



Design and Discovery

Engineering Fundamentals

In these sessions, students are introduced to basic engineering concepts that they can later apply to their design projects. In *Session 3: Materials for Design*, students learn about material classes, properties, and cost considerations when selecting materials. In *Session 4: Getting a Charge from Electricity*, students explore electrical circuits as they learn to wire simple, series, and parallel circuits. *Session 5: Making Machines*, introduces the principles of simple machines and gives students an opportunity to apply these principles to mechanical toy designs. In *Session 6: One Problem, Many Solutions*, the difference between form and function is introduced as students compare alarm clocks.