2021-2022 City Model Slideshow

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Section I

CITY DESIGN

Overview of the city

Industrial zone
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Residential zone
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Residential Zone - Houses

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

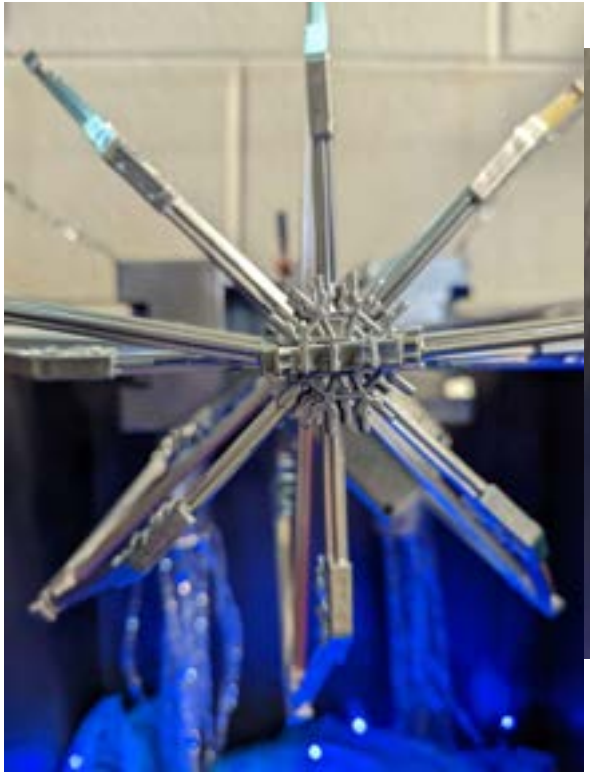
These ball-shaped houses are eco-friendly and are stacked to save space. On the side of the homes are collectors that are like sewer drains. The drains collect rainwater that run down pipes underground. The water that is recycled is used throughout the house for sinks, washers, dishwashers, and showers. There are also underground tunnels that connect the homes and local businesses.

Commercial Zone - Skatepark

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

Almost everything in our commercial zone is made from recycled or reused material. The skate park has an urban garden and everyone who uses the park can snack on healthy foods and smoothies. The park also helps keep everyone active and healthy.

Industrial Zone - Water Pump



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

Our sustainable Geothermal energy plant uses steam from the water underground to spin a wheel which generates kinetic energy. That energy is then transformed into a generator where it is processed into electricity for the city. Then the water is put back into the underground using special tubes. This process creates no pollution and is renewable. Having the geothermal plant inside of the mountain in our city, saves the city's money, time and space.

Infrastructure Example 1 - Ski Lift

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

Our ski lift is made using microalgae grown into stainless steel tanks to make an environmentally friendly steel. We can use this steel to make skis as well. Our lift will be made entirely of this algae steel and will use solar panels to power it. Since it is on a mountain, it gets more sunlight which would lead to more power which allows it to stay on longer.

Infrastructure Example 2 - TMW

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

This model is working with providing some utilities. What this model does is melt old things. our factory is powered by black solar panels.

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

We would be harming near where the city is being built so we need to keep as much products in the city as possible. By melting old electronics, we eliminate the amount of waste in landfill outside our city. also if there is a build up of waste then a dump truck could come in and we could melt the things in the factory. TMW stands for “Transforming More Waste”

