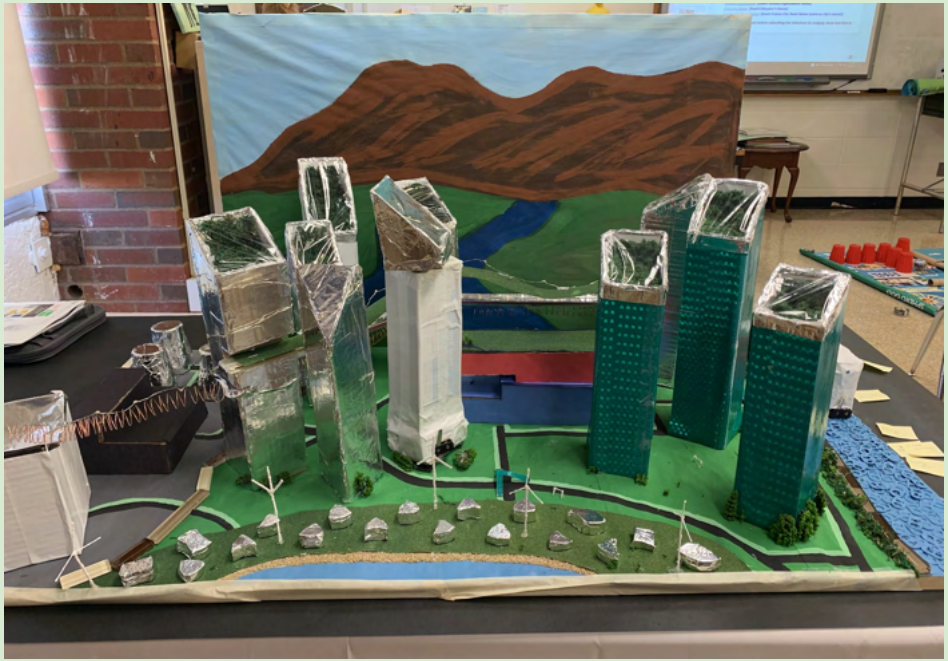
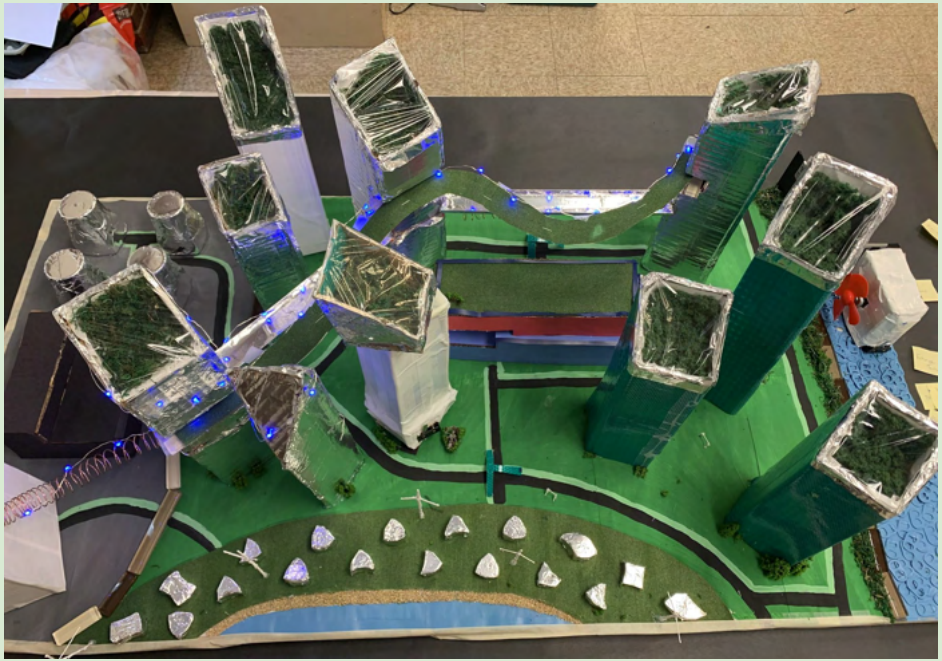
Future City Team Name: Sóunarlus

