2021-2022 City Model Slideshow

School/Organization: **Drexel Hill Middle School**

Educator Name: **Mr. Harry F. Crossgrove**

Future City Team Name: **Sin Desperdicio**

Deliverable Details/Requirements

- 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. Where noted, you can put one (1) or two (2) photographs of your team's work. The photos can take up as much space on the slide as you like, as long as they do not cover the slide title (upper left) or the text block descriptions on the right of the slide. More than two photographs are not permitted per slide. Collage images with more than two photos are not permitted.

- 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 Educator Dashboard at FutureCity.org.

- Review the 2021-2022 Program Handbook for a full list of rules and requirements.

Section I

CITY DESIGN

Residential Zone

There are two different residential zone platforms. They both have similar designs and features. In the middle of each platform is a large park with trees. These areas are for recreational purposes where people can enjoy nature and have fun. On top of most of the houses there are rooftop gardens for food and to keep the air clean. Most of the homes are cube shaped, and mimic the old shanty town houses. As for materials, we used dice, keycaps from old computers, K'nex and twine spools for the bases. For the rooftop gardens, we used turf powder, felt, and model foliage.

Commercial Zone

The commercial zone platform is on the light side of the model and is the higher platform the farthest from the river. Some materials that we used to make the buildings are key caps, Sorry pieces, batteries, chess pieces, lights, and orbs.

The buildings that are in this zone are office buildings, hotels, malls, retail stores, restaurants, shopping centers, and grocery stores.

Citizens can get to this zone by traveling in tubes wrapped around each platform, we used fish tank tubes on our model. People come here for work, food, and shopping.

Industrial Zone

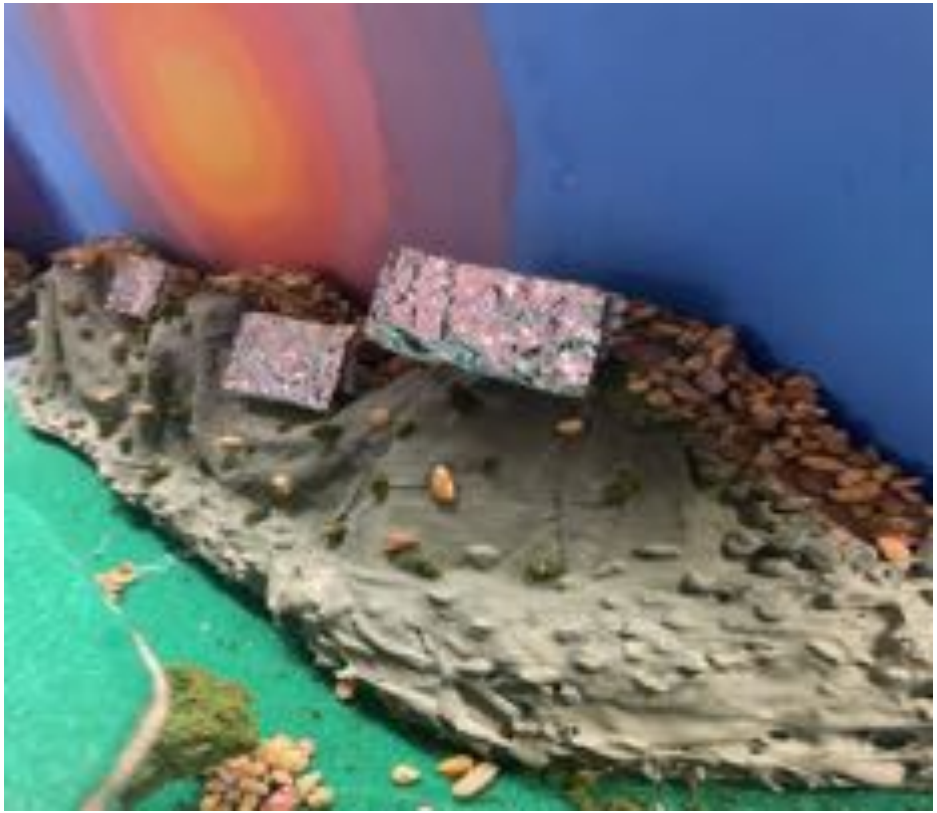
This is our Industrial zone. We put all of our zones on platforms. The Industrial zone of our city has to do with the power of our city. The picture on the left is our whole Industrial platform. The picture on the right is our power plant which is one of the many ways to power our city along with solar panels.
This Solar Power Processing Facility was made with a recycled motor and parts from a printer. The other buildings in the industrial zone were made from old fans, miniature lightbulbs, Jenga pieces, computer components, electric parts, spools and batteries.

