

## Science speakers

## Electrical Engineering

***Purpose of the program***

The purpose of this program is to help children connect their science curriculum to interests and careers and to stimulate their curiosity. We wish to awaken children to the wide variety of jobs that people do and help them understand the necessity of a good education to getting the jobs. By illustrating how basic science concepts are used in their work, speakers show how science is fundamental to daily life.

Civil Engineering intersects with the fourth grade science curriculum. Below are content points and a general outline to help you structure your talk.

***Reminders***

Plan your presentation to run about 20 minutes. Then give the children 5-10 minutes for questions.

Children love to see examples; it helps them remember and understand. Any items you can show them and demonstrate will impress and delight them.

Please arrive at the school office at least 10 minutes before you are scheduled to speak.

Call **Mary Goljenboom** at United Way of Lake County with questions: **847 775 1058**.

***What the children are learning***

**Fourth graders** (age 9) study earth materials. They learn that earth materials provide many of the resources that humans use. The science content includes the following points:

- Magnets attract and repel each other and certain kinds of other materials;
- Electricity in circuits can produce light, heat, sound, and magnetic effects.
- Electric circuits require a complete loop through which an electric current can pass.
- Some materials permit the flow of electricity (conductors), and some don't (insulators).

***What you could say***

Define your job. For example, *An electrical engineer uses science and math to plan, design, build or operate appliances, control devices, generators, transformers, [please also add the projects you work on].*

Explain to the children how the science they are learning is used in your job. For example, *Appliances, generators, transformers, control devices, [please also add the projects you work on] use circuits.*

Please tell the children about the duties and responsibilities of your job. Please also tell them some of the things that you enjoy about it. As you explain and/or demonstrate, please remind the children of some of the science points above. You do **not** need to refer to all of them.

Please tell the children what kind of education is needed to do the job and how you got interested in this work.