Section I

CITY DESIGN





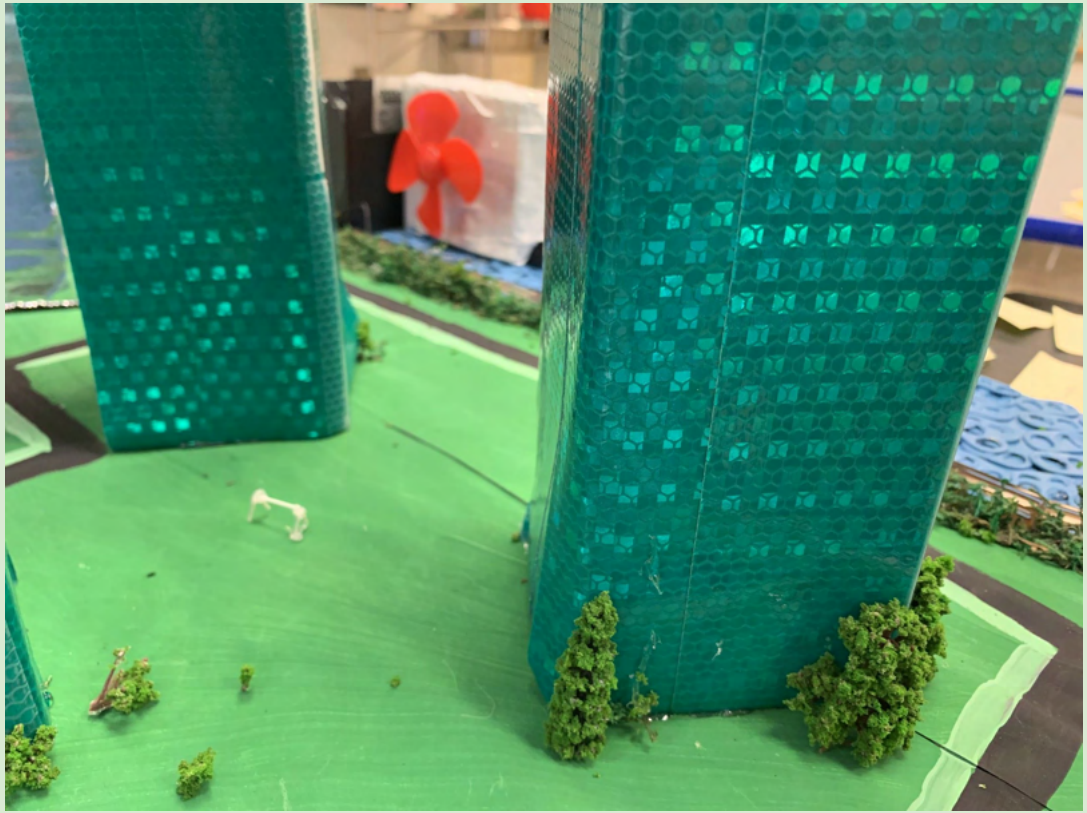
Sóunarlus

Residential Zone

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

The Residential area can be found in both the single homes located close to the ocean and in the middle to upper levels of the high rises. All high rise buildings are equipped with a common area which includes a refill station for everyday liquids like detergent, water, juices, over the counter liquid medicines, mouth wash, and shampoo. This has been done to limit the amount of waste that comes from throwing out everyday materials once all of its contents are gone.

