



Energize Youth aims to educate children, ages 10–14, about clean energy and how electricity can be generated from motion, pressure, and contact. Through a free three-part workshop series, students will learn why renewable energy matters and explore how energy can be harvested and used. Schools, libraries, and youth organizations can register for individual sessions or the full series:

1. Power From Pressure

In workshop one, students will learn why clean energy is important and how the world is shifting toward sustainable solutions. They will then be introduced to piezoelectricity, where certain materials generate electricity when pressed, bent, or vibrated. After the presentation, students will engage in an interactive activity to learn first-hand how force can become electricity.

2. Power From Contact

In workshop two, students will learn about triboelectricity, the principle behind static electricity. They will explore how charge is created when two materials touch and separate, and how engineers use that effect in sensors and energy-harvesting systems. Students will then do an activity that uses static electricity to move an aluminum can without touching it to show how electric charges create forces that can move objects without direct contact.

3. Power From Motion

In workshop three, students will learn about electromagnetic induction, the principle behind generators, wind turbines, and many power systems. They will discover how spinning motion can become electricity and how speed, blade design, and generator structure affect output. Students will then complete a mini wind turbine challenge, using a small motor as a generator to test how blade designs change voltage.

About Me

My name is Vismay Patel, and I am a rising senior at John P. Stevens High School. I am passionate about sustainable energy and the role engineering can play in building a cleaner future. Through Energize Youth, I hope to make clean energy more understandable, accessible, and exciting for youth. I am also following my passion for energy by building a scalable energy-generating tile that can turn footsteps into usable electricity.