City Services Example 1 - Water

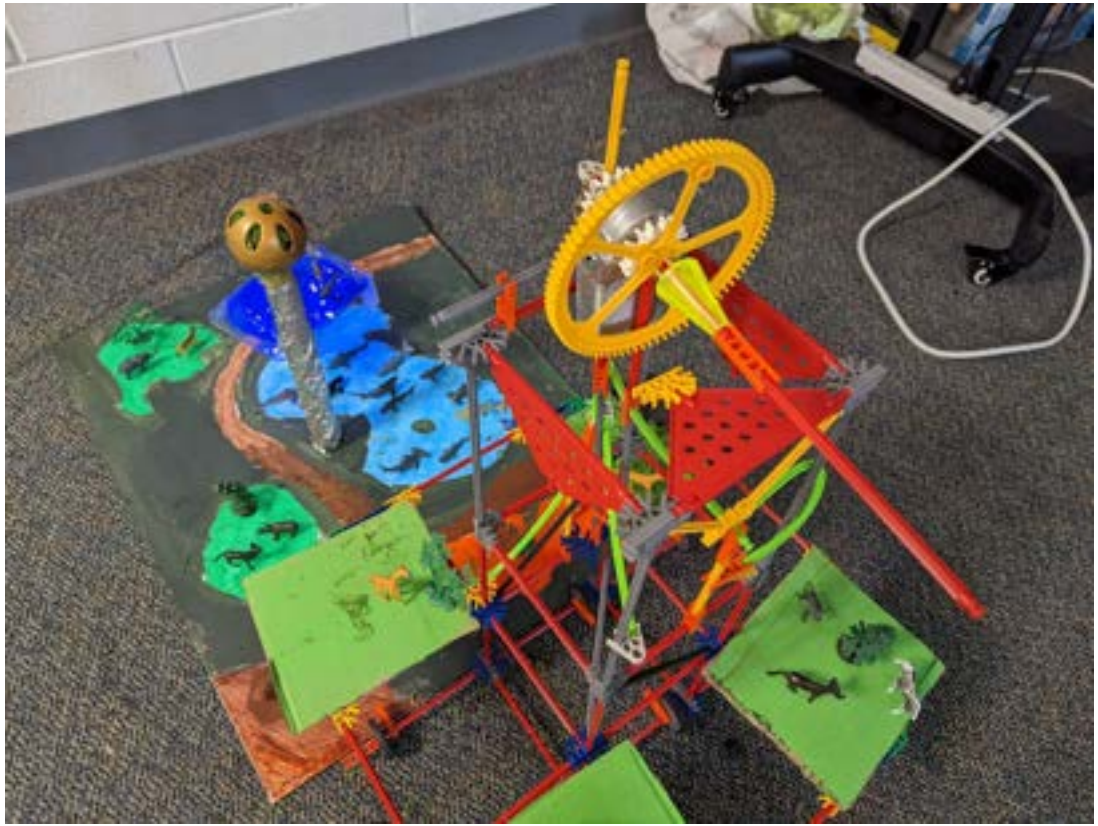
What type(s) of city services are shown here (health, education, etc.)?:

This is our urban farm and water purification center.

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

The vertical farms have cylinders with flowing water, which are all connected underground. On the cylinders there are holes where roots of certain types of produce grow without soil, mainly green vegetables. This is environmentally friendly because we will not be using pesticides because it is built in a closed off area. This is waste-free because we filter the water which makes it reusable.

City Services Example 2 - Zoo



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

This is our zoo. It also provides some solar power and energy.

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

Our zoo is a circular economy. We get all of our energy from solar power and from our "Decomposer." This device takes the waste from the animals and turns it into energy. The zoo captures all rainwater and uses it to hydrate the animals.

Transportation Example 1

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

This is the “Disco Ball” - the transportation hub in the center of our city. Residents can board trains here that run on elevated tracks throughout the city and are thermoelectric, running on the power of the friction between the moving train and the track.

There are also hydroponic gardens that grow at the base of our Disco Ball.