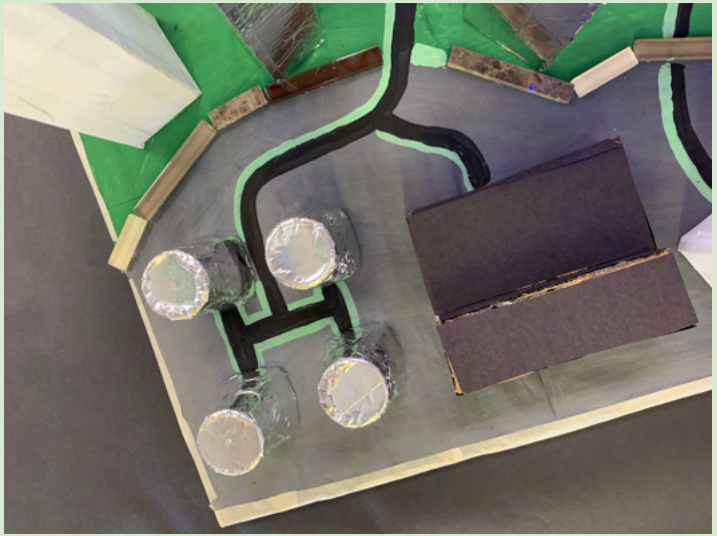
Commercial Zone



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

Commercial areas are located on the bottom floor of every high rise building. This utilizes space and minimizes the waste of land within our city. Additionally, the placement of these zones promotes easy access and convenience for the residents', as well as the community's, needs and wants.

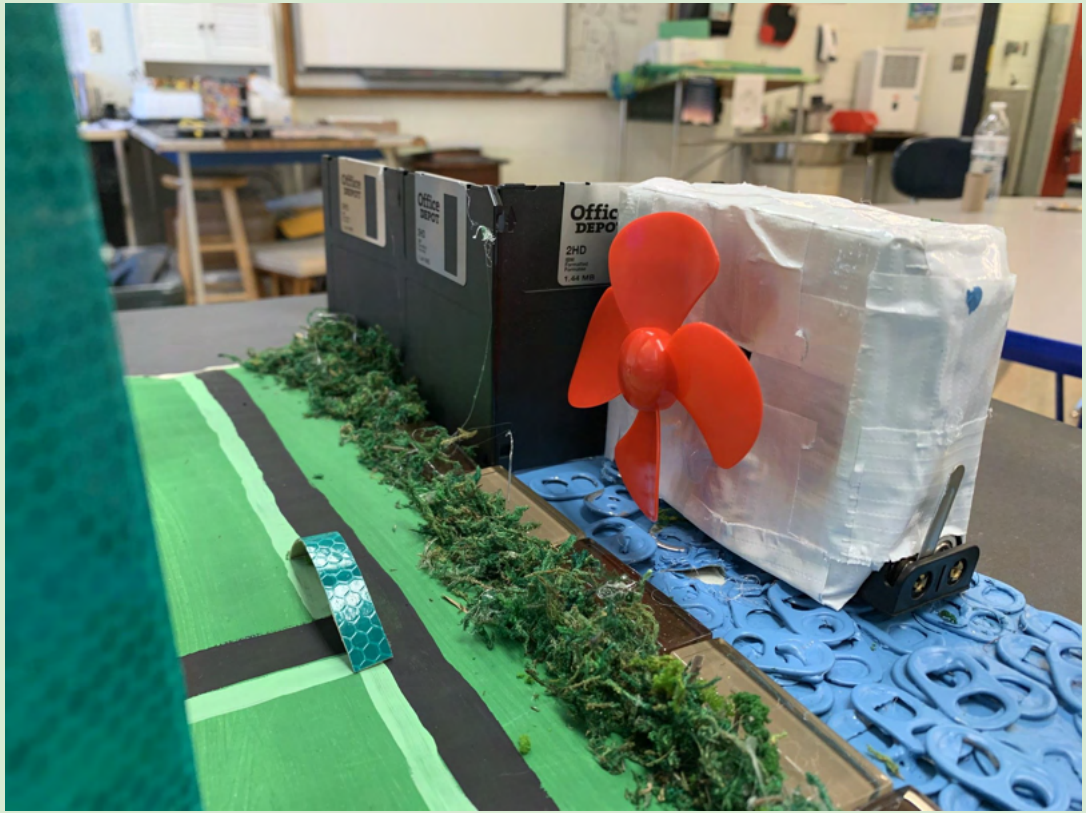
Industrial Zone



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

Four of these buildings are part of our recycling and process, with each building having a specific material focus. Also pictured is a fish farm. Each of the four identical buildings contribute in their own way in the process of recycling. The building on the upper left is the place where all of the sorting is done. To the right of that building is where all electronic waste goes into to be taken apart for reuse. The bottom left of the four buildings is where all paper waste goes and the building on the bottom right is for all food waste. The fish farm is were most of the city's food can be found. The farm is able to sustainably catch fish which prevents the loss of the city's food source and the decrease of the fish's population.

