



peak their interest

Electricity

Did You Know?

Frog legs helped create the first battery. In 1780, an Italian professor of astronomy, Luigi Galvani, noticed that sparks from a machine in his lab made the legs of a dead frog twitch. Galvani performed experiments in which he placed the frog on a metal table and made its leg jump by touching it with different pieces of metal. But it was his fellow scientist, Alessandro Volta, who figured out that the electricity came from the metal, not the frog leg. When he invented the first battery in 1800, Volta used his knowledge about a wet frog leg serving as a conductor of electricity.

The power generated by walking on carpet is similar to that of a lightning strike. The big difference is that the number of volts of electricity that lightning discharges is significantly more than the static produced in everyday activities. You can generate about 3,000 volts by walking on carpet and 30,000 volts by taking off a sweater. Lightning strikes discharge 100 million volts.

Thomas Edison once used a telegraph to fight a cockroach infestation. Early in his career, Edison worked in a telegraph office that had previously been a restaurant. Here's his description of the problem and his short-lived solution:

The office ... was literally loaded with cockroaches, who lived between the wall and the board running around the room at the floor. These were such a bother on my table that I pasted two strips of tinfoil on the wall at my desk, connecting one piece to the positive pole of the big battery supplying current to the wires and the negative pole to the other strip. The cockroaches moving up on the wall would pass over the strips, and the moment they got their legs across both strips, there was a flash of light and the cockroach went into gas. This automatic electrocution device attracted so much attention and got a one-half column description in an evening paper, that the manager made me stop it.

The power behind "paddles of life." You may have seen a defibrillator in action on a medical TV show. Do you know how it works? When people experience heart trouble, their heart muscles have become disorganized. Instead of working together strongly, the muscles twitch weakly, a process called fibrillation. The electric shock from the defibrillator briefly stops the heart, which allows the muscles to regain their rhythm.