

What Makes Motors Run and Generators Spin

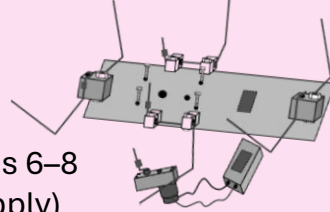
Inspired by Faraday. Driven by you!



Setting: High school gymnasium



Participants: students in Grades 6–8 (no restrictions apply)



Format: Interactive, Experiment and Assemble

Workshop Overview:

In this engaging and practical workshop, students explore the fundamental principles behind motors and generators. Through clear demonstrations and interactive experiments, participants gain firsthand experience of how mechanical energy is converted to electrical energy, and vice versa.

Historical Encounters:

Bringing science history to life, selected school staff members, prepared in advance, participate in the workshop in the roles of legendary scientists such as Michael Faraday and Heinrich Lenz. Dressed in period costume and equipped with foundational knowledge of these pioneers' theories, they guide students through key concepts in electromagnetism and energy transformation, adding a memorable theatrical dimension to the learning process.

Creative Construction and Competition:

Each student receives a kit to build a small robot that, once assembled, resembles an insect and moves using six legs. After building and decorating their robots, students enter them into a friendly competition where creativity, design, and performance are put to the test.

Learning Outcomes:

- Understand the core principles of electromagnetism,
- Recognize the historical development of motors and generators,
- Apply learned concepts in building a functional robotic model,
- Develop creativity, teamwork, and problem-solving skills.



Corridor of Comprehensive Knowledge