Infrastructure Example 1



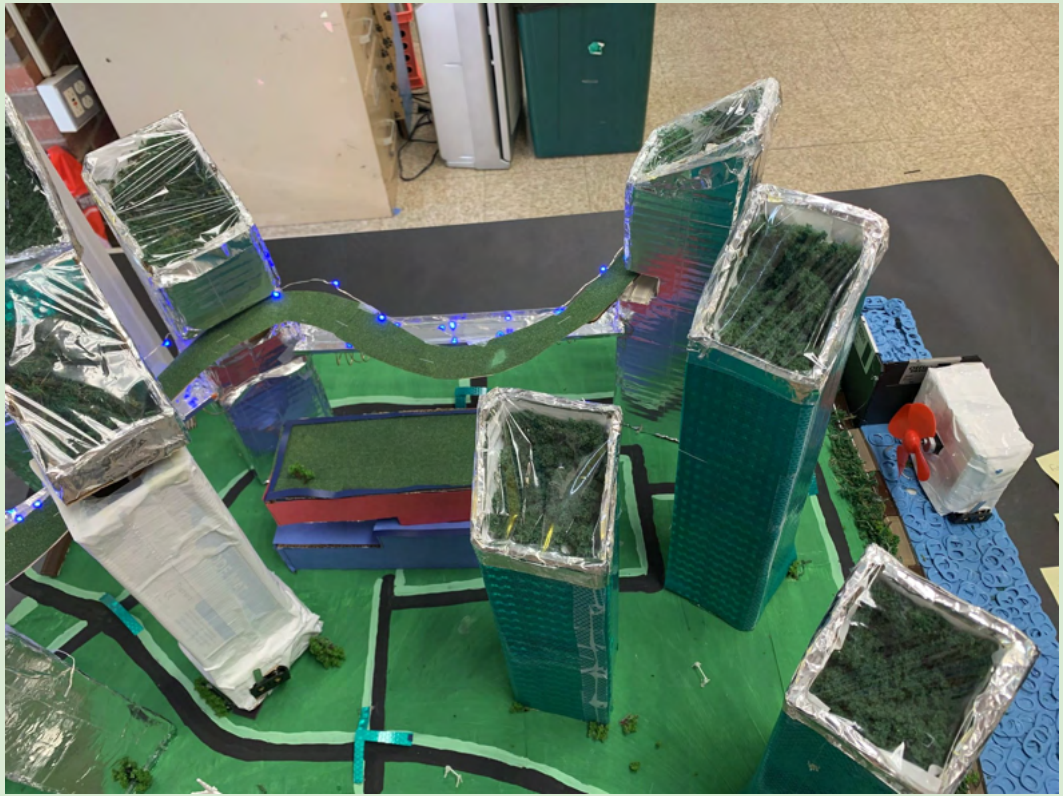
What type(s) of infrastructure are shown here (water, power, utilities, etc.)?:

The hydroelectric power plant shown here helps provide power to the whole city because the water turns the turbine which produces electricity. It also helps clean and filter water for use for the citizens of the city.

How are these related to the realities/challenges of a Waste-Free City?:

Hydroelectricity is a clean power source, and keeps the city sustainable without need for far transport, therefore creating less waste.

Infrastructure Example 2



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

The glass pane roofs of the buildings are slanted to allow for the maximum capture of sunlight. They are able to rotate with the angle of the sun

How are these related to the realities/challenges of a Waste-Free City?:

It minimizes production waste and you don't have to transport food to processing facilities. It also takes up as much sunlight as possible, barely wasting any.