Transportation Example 2

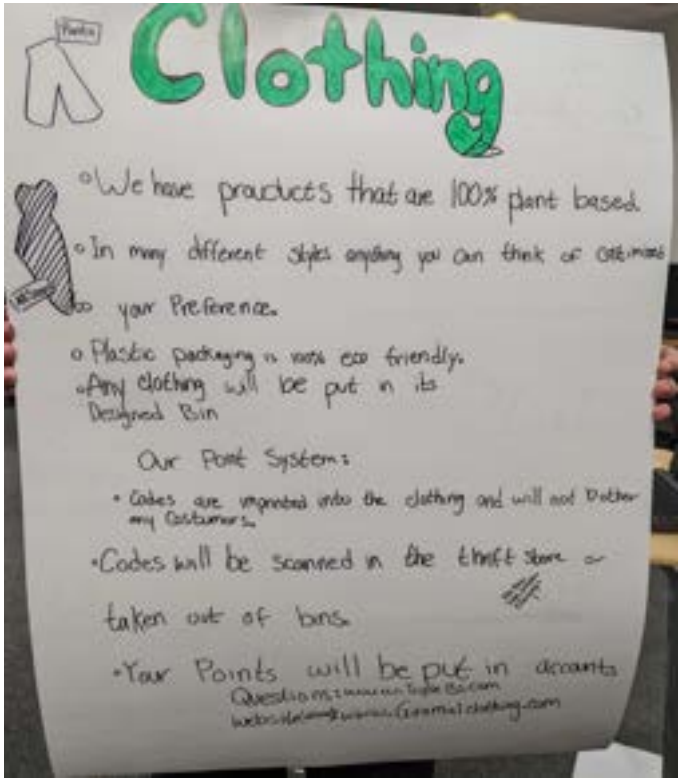
What type(s) of transportation systems are shown here?:

This is our solar powered recycling truck.

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

This vehicle rolls throughout the city, collecting any recyclables and brings them back to the plant where the items are sorted and cleaned and reused or recycled into something else. Nothing here is thrown away.

Principles of a Circular Economy in Action - Example 1 - CLOTHING



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

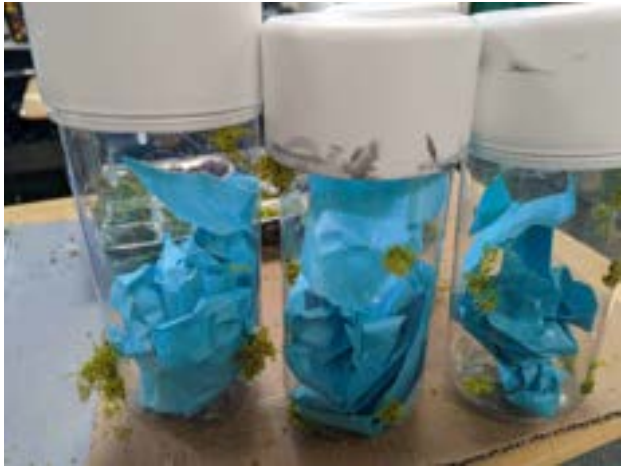
All of our clothing is plant based. Our clothing contains styles like Lolita, alt,goth, punk, dark academia, light academia, and harijicu. There is also many cosplays.The items are good quality and made to last. Once a person grows out of the clothing, it is brought to a second hand store where it is resold. Any items that need to be fixed are mended and then sold again. This creates much less waste. Once clothing is too tattered, it is taken to the recycling center to be created into new, plant based material.

Principles of a Circular Economy in Action - Moving Solar Panel Field

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

It has 5 bases with three solar panels in each. Everyone has a wire attached to it,so the power all goes to the station which can go to a power station. It is a special kind of solar panel that can get power through clouds but not as much. The panels can be moved to provide power to places that need it.

Principles of a Circular Economy in Action - Vertical Farm



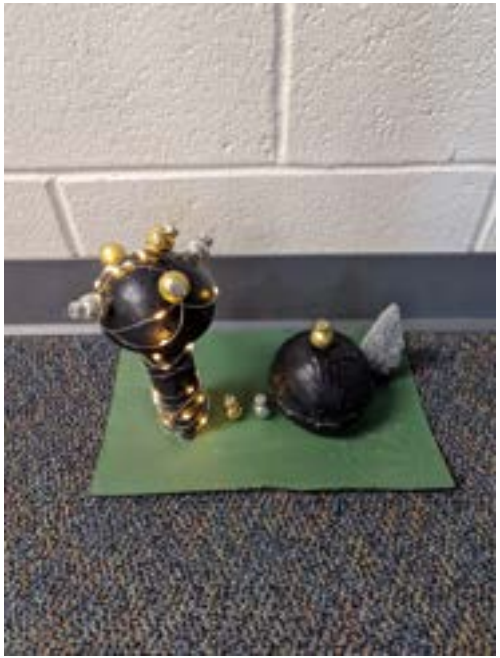
What is important for the judges to know about this element of your circular economy solution?:

