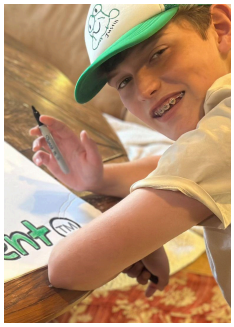
INTERNATIONAL KIDS CONFERENCE



ENGINEERING FOR THE ENVIRONMENT
Finding Solutions for the Next Generation

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SUMMARY

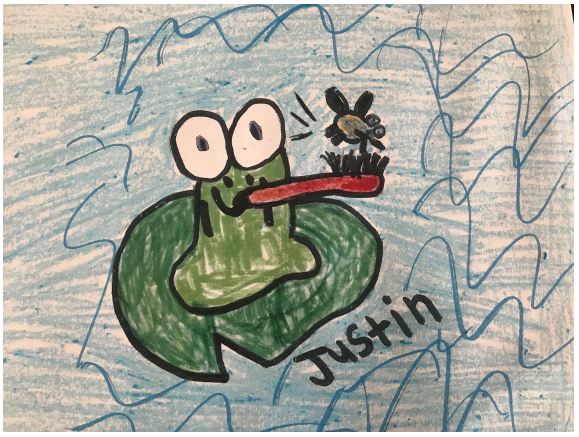
THE PROBLEM: City Living and Urbanization is Affecting Wildlife and Nature

Urbanization of the Planet
Did you know that more than half of the world's population live in cities? And by 2050, it is likely that 7 out of 10 people are expected to live in urban areas?

What is Urbanization?
A transition from people living in a rural area with little development to an urban society with more homes, schools, cars, buildings and jobs in a central location or city.

How does Urbanization Affect Wildlife?
Urbanization has a big impact on wildlife because it causes deforestation, habitat loss, more pollution, and animals have fewer places to live. Cutting down trees and plants also affects the biodiversity and the variety of plants, animals, and insects needed to work together to create a balanced ecosystem.

Urbanization and Frogs
Scientists recognize frogs have been impacted tremendously by urbanization. Wetlands, rainforests, ponds and rivers where they live are being destroyed, cut down, and polluted from trash, chemicals, and toxins.



Frogs are Indicator Species
Frogs are indicator species which is why they help scientists determine the health of an ecosystem. They can breathe and drink through their skin which makes them sensitive to pollution so by studying populations of indicator species, scientists can determine whether an ecosystem is healthy or out of balance.

Meaning, if frogs are sick or declining in population it often indicates the health of that ecosystem is not in balance.

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Process

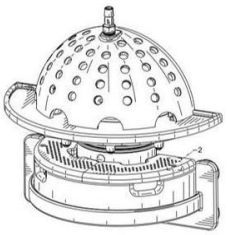
THE SOLUTION: Find Innovative Ways to Helps Wildlife in Urban Communities

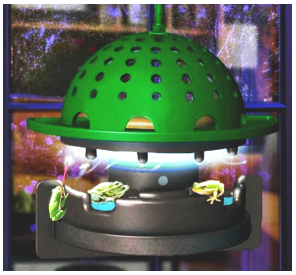
Finding Solutions
My solution is to inspire people to “Engineer for the Environment” so we can create future cities to be more sustainable. It is possible to find ways for cities to have less waste and pollution, and better ways to protect biodiversity and create more green spaces for plants, animals, and people.

Engineering for the Environment
My hope is to use my creativity to design a hands-on project using skills such as art, robotics, 3D printing, and concepts like biomimicry to find solutions. One skill engineers use is a concept called biomimicry to mimic features and behaviors from nature to improve their own inventions and designs.

Create an Animal Habitat
One idea is to create habitats for animals and insects such as birds, bees, owls, and frogs.

Designing The Frog Fortress
I’m working with an inventor who has created a Frog Fortress. It is like a birdhouse but made for frogs and can be placed in a backyard, on a balcony, rooftop, or even in a school garden, or local park. It is designed to be the ultimate habitat for frogs because it has wading pools, secret hideouts from predators, and even insect-attracting lights to attract food for the frogs to eat.





Future Plan

MY HOPE: Create More Urban Green Spaces for Healthier and Happier Cities

Connecting People with Nature
We are working on a Kickstarter Campaign starting on Giving Tuesday, December 3rd, to raise money to build hundreds of these frog habitats.

The future plan is to add built in cameras for live-streaming so people can watch and see what frogs come and visit their backyard, school or community and enjoy learning more about frogs.

Creating The Frog Fortress will not only help frogs have a safe place to live in urban communities but it will also develop a deeper connection between people and nature!