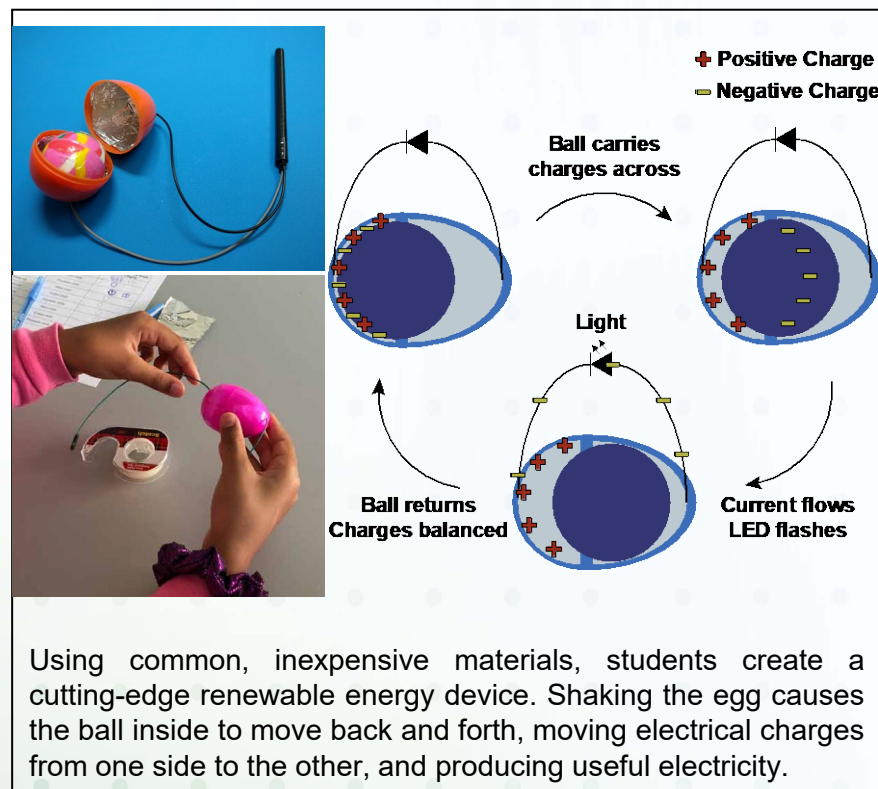


Sparking student interest: Renewable energy devices in the classroom

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The Wisconsin MRSEC has developed a simple, inexpensive way for K-12 students to build a sustainable energy device using familiar, everyday materials including kitchen aluminum foil, a plastic egg, clear tape, and a bouncy ball. The device, called a triboelectric nanogenerator, converts the often-wasted energy of motion into useful electrical energy. By exploiting triboelectricity (commonly known as static electricity), triboelectric nanogenerators produce an electric current from the external motion of shaking the egg.

These devices provide students with an engaging avenue to explore harnessing the energy that surrounds us, which is an especially important engineering challenge with rising global demand for clean energy. They are based upon cutting-edge research around creating new materials to convert the energy in activities such as walking on a floor or a heart beating into usable electricity.



Using common, inexpensive materials, students create a cutting-edge renewable energy device. Shaking the egg causes the ball inside to move back and forth, moving electrical charges from one side to the other, and producing useful electricity.

Learn more at:

<https://education.mrsec.wisc.edu/triboelectric-nanogenerator/>