

Diary of a day in the life of a Consulting Engineer

On arrival at Aurecon fifteen learners were welcomed and informed of the programme. We were to follow the many processes that could make up a day in our lives if we became an engineer. We began the journey by meeting with a Technical Director who explained what a consultancy is.



"We do work for clients. We look at the newspapers and websites for suitable tenders and then we submit a proposal explaining how we will do the work and what it will cost. As an engineer you need to offer the best solution with the highest standard of work and that means that we other specialists such as project managers and those who support the engineers, like the environmental people, technicians, CAD operators and a GIS specialist. But we also run an office with all that entails."

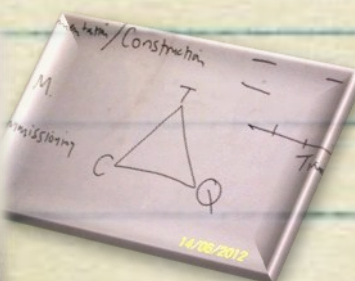


1 Pearce Street, Berea, East London

A project has to be managed to see that the clients money is spent wisely, so Project Management is an important part of planning the project.

I have most definitely acquired so much more facts about engineers. I have discovered what I really like and which specific aspects of civil engineering I would not tolerate. It has definitely assisted me in making a firm decision about my future.

"It is important to plan the project very carefully, with realistic timelines and to maintain the balance between the time you spend on the project, the quality of the work and the cost"



Next we were given an overview of the different fields of engineering.

Engineering is much bigger than I thought. I can leave a monument to myself and help my community

I hadn't thought of that!



"As an engineer, I help to make the world a better place for humans to live in."

"We are responsible for all the roads, structures, water resources, waste water treatment works, bridges, tunnels, etc."



Why do you want to become an engineer? Uhm... It is to address issues that are facing the country and the world at large taking into consideration transportation infrastructure, basic needs of water and housing. To feel the sense of achievement knowing you created something for some people and being paid for that deed @

"But all engineering projects have to consider the environment, so we need Environmental Engineers and Environmental Scientists"



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We learned that the engineers are supported by Civil Technologists who put the design together.



"I love solving problems, so I qualified as a civil technologist. Today I am solving a problem with water reticulation for a housing project."



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"I am a civil technician. I have a creative and interesting job. I have to prepare a plan showing the best way to lay out the engineer's design on the land surface, so I work with contour maps. I often have to solve problems. Sometimes we need to change the original plan many times."

I'm glad I'm doing computer studies and geography at school. If I study engineering it will make it easier to understand.

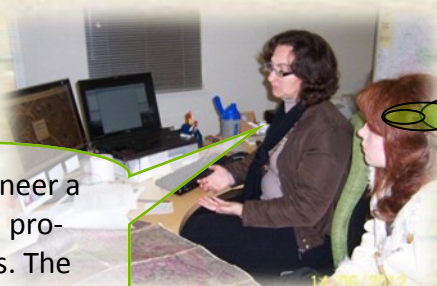
Then we spent time learning more about Computer Assisted Design....



"I trained as a CAD operator. I assist the engineer by interpreting the engineer's drawings and preparing a detailed, accurate design with all the measurements that the contractor will refer to when building the structure"

I didn't know this job existed! This is so cool!

....and the role of Geographical Information Systems



This is what we do at school in GIS only much more interesting. If I choose this career I'll need to know how to do this, so I'd better concentrate more in class!

"GIS is a very powerful programme that allows us to give the engineer a lot of information about the area in which she or he is working. I produce these large maps from data that are fed to me by specialists. The engineers and contractors will use them when on the construction site."

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Civil engineering is not all done in the office. As an engineer I will be responsible for the quality of the project and ensure that is safe and long-lasting. That means I have to go and see that the project is being implemented according to the design and sort out any problems. This can mean long days spent walking long distances, as with a water reticulation service in a new housing estate.

about civil engineering, always thought that civil engineering was about building houses, but today I've learned about various work that civil engineers can do.

I found out that when I have qualified I will need to spend some time 'on site' as the engineers say. This is so I can gain a better understanding of the challenges that might be met and it will be my job to suggest solutions to the engineer who will make the final decision.