City Services Example 1

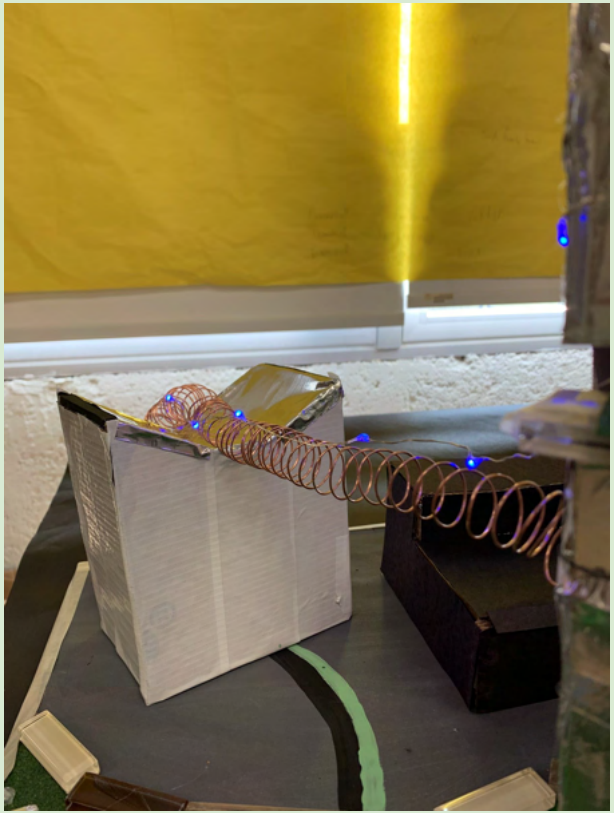
What type(s) of city services are shown here (health, education, etc)

Fire safety, and law enforcement. We have police officers to enforce the law, and firefighters to keep the city safe from fire hazards. Above these departments, is a green space public area on top.

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

In place of medical appointments, a ring monitors the health of all residents, reducing overall medical waste as well as keeping the safety of our people to the maximal degree. Our education is completely virtual, in a virtual reality format.

City Services Example 2



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

Health Service Building

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

In place of medical appointments, a ring monitors the health of all residents, reducing overall medical waste as well as keeping the safety of our people to the maximal degree. This building provides medical care to those in need. It takes care of all needs and procedures regarding the health of the citizens.

Transportation Example 1

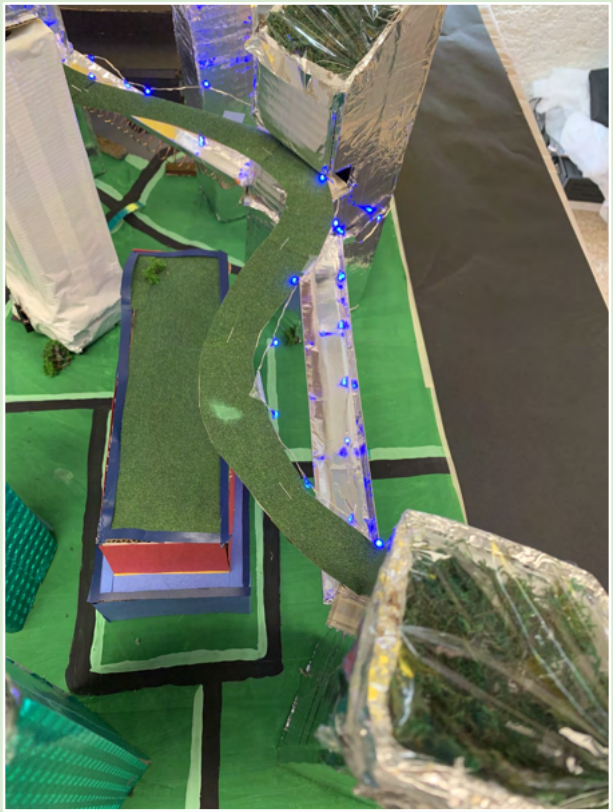
What type(s) of transportation systems are shown here?:

The two types of transportation shown in this picture include the Sounar Bullet, an electromagnetic train, and bike(green path)/car (black path) transport on the ground level.

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

The Sound Bullet is the main source of public transportation in our city. With the magnetic field being produced from the electrified coils, the track is able to the lift the train for a smooth ride with far less safety concerns. The bikes, a private type of transit, can be purchased by any citizen. The light green track represents the road used for bikes, which are located throughout our entire city. Bikes are powered by swing energy production.