Infrastructure Example 1 (Travel)

In our city we have many different types of transportation. Some of the ways we get around Is by pneumatic tubes, roads and bikes.

Our pneumatic tubes are made out of fish tank pump tubes. The roads are made of electrical tape. The roads are placed around in a square shape on the platforms. The tubes are the transportation between the platforms. People will use the tubes to transport between the islands in a faster and a more efficient way.
To travel outside our city we use planes and other environmentally friendly transportation methods.

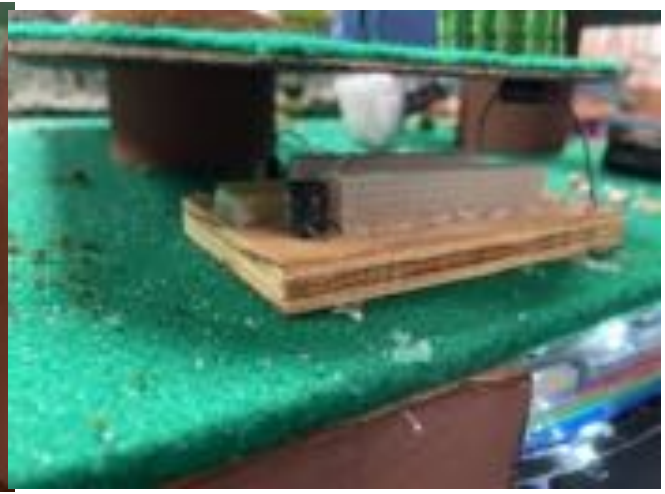
Infrastructure Example 2 - (City Power)



One of the ways that Sin Desperdicio gets power is solar power. The solar panels are located on top of the mountains. These Solar panels are all connected through the city's wiring system to the Solar Panel Storage facility located on our Industrial Platform. The solar panels are made from a building kit and plastic wrap. The mountains are made of paper and glue and are decorated with pebbles, model foliage and paint.

City Services Example 1 (Trash Removal)

Recycling tube(above)

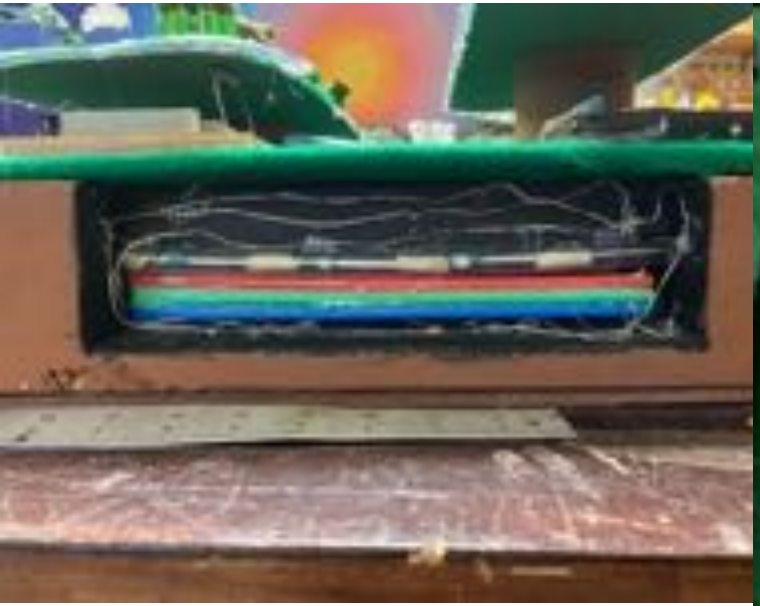


Recycling plant(above)

