

fuTuRe City

COMPETITION



- Michael Malecki – 2020 Future City Pittsburgh Alumnus of the Year
- 2016 B.S. in Petroleum & Natural Gas Engineering from WVU
- 2017 B.S. in Industrial Engineering from WVU
- 2008 Future City – Freeport Jr. High School

AGENDA

- Introduction
- Engineers!
- Competition Overview
 - ❖ A Virtual Future City
 - ❖ Judging & Scoring
 - ❖ Living on the Moon
- Wrap-up and Q&A

Design it!

Build it!

Show it!



Goal: Introduce engineering to middle school students via authentic sustainability question and project.



- Established in 1992
- 22nd Year in Pittsburgh
- 1,400 Middle Schools
- 40,000 Students
- 40 Regions in USA
- 8 Regions Internationally



Student Outcomes

- Apply math & science concepts
- Develop writing & public speaking skills
- Become better problem solvers
- Develop good teamwork habits
- Discover different types of engineering
- Learn how their communities work & become better citizens



fuTuRe City

COMPETITION

- **Civil Engineers** – design the roads and bridges we drive on
- **Chemical Engineers** – design the water and waste treatment systems we use every day
- **Electrical Engineers** – design the electrical infrastructure that powers our life



- **Mechanical Engineers** – design the cars we drive
- **Environmental Engineers** – design the pollution control that keeps our city clean

There are so many more examples.

They all overlap!

What is Engineering?

fUTURE City
COMPETITION



Question: How can we make the world a better place?



Deliverables

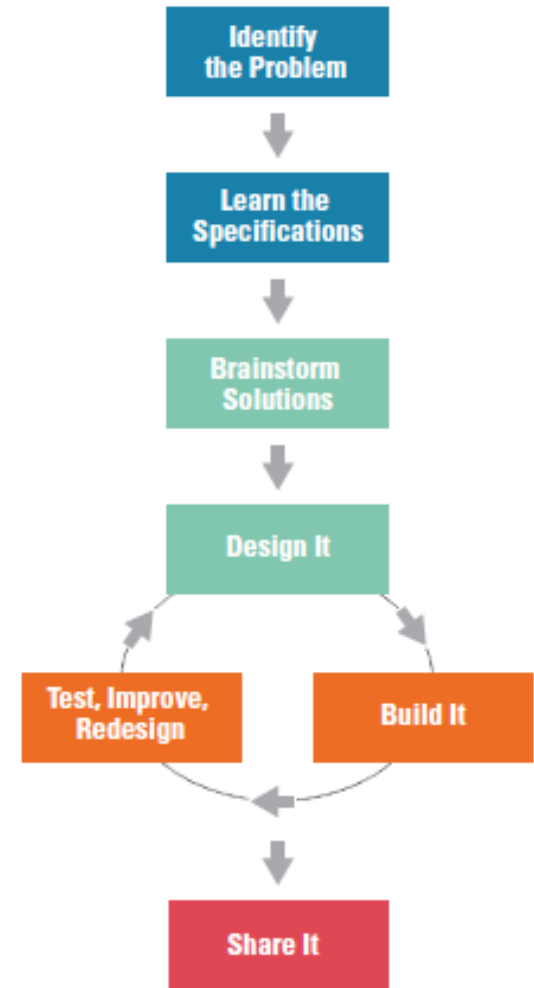
1. Project Plan
2. City Essay
3. City Model
4. City Video Presentation
5. City Q & A



The SimCity Virtual City is no longer required, but can be used as an educational tool (codes will be provided).

Project Plan

- Part I: Set Goals
- Part II: Create a Schedule
- Part III: Conduct Check-Ins
- Part IV: Reflect on the Project





City Model

- Teams build a physical model of their future city (to scale) using recycled materials.
- Teams may create a single model OR multiple model segments.
- Using a provided template, teams will submit a PDF slideshow containing photos and accompanying descriptions of their model prior to the Regional Competition.