Transportation Example 2



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

These walkways go from building to building allowing for easier travel between them below it is the soulnar bullet, the green on the ground is for bikes, and the black on the ground is for cars

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

Despite being 75 feet wide, the walkways are pedestrian only. They are luscious green and allow people to walk between buildings without using cars. They can get one type of vegetable at one building, than walk over to another to get others.

Principles of a Circular Economy in Action - Example 1

What is important for the judges to know about this element of your circular economy solution?:

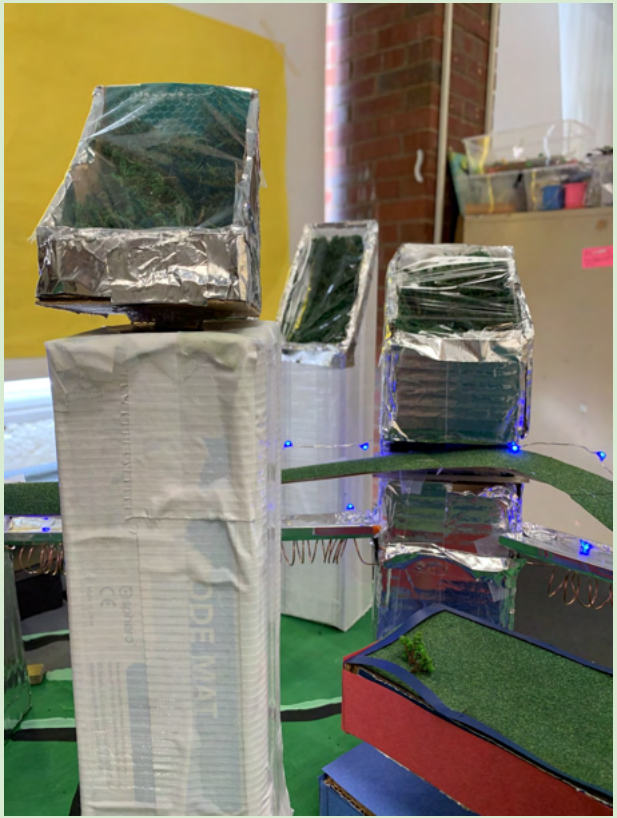
The four similar looking buildings each play a role in recycling which is essential in having a circular economy. All sorting of waste happens through two different electromagnets which can separate electronics and paper waste from all food waste. Each type of waste is sent to another building which specializes in making the waste available for reuse. All electronic waste is taken apart by people in the city so that specific parts can be bought and reused. Paper wates is sanitised and compacted to be cut into more paper material. Similar to paper waste, food waste is cleaned and compacted for later use as construction material.

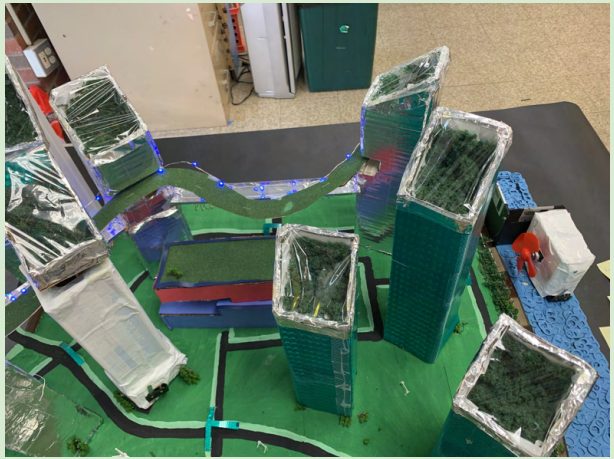
Principles of a Circular Economy in Action - Example 2

What is important for the judges to know about this element of your circular economy solution?:

This is a facility to farm fish. The fish are primarily produced in this location and are raised to be used as food for the citizens. By farming the fish in this facility, we no longer have the need to retrieve fish from outside sources. This cuts down on waste by removing the need for boats, machinery, and other forms of transportation. It also prevents the species of fish from going extinct, by raising them particularly to be eaten while continuously producing more. This is a form of regenerating natural systems.

Principles of a Circular Economy in Action - Example 3





What is important for the judges to know about this element of your circular economy solution?:

The vegetation located on top of high rise apartments demonstrate solar energy and maximal food production, which is an element of circular economy. With the rotation of the ceiling, the gardens will always face the sun. Furthermore, all residents have access to these gardens, abolishing packaging materials and pollution from shipping.