Trash removal

In our city, when you throw out your recycling, the vehicles take it to a plant where the recycling goes into a tube. The tube carries it to where it will be recycled into new things. If you look into the cutout on the right side of the model, you can see that there is a clear tube with things inside. That is our recycling tube. Nanobots are also used to dispose of any trash from the river. The Recycling plant is made out of computer parts, and Jenga blocks. The recycling tube is made out of a clear plastic tube with a string and tape on said string that goes through the tube.

City Services Example 2 (Water Filtration)



Water Filtration

Something I would like the judges to know about for my city´s operation is that the blue pipe on the bottom right picture transfers the water from the filtration plant to all of the city platforms. This water was purified by nanobots in the river which is located in the middle of the city. The City pipe display was created using different color straws and the river was created using ½ a cardboard tube, paint, and a scrap of plastic sheeting.

Transportation Example 1 (Pneumatic Tubes)

Transportation of the tubes

The pneumatic Transportation tubes are used to travel in between and around the platforms. They are used to move packages and people to different platforms and around the rest of Sin Desperdicio. We recycled many of the plastics that were cleaned out of our river to create our pneumatic tubes. This allowed us to make use of the discarded plastic which couldn't have been broken down naturally.

The pneumatic tubes on the model are made with 3 feet long fish tank pump tubes.

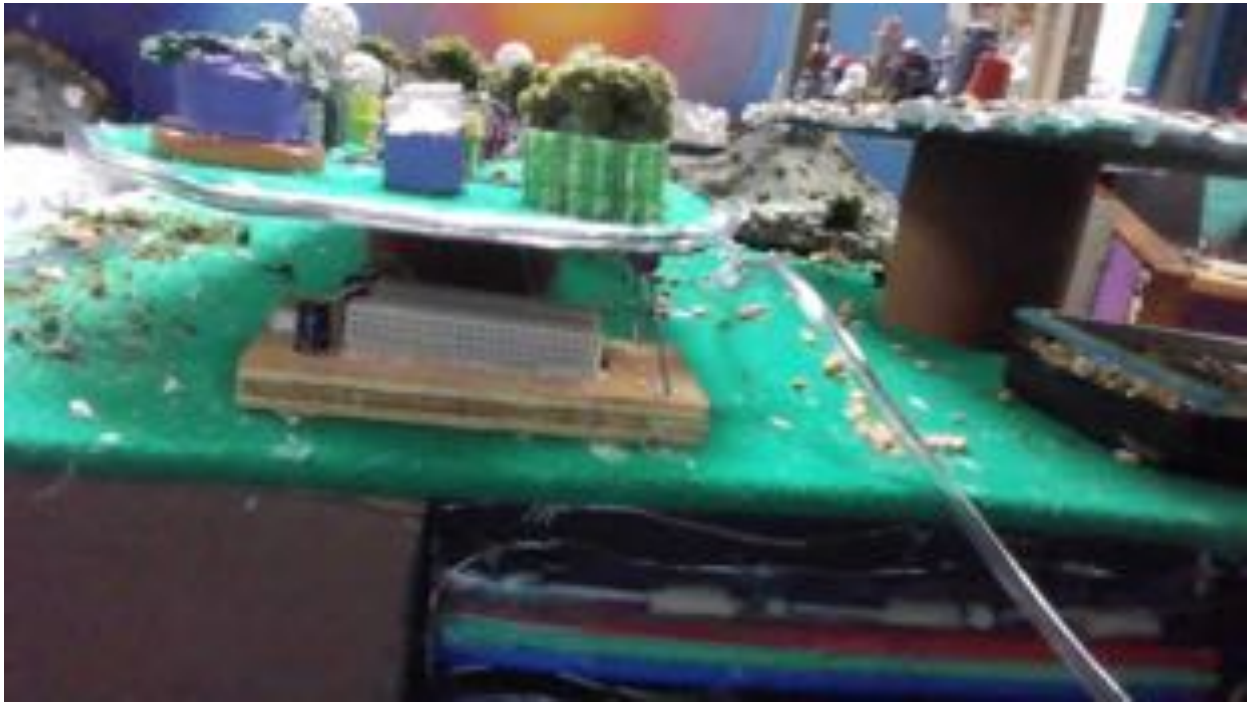
Transportation Example 2 (Roads/Bikes)

