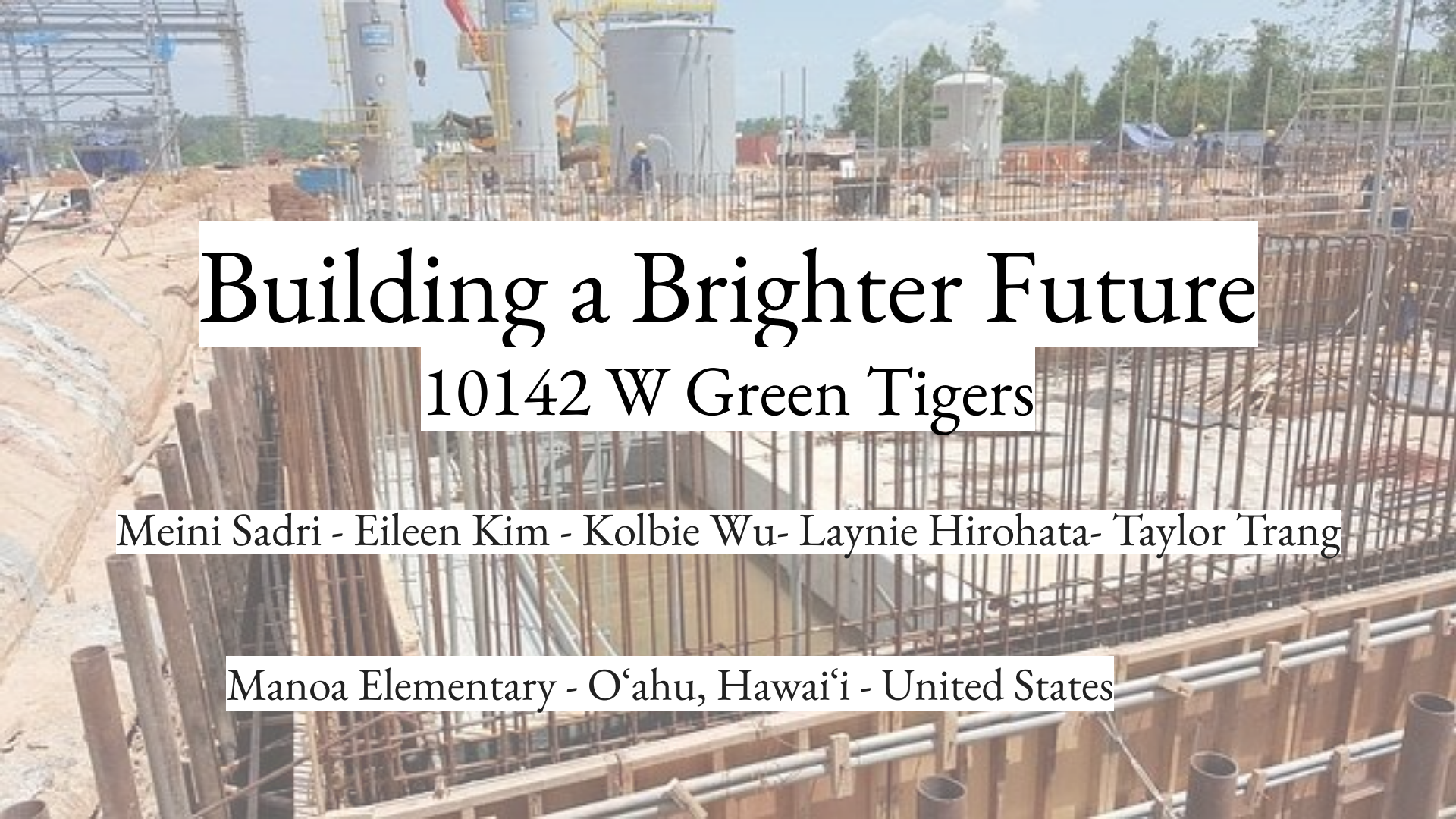

Building a Brighter Future

10142 W Green Tigers

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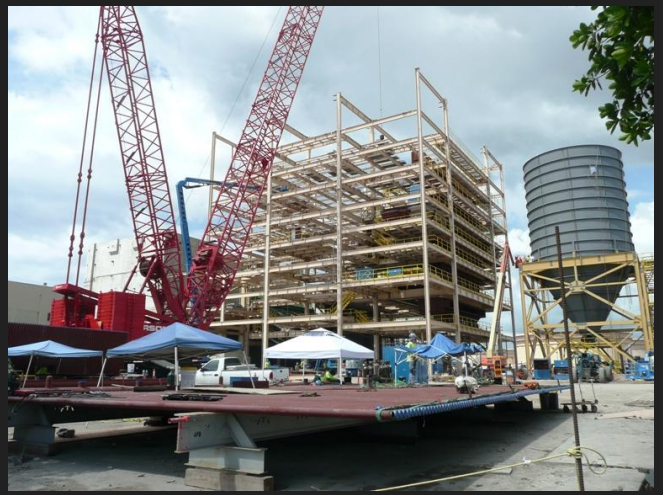
Manoa Elementary - Oʻahu, Hawaiʻi - United States

How would you react if someone asked you, “What do you want to be when you grow up?” You would probably be like “Hm, I don't really know” or “I want to be a Scientist!” Or “A teacher!” There are a million possibilities you can dream of what you want to be when you grow up. But what I'm talking about is how your career or careers affect the world itself.