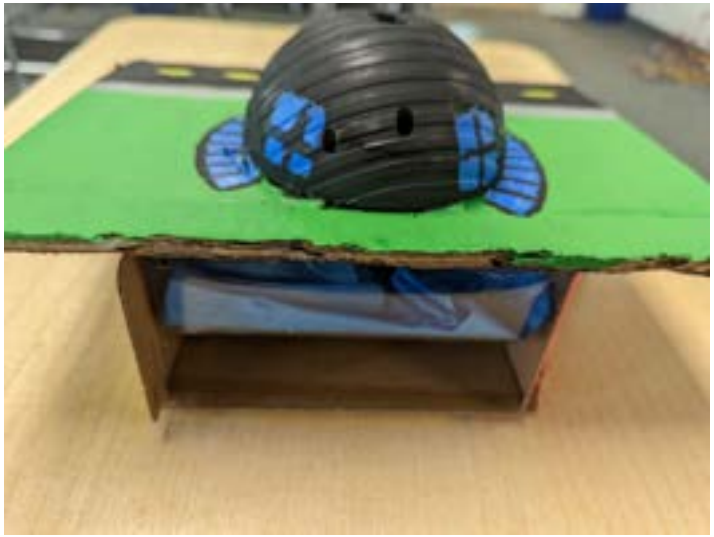
The vertical farm is a farm built in a mountain. In the farm, there are vertical cylinders with flowing water, which are all connected underground. There is a water filter next to the cylinders which filters all the water. On the cylinders there are holes where roots of certain types of produce grow without soil, mainly green vegetables. This is environmentally friendly because we will not be using pesticides because it is built in a closed off area. This is waste-free because we filter the water with makes it reusable.

Section II

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:

Our residential zone is created out of LOL Doll containers. The round containers were perfect for our idea of creating stackable housing that was compact and did not take up a lot of space but still felt roomy. The houses also recycle rainwater for sinks, dishwashers, washers, and showers.

Innovative Material & Use Example 2

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

These are the farms of the city. These farms get water from the tubes, the tubes get water from the geothermal plant next to it. We used recycled water bottles and a recycled candy container as well as fake moss and tissue paper to make this.

Innovative Material & Use Example 3

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

We used an old K'Nex set to build our environmentally friendly Ski Lift and our Decomposer in our zoo.

Example of Scale

Scale used in model (e.g., 1”= 10’, or 1”=22’):

Structure 1

What type of structure is this?:
Skate Park

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

What size would this structure be in real life?: The building is 1 story and the ramp is 40’

Structure 2

What type of structure is this?:
Housing

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

What size would this structure be in real life?: There is a 6 story middle section with housing with a top that is a farm.

Moving Part

Three moving Parts

- Geothermal Power Plant
- Waste Decomposer
- Transportation Center

https://vimeo.com/665307590

Section III

JUDGE ASSESSMENT OF MODEL

Futuristic Technology Example 1

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

Interior design

The interior design of houses aren't commonly made out of conserved materials, But with the use of stuff like old tires broken computers / computer chips, reused glass, old furniture, restored candles, and the power of filtered water, we were able to make an eco friendly interior design!

Futuristic Technology Example 2

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

TMW, “Transforming More Waste” - This factory reuses old electronics to make new ones. It keeps Motherboards, CPU,and Ram. The melted materials are used to redesign and remake new technologies.