



Tools of the Trade

Kids of all ages love gadgets. For this project simply bring in some of the engineering tools you use such as a planimeter or Brunton compass. Let students guess what they are, then explain their uses. Let students try them.

Tools can run from the simple to the complex. Bring in a CAD/CAM machine for a demonstration. Or bring a state-of-the-art pocket calculator and a slide rule. Talk about how engineers use the slide rule, how they use the calculator and how engineering made the calculator possible.

Engineering by Design

Engineers create the fantastic and the mundane. Bring in everyday household objects and discuss the design evolutions, spurred on by engineers that have made them possible. For example, talk about the evolution of sound recording by bringing in a state-of-the-art compact disc and phonograph album. Discuss why a product changes and specifically why certain products have changed. You can also discuss the methods and tools engineers use to design things now, compared to the past and how they might work in the future. Talk with the teacher to find out if he or she has any preferences for objects to disassemble.

Here are several variations on this project and you can probably think of more:

- Bring in a small grab bag of household items. Call a student to select something from the bag for you and use that to start.
- Perhaps you have been involved in the design of a project with which the students would be familiar—a local or nationally known building for example. Bring in the original drawings or early models and trace the project's design evolution.