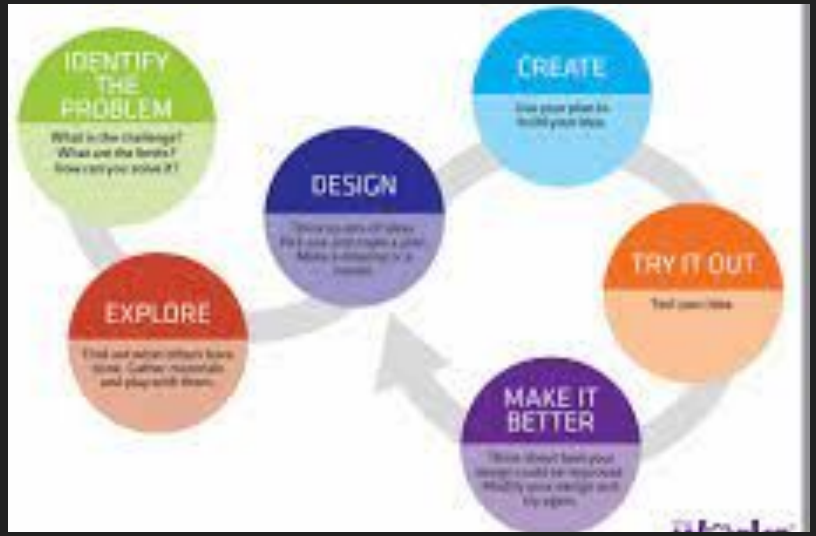
(1) Blueprint of a building

You may want to be a ballerina or a baker, but still we want you to think on how your career can affect the world. Here, we will tell you one: a civil engineer affects the world by making the world a better place by making structures, and buildings so we can live in it. That's why civil engineering is important. Without civil engineering you probably wouldn’t have a place to live!