Platform Transportation

In Sin Desperdicio Lane Bikes are the best way to get around on the roads. The driver and passengers pedal the vehicle so there is no air pollution in the cities air. Our citizens also love to walk throughout our platforms to enjoy the parks and rooftop gardens. Our citizens can also transport through the platforms using a varitety of low emission electrical cars

The roads were created using half in electrical tape to allow our citizens to travel throughout each platform.

Principles of a Circular Economy in Action - Example 1 (Recycling Center)



Recycling Center

Our recycling center is a area for items to be clean and fixed. Any clothing can be cut and sewed together to fix old clothing or recycle it to make new ones. All of our plastic is recycled into other items such and water bottles or even some toys. Everything is cleaned that they reuse in our recycling center. Our recycling center is made from Jenga blocks and computer components.

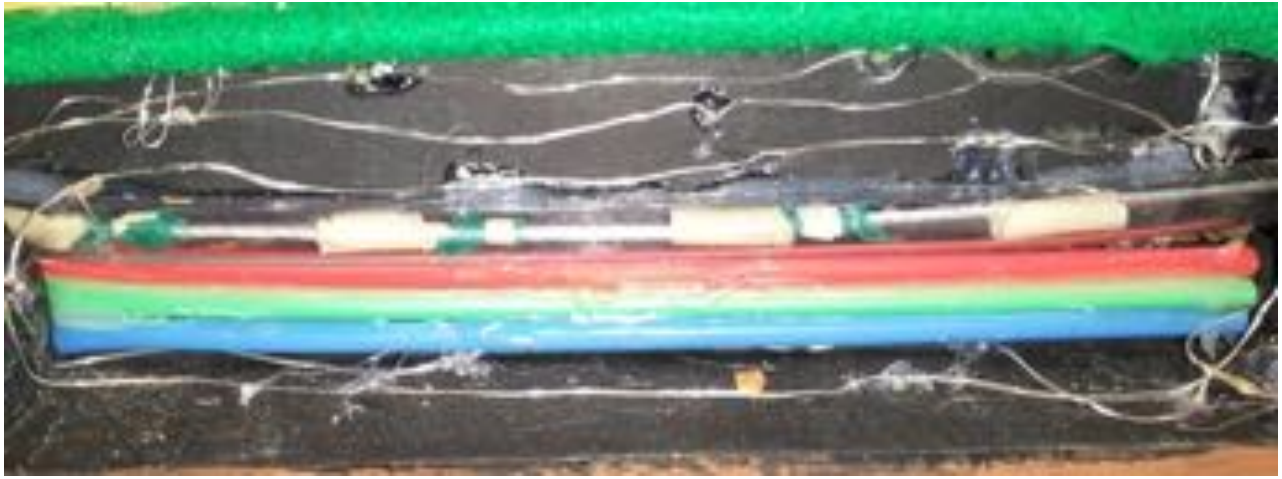
Principles of a Circular Economy in Action - Example 2 (Water Cleaning NanoBots)

Water Purification Nanobots

The nanobots/control station is made out of graphene, multiple computer parts, foam, and what looks to be a plastic spool upcycled from a previous year.

The nanobots/control station is important because they clean the heavily polluted water that was once in the city of Sin Desperdicio by collecting the metal and other materials that do not belong in our river. We use the discarded materials to make more nanobots.

