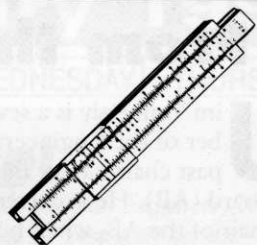


High School Slide Rule



High school students: If you have an interesting article or project that you would like us to feature in future issues, please submit it to Herb Davis, executive director, The Engineers Club.

What It Means To Be An Engineer

by Jen Houtz

Centerville High School—Junior Class

What is engineering? To many, it is simply a field of work in which people fix devices, build machinery and such, or work on problems. Personally, I fall under the “many” category of those who know next to nothing about engineering. When I began my research on the subject, I knew little about engineering, and while I am still not an expert, I now have a much clearer understanding of the subject. When I pictured an engineer, I was reminded of my childhood days of watching *Sesame Street*. There was a particular episode that had a scene in which an extremely warm-looking man, in what appeared to be a cave, was pounding at some horseshoes he had just pulled from a kiln. To me, this was the perfect example of an engineer.

In actuality, though, the correct definition of engineering is a profession in which a knowledge of the mathematical and natural sciences gained by study, practice, and experience is applied to the efficient use of the materials and forces of nature. An engineer by trade is someone who receives professional training in science, both applied and also in the field itself. The term “engineer” can also denote someone who operates an engine, for example, a train engineer.

Some other interesting information that I acquired through my research is that there are over 10 different main branches of engineering. Some of the more well-known subdivisions include aeronautical, aerospace, mechanical, military, and nuclear engineering. Furthermore, an engineer who works in any of those fields must have, at the minimum, a basic knowledge of the other engineering fields, due to the fact

that many problems engineers are faced with are quite complex and interrelated.

Marine engineering is yet another branch, and this particular form centers around those engineers who have the overall responsibility of designing and supervising the construction of ships. This type of engineering was particularly fascinating to me because there is so much work involved in the design and operation of systems within the ship. For instance, when building a ship, the engineer has to take into consideration many things, including safety, stability, speed, how much the engine and fuel bunkers will weigh, how much space they will occupy, and projected costs for the various expenses involved. In addition to those things, a marine engineer must know a variety of techniques in modern shipbuilding and have a thorough understanding of the applied sciences.

Today, computers play a very important part in the field of engineering. They are used to help solve problems, as well as for maintaining and storing the enormous volume of data that engineers must work with. In 1964, the National Academy of Engineering was founded to sponsor new research in the individual branches of engineering and fresh ways to use computers. It is also concerned with the relationship of engineering to society. It is essential for people to understand the importance of engineers, and also to realize what it is that they do. Through my research, I have a clearer understanding on the job description of engineers and who they are. I now realize just how much they do for our society.

I WAS THERE!

by Wilson Charbonneaux

I was there ... during the summer of 1938. Yes, in the Iowa State Prison at Ft. Madison, Iowa. But it wasn't all that bad, as I was manager of the Burlington Bees baseball team (currently a top minor league team), and we had made prior arrangements to play the state prison team.

As our regular pitcher was ill, it was up to me to take over this responsibility. It was a strange feeling, with 30-foot-high stone and concrete walls surrounding the playing field. There were bleachers along the first and third baselines for the inmate audience.

The men in the bleachers shouted to me “Pitch 'em low!” Not believing they were on my side, I pitched high and inside. Bang! Smash! The first three batters scored, as did the next two! Then, due to continued advice from the crowd, I pitched the next and following balls as low and outside curves, and what do you know—I struck them out!

Yes, the bleachers were filled with rooters for our team, not the home team! And we won the game 9 to 5. The men on the prison team had spent their prison lives gazing at the sky above those high prison walls, and their vision was not so sharp in a downward direction.

Yes, I learned a lesson during my brief time in prison!