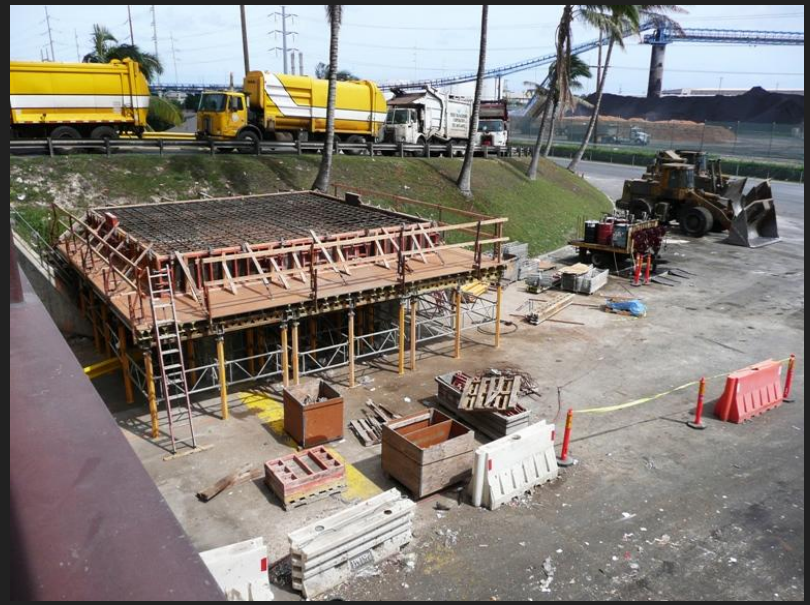
(2) A building in construction

We interviewed three civil engineers. We chose civil engineers because some of us have relatives that are civil engineers. We also chose it because one of our team members wants to be a civil engineer and because most of them use the Engineer Design Process (EDP). The engineers work at City and County of Honolulu Department of Design and Construction, City HPOWER, and Marine Corps Base Hawaii.



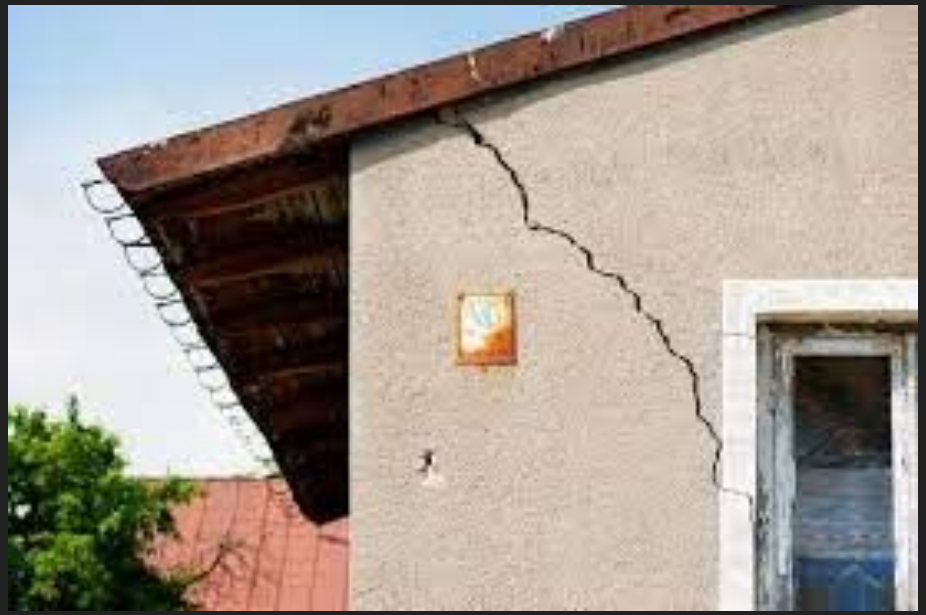
(3) The EDP Process

Civil engineers design, operate, construct and maintain infrastructure (organizational structures) projects and systems in the public and private sector. Civil Engineers fix roads, bridges, and drainage systems. They also design major transportation projects and work with power generating facilities, utilities billing, and energy saving projects. Many civil engineers work in planning, design, and construction. To find the these things, we did an internet search and had interviews with civil engineers.



(4) A frame of a incomplete house

Civil engineers use EDP to help people. They need the process because if they make a mistake then they can use the EDP to fix it. They can use the EDP if the project doesn't work as planned. Civil engineers use this process as an advantage and a resource. The EDP applies to civil engineering by using the process to help people because when they make structures, they can be safe for the people. Civil engineers can repeat the EDP and use the test step using a model so they can fix the mistake.