Section 2

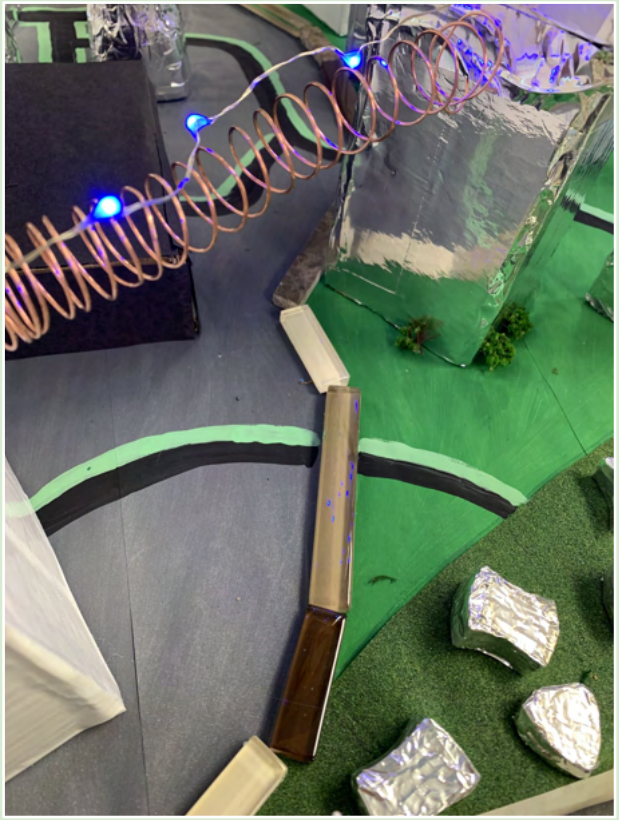
BUILD IT: QUALITY, SCALE, AND MATERIALS

Innovative Material & Use Example 1

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

The trees seen in our model are taken directly from this school's past future city projects. Our single homes are made out of old tape, foam, and puzzle pieces. The boxes for our moving piece were taken from last year's model. Finally, a 3d pen was used to create our windmills, portrayed in this image.

Innovative Material & Use Example 2



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

The tiles, equipped from an old bathroom, are used as a border to differentiate between the industrial and residential zones. Aluminum foil tape from previous years was applied as a decorative exterior on the buildings, as well, to make them stand out and feel modern.

Innovative Material & Use Example 3

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

One example of our use of innovative materials is the use of floppy disks. These recycled computer disks serve the purpose building a dam, which holds back river water and raises it to the appropriate level. This allows the water to properly flow into the hydroelectric power plant to create electricity. We also used recycled can tabs to replicate the water and flow of the river. Both of these examples are symbolic of a circular economy, being that we are taking materials that would typically be put to waste and repurposing them.

Example of Scale

Scale used in model: 1” = 50’

Structure 1

What type of structure is this?: Single family homes and wind turbines

What size is the structure on the model?
1 inch long, 1 ¼ inches wide, and ½ inch tall
What size would this structure be in real life?:
The structure would be 50 ft x 62.5 feet x 25 feet.

Structure 2

What type of structure is this?:
Commercial/Residential common area with power generating swings

What size is the structure on the model?: ¼ inch tall, ⅕ inch wide, ½ long

What size would this structure be in real life?: 12.5 ft x 10 ft x 25 ft

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?:

The rotating heliophile ceilings constantly follow the sun throughout the day. Not only does the vegetation absorb 95% of sunlight due to the aerogel glass, but it is also a position of employment. This futuristic technology takes advantage of the circular economy from the ultimate production of food and solar energy.

Futuristic Technology Example 2

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

The Sounar Bullet, which provides speedy and safe transportation for citizens, is a great example of futuristic technology. Unlike present day trains, this trains does not require constant maintenance in that it is propelled through an electromagnetic field as opposed to traditionally trains running on tracks. Additionally, the Sounar Bullet does not create loads roars and disturbances to nature, which allows it to stop within high rises and not harm buildings or people.