A tunnel, shrouded in darkness. With nothing but sticky, warm air. The sound of suffocation echoes off the seemingly infinite tunnel walls. As if magic, a small, intense light appears. A light at the end of the tunnel.

The engineering design process is a resource this new generation of civil engineers needs to use in order to save our planet. By using the design process to design a better process, factories can cut down on the 65% of carbon emissions this stage takes. Expensive analyses and experiments may be necessary to verify design choices.

Young, bright minds are all we have left. In this battle against climate change, we can only turn to those whose futures are in danger. Innovative ideas are the only thing that can save the place we call home. With current, exhaustive methods, such as “cutting down” on single-use plastic and capping carbon emissions barely helping, we need new ideas. New ideas come from a new generation. A new generation of engineers raised with VEX Robotics. As an organization VEX singlehandedly has aided the climate crisis by continually interesting children in engineering. With the number of engineering university applications and graduates growing each year by astronomical amounts, it’s no shock that Civil Engineering has become the principal career in battling the climate crisis. According to The Carbon Majors report as of 2021, just 100 companies have been the source of more than 70% of the world’s greenhouse gas emissions since 1988. Given this, designing factories is arguably the best way to slow the climate crisis. With their current, economically inexpensive design, factories take up enormous amounts of precious land, oil, and building resources. The ingenuity VEX nurtures in children means that they can grow up to fix these issues. Grow up, so that one day,.....

Industrial Civil Engineer: How VEX Can Help In the Climate Combat

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Define the problem. Factories are currently inefficiently designed, and their continuation poses disastrous implications for our Earth. Do background research. Civil engineers spend years at university at this step--learning--so they can improve industrial buildings. Brainstorm, evaluate, and choose solution. VEX prepares students for this through it's hands-on learning experience and real-world applications. In particular, the engineering notebook not only aids designing and building, but teaches the future generation of engineers about the importance of the engineering design process.

In many cases, designers find that the options become more and more difficult; negotiations over technical issues, budgets, and schedules become intense. As design evolves, the choices become interdependent, taking on the character of an interwoven, historical chain in which later decisions are conditioned by those made previously. This inefficient yet persistent method can be improved. VEX robotics fosters ingenuity and creativity in it's students, and this can later help with improving the broken and disastrous current factory design process.

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