"My job is to see that the trenches are dug to the right depth and for this we use a laser."

Wow! I never knew that. There is so much to learn!

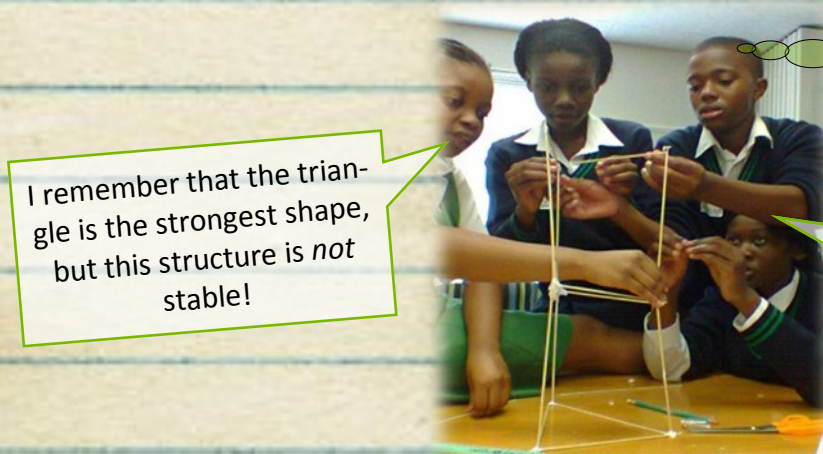
"I'm a civil technician getting site experience because I like to work outdoors. The bottom of the trench must slope at the correct angle for water to flow smoothly"

You need to be fit for this job!



I would like to be an engineer because of what I saw today at Montessori. The engineers put in lots of time and effort to take people out of the slums by building them houses with running water and proper sewage systems. I want to be part of a team that does that. I also want to improve the quality of life that people have.

As an a engineer I will have to invent clever new designs and we were given a chance to try our hand and hear about study opportunities



I remember that the triangle is the strongest shape, but this structure is not stable!

There's got to be a better way to do this!

Hold those pieces together while I join them.

What I liked most is the part that we were given so much time to ask everything that we didn't understand. It was as they were working they showed us almost every basic thing about engineering in practical.

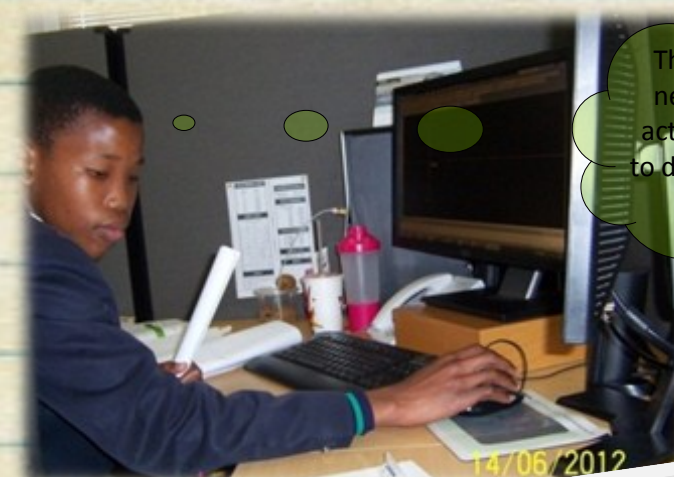
I would like to say that I have lots of respect for civil engineers, I salute them, they work really hard. I would also like to thank Aurecon for giving us such a wonderful opportunity.

I must tell my learners about that



Eish! I'd better concentrate on my studies or I'm not going to make it!

The best part was to be allowed to try some of the design programmes



This is fantastic! I never thought I'd actually be allowed to do some real computer work.

It's fun. I wish I could spend more time here. Perhaps I can ask to come again.

That was a great experience. I like the fact that we were exposed to real engineers at their work place. It was nice to see how they do their field of engineering. It was also nice to be exposed to both the office work and ground/field work. It was an enjoyable and memorable experience.

You must work accurately because if the pieces of the bridge don't fit together ... and also, people's lives may depend on the structure you design. Engineers carry a big responsibility



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