





## Bridging Gender, Innovation, and Opportunity Gaps for Middle School Girls in New Jersey **Energy Course — From Concept to Results** Electricity Everyday | Electricity's impact on daily life (2) Electricity Generation | From Potatoes and Motors SYLLABUS (3) Solar Energy | How Sunlight keeps your home cool Wind Energy | KidWind adventures (5) HydroPower | Water cycle and kinetic energy Lessons (6) Nuclear Energy | Fission, fusion and steam making Geothermal and Tidal | From the depth of earth to the waves of the shores (8) Biomass and Biofuels | How new plants and animals make energy (9) Fossil Fuels | How old plants and animals make energy (10) Project & Party | Capstone project- Shark Tank Instruction Classroom: 12-20 Students Curricular-Aligned **Industry Speakers** Methodology 1:4 Instructor to Student Ratio Field Trips Participation **Program Structure** [1.5-2 hrs] Presentation (SEL) Minorities and Experimentation Discussion **Experimentation and** and Wrap Up Women in STEM **Demonstration Follow Up New Jersey Science Standards** PS3.D **Definitions of Energy** Energy in Chemical Processes and Everyday Life

## Relationship Between Energy and Forces







**Conservation of Energy and Energy Transfer** 



Let's Connect

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Org. for Matter and Energy Flow in Organisms

Cycles of Matter/Energy Transfer in Ecosystems

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