



Virtual Learning

Career Explorations: Structural Engineer

May 15, 2020



Architectural Drafting
Mr. Windes, Mr. Leutzinger, Mr. Oatman

Lesson: May 15, 2020

Objective/Learning Target:

Students will explore Structural Engineering as a career path.



What do they do?

“**Structural engineers** focus on the physical integrity and design of projects such as buildings, bridges, and tunnels. It is their job to make sure the physical structure maintain integrity and are able to handle the loads and forces they encounter.”

CBSMN.com

Types of projects:

- Residential Buildings:
 - Existing structures
 - New Structures
- Commercial Projects
- Home Purchase Transactions
- Construction Defect
- Storm Damage

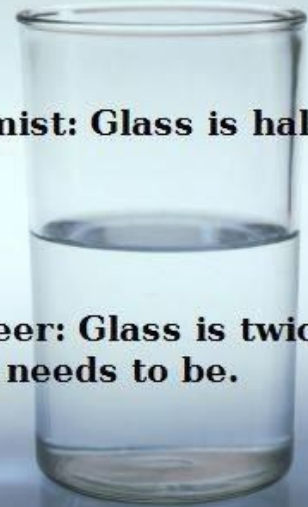
What skills do they need?

Structural engineering is a sub-discipline of civil engineering and as such the skills needed of a structural engineer are similar. Structural Engineers require strong technical (science, physics, materials knowledge, etc.) and mathematical skills, as well as communication, analytical, critical-thinking, organizational, visualization, and artistic skills. They also must be proficient with specialized tools and technology.

Optomist: Glass is half full.

Pessimist: Glass is half empty

Engineer: Glass is twice the size it needs to be.





Watch the video:

How to Become a Structural Engineer

After watching the video, answer the following questions in your engineer's notebook or on a piece of notebook paper. You will need to utilize additional resources to fully answer the questions (remember to cite your sources).



Questions

1. What are the main job responsibilities of a structural engineer?
2. What is the average salary of a structural engineer (use the most current information you can find)?
3. What is the job outlook for a structural engineer in Kansas City? Is the number of structural engineers needed going to increase or decrease in the future?
4. What types of activities could a structural engineer expect to do on a daily basis?
5. What does a person need to do to become a structural engineer? How long might it take?



Additional Resources

[What is Structural Engineering](#)

[Architect vs. Structural Engineer - A design meeting](#)

[Why structural engineers are awesome](#)

(The structural engineer shows up at the 15 minute mark to discuss options with the contractor. It's a pretty interesting conversation.)