Principles of a Circular Economy in Action - Example 3 (Waste Removal Tubes)



Waste Removal Tubes

The Trash Tubes are the way the waste from the city gets to the recycling plant. The tubes carry the waste from both all four of the different areas underground. After the the items are properly used for a new product, the new product is sent back to the city via another tube.
The materials used to make the tubes are clear plastic pipe with a string running through it. Attached to the string are wads of tape representing the waste. The other tubes are made of differently colored plastic straws.

Section II

BUILD IT: QUALITY, SCALE, AND MATERIALS

Innovative Material & Use Example 1 (Recreation)

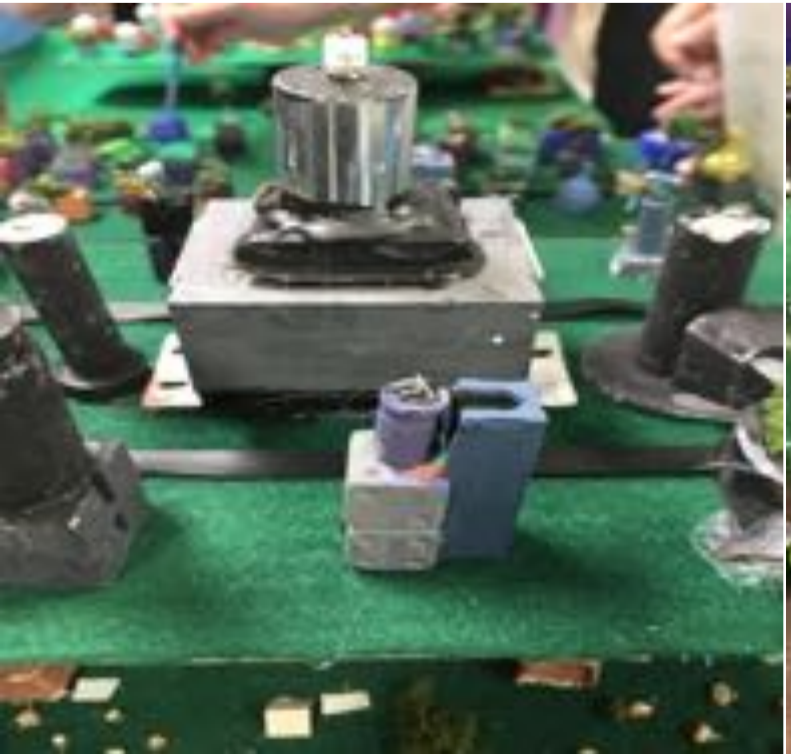
The best way for our citizens to escape the hustle and bustle of Sin Desperdicio is to travel below the platform by the river and go camping. There are two sizes of cabins - the small one with one story and the large having two stories. Also there are tents throughout the campground. We made the large cabins by glueing two keycaps and wrapping them in tape. For the small cabins we used one keycap wrapped in tape. For the tents we folded small strips of paper and glued them down. The campground is on the dark side of the model with views of the river and the mountains.

Innovative Material & Use Example 2 (Residential)

Innovative Materials
Residential Zone

In our city, we used dice, mini light bulbs, keycaps, tissue paper, K'nex, toothpicks, felt, twine spool, and wooden cubes from previous models.
On the top building, the materials we used were painted dice, fake bushes, and some paint on top.
On the bottom building, the building is made out of a painted wooden block and a keycap glued down onto the block.
To the left of the photos is the overall photo of the residential zone.