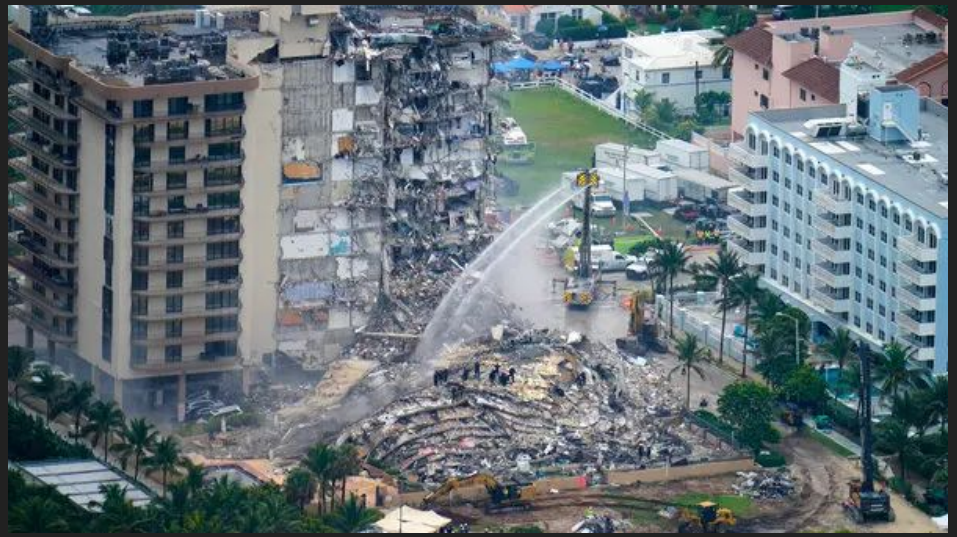


(5) A broken house that civil engineers will fix

Most civil engineers use all of the EDP but one civil engineer we interviewed said that they don’t usually test. They do not test because if they set up roads, bridges and other public things, the test would destroy all their work. It's important for engineers to use the EDP because they can be more organized. But not only to be more organized, also to be more efficient and also to not repeat the same mistakes multiple times.

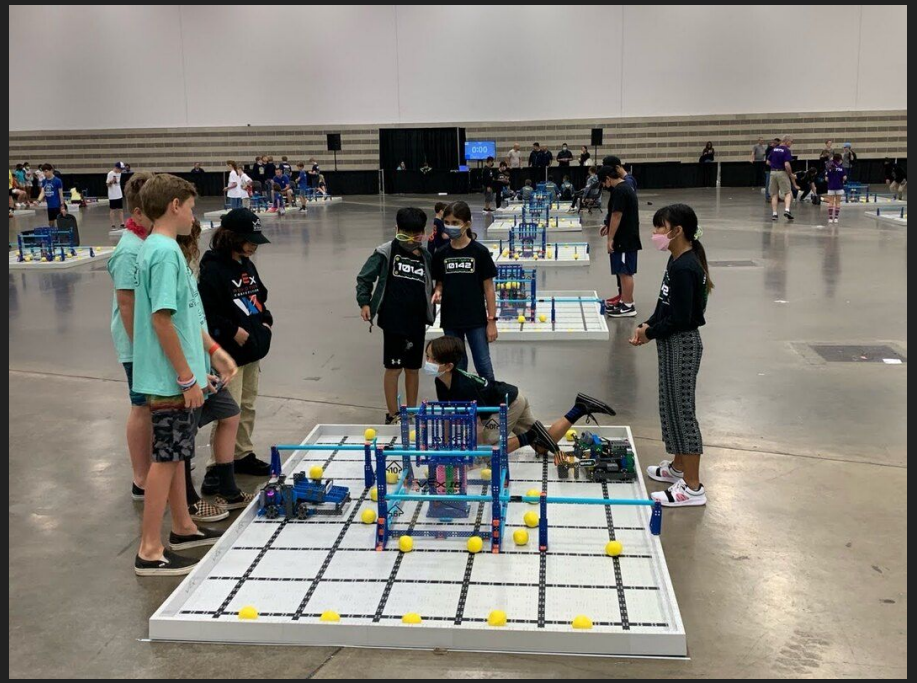
6) Cranes and more working machines building a structure

The civil engineers always start with a problem, like us. Sometimes, they work in teams, but other times, they work alone. Civil engineers use these parts of the EDP. They identify the problem (Ask), look at and research different solutions (Explore), choose the best solution (Plan), build the solution (Create), and test the solution (Test).