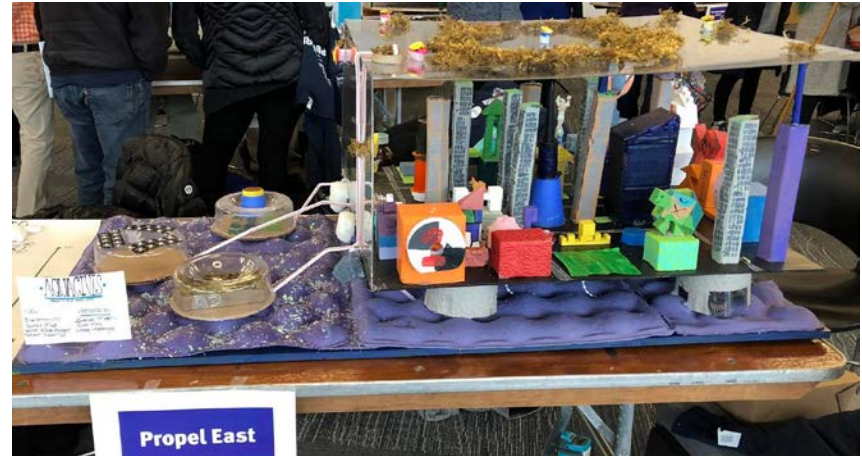
City Model

- No size restriction on the model or model segments, but there is a limit on the number of presentation slides.
- Don't forget the moving part! Only need one for the entire model, not for each segment.
- Include a link to a video of the moving part in the slideshow.



City Virtual Presentation

- 3-student teams record a 7-minute video presentation about their city.
- The recorded video is due prior to the virtual Regional Competition.



Rubric is based on presentation content rather than video production.



City Q&A

- Judging will be on Saturday, February 13, 2021.
- Judges will review your City Virtual City in advance.
- You will be given a scheduled time for your Q & A session.
- 3 students will have 10 minutes to answer questions about your city (does not have to be the same 3 students in the video).



Judging & Scoring

- Project Plan 10 pts.
- Essay 58 pts.
- City Model 65 pts.
- City Virtual Presentation 50 pts.
- City Q & A 25 pts.

Look at the rubrics in the Handbook for scoring breakdowns.



Judging & Scoring

Deductions

- Missing a submission deadline: 5-10 pts.
- Exceeding Essay word count: 10 pts.
- Late/missing expense form: 15 pts.
- Missing team ID in slideshow: 5 pts.
- Exceeding slide limit: 15 pts.
- Destruction of another team's model: Disqualification
- Going outside of text boxes: 15 pts.
- Exceeding \$100 on model: 15 pts.
- Missing Honor Statement: 2 pts.
- Unsportsmanlike conduct: 20 pts.
- Plagiarism: 0 pts. earned

Living on the Moon



- Your lunar city started as a collection of lunar landers that expanded into an outpost. Gradually it grew into a village and is now a city.
- Present your lunar city, describe its location, share its innovative features, and provide a detailed description of how the city uses two of the Moon's resources in futuristic ways to keep their residents safe and healthy.



Living on the Moon

- 1,500 words
- Up to four graphics
- Check out the webinar at <https://futurecity.org/2020-future-city-theme-webinar-living-moon>



Important Dates

- Essay January 15
- Project Plan February 6
- Video & Budget February 6
- Judging February 8-12
- Competition Day February 13
 - Preliminaries 8:00-11:00
 - Finals 1:00-4:00
 - Winners Announced 4:30-5:00



The Most Important Thing





Resources for Participants

- Program Handbook
- Online Videos
- Regional Trainings
- Webinars
- SimCity Software
- Assessment Rubrics
- Judge Manual

You may have multiple teams, however, only one team can attend regionals.



ENGINEERS' SOCIETY
of
WESTERN PENNSYLVANIA

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