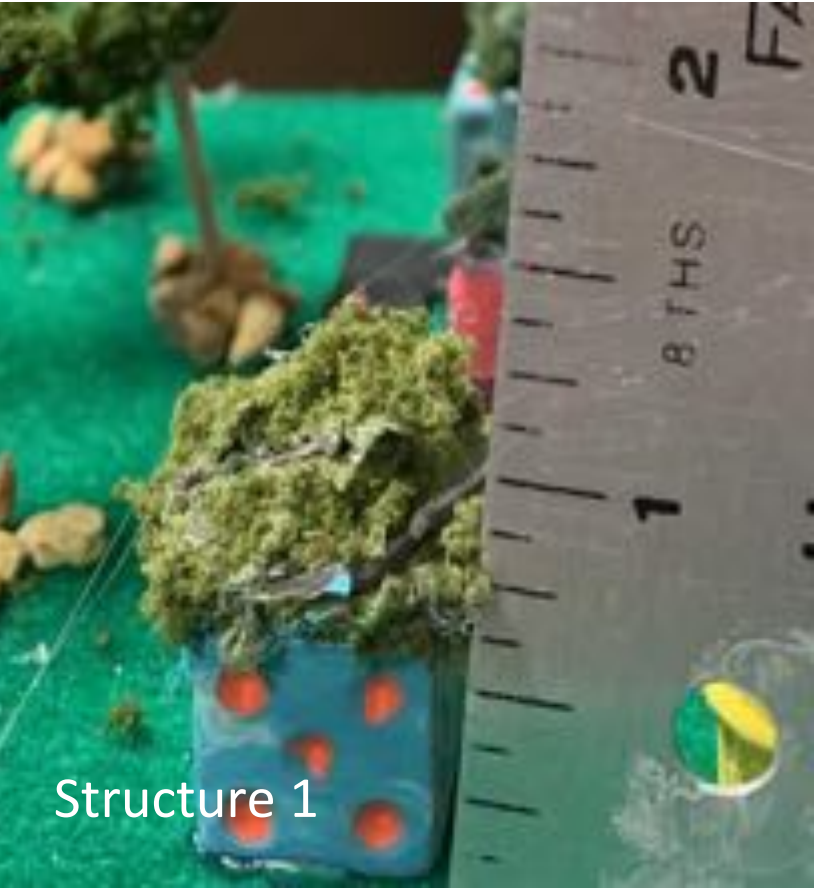
Innovative Material & Use Example 3 (Industrial)



innovative Materials
Industrial Zone

In this build we used the small lightbulbs as a sign that the building is a electrical powered building that would power the industrial section. The giant building in the middle of the industrial area has multiple different uses, which is why it's so big. The building is made up of a old motor piece and a large magnet put together.
The buildings to the side are made of batteries, keyboard pieces, a small fan, and a small pillar. The fan building is powered by air. There's a building with plant life at the side of the section, which we use for production storage and material storage.

Examples of Scale



Scale used in model: **1in=100ft**

Structure 1

What type of structure is this?:
Residential zone house

What size is this on the model?:
1 ⅓ in

What size would this be in real life?:
133 ft

Structure 2

What type of structure is this?:
Commercial Office Building

What size is this on the model?:
5 in

What size would this be in real life?: **500 ft**

Moving Part

- **Judges**: Watch and review the moving part video from this team in your Judge Dashboard.

Video Details:

- The video must be posted as to be publicly available for judges to access on either YouTube or Vimeo.
- Video cannot exceed 1 minute.
- Teams need to mention their city/team name in the video.
- Teams must show the moving part in action.
- In the video, share what role the part plays within the city and how your team built it.

2022 DHMS Sin Desperdicio Moving Part Click Here https://youtu.be/LPKMeMly2Jk

Section III

JUDGE ASSESSMENT OF MODEL

Futuristic Technology Example 1 (Water Filtering Nanobots)

Nanobots:
Nanobots are used for cleaning the river that runs through the middle of the city directed by the control center.

Nanobot Water Filtration

The control center in the middle of the river is made of styrofoam at the bottom and a painted lightbulb with no sharp glass on it. The river is in the center between the platforms, and has nanobots cleaning the river, controlled by the building in the middle of the water
According to the scale, the river is about 200-300 feet wide. The river was originally polluted by sewage and mining waste. With bots cleaning the river, over time the water became clean and uncontaminated by the waste.

Futuristic Technology Example 2 - (Communication)

Communication System

This technology is called Sin Desperdicio's Intelligence System, and often abbreviated to SDIS.

The SDIS is the new method of communication, and how we navigate. This technology is like phones and computers, but on your face.

These glasses also function as normal glasses for people with vision problems, and they still maintain their use as communication devices.