7) The collapsed building in Miami

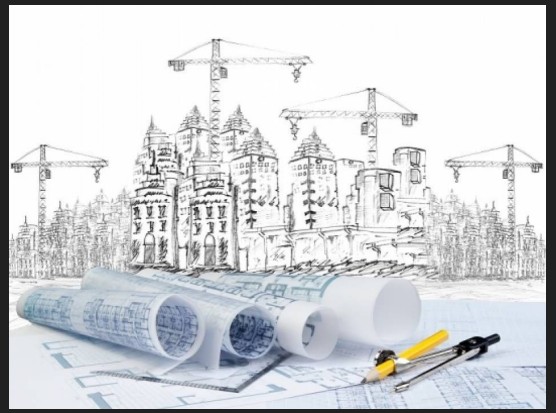
If you went to VEX robotics when you were young, you would get the practices of civil engineering. You would experience and practice the skills of a civil engineer. Sometimes what you do as a young child affects your job later in life. Suppose that you were in VEX Robotics when you were young. Say that before robotics, you wanted to be a doctor. After robotics, you might realize that you loved working with robots or building things that you wanted to become an civil engineer instead.



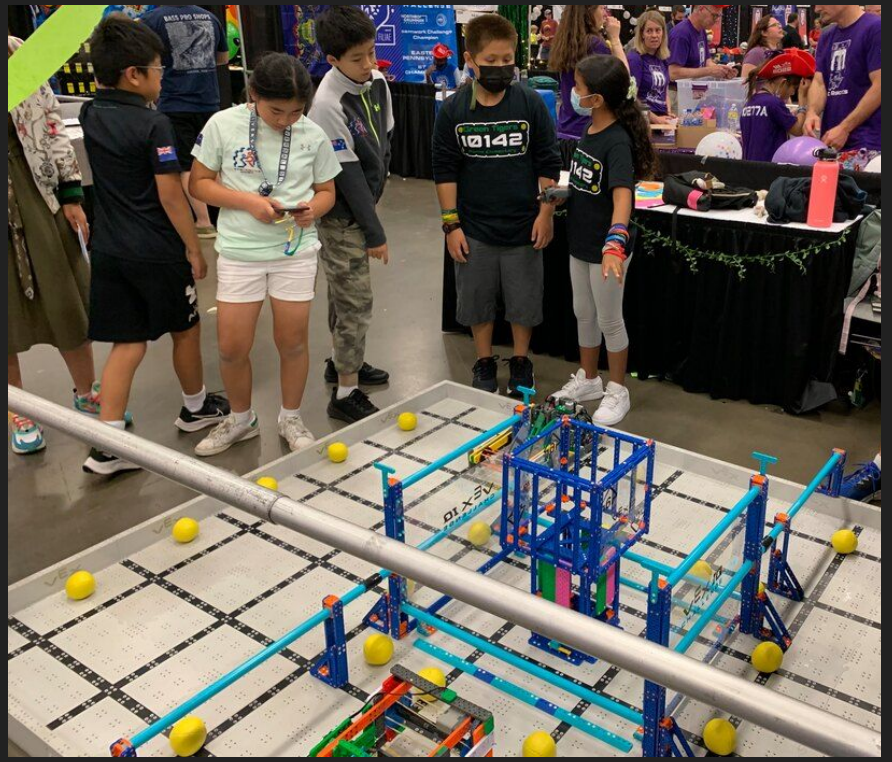
(8) Robotics students competing in Dallas (2021)

After robotics, you might realize that you loved working with robots or building things that you wanted to become an civil engineer instead. Or maybe you didn't like it and you still wanted to be a doctor. What you do as a child affects what you do when you are older, and sometimes it helps if your parents are something that you want to be. For example, if you want to be a civil engineer and your mom or dad is one, you could learn more about being a civil engineer. So if you learned something about the job that you didn't like, you would come up with something else to do when you grew up.

VEX IQ ROBOTICS COMPETITION



Being in VEX Robotics will prepare you for a future career, like a civil engineer. It'll prepare you for building things, like if you needed to build a bridge. You would have experience, so it would be slightly easier to build it.



(10) Students in Robotics competing in Dallas

It would also help with programming, so if you were a computer engineer, you would know more about programming. If you were in VEX Robotics when you were young, you would have the experience of a civil engineer and it would help you if you ever planned to be a civil engineer or something similar to a civil engineer.

11) Computer programming

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2. Photo 2

One of the civil engineers sent us this photo.

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