S1 GREEN DESIGN LAB
A PROGRAM OF SOLAR ONE

Jersey City Virtual Classoom Sessions

30 to 40-minute Zoom or Google Meets Sessions:

Intro to Electricity Part 1: Circuits

Grade Level: 3rd to 8th

Students are introduced to the basics of circuit-building and through a live demonstration will learn about the different parts of a circuit and how circuit configuration can impact its electrical output.

Intro to Electricity Part 2- Conductors

Grade Level: 3rd to 8th

Students explore the conductivity of different types of household materials and objects through a live demo. Students will learn how the properties of a material determines their conductivity and the connection between conductivity and electrical circuits.

Exploring Solar Panels

Grade Level: 3rd to 12th

Students are introduced to solar power as the Solar One Educator uses a light to power solar cells. Students will also explore how shade and the angle of the solar panel effects the electrical output. Students will use this information to discuss how solar power might be impacted by location, time of day and time of year.

Energy Storage and Building Batteries

Grade Level: 3rd to 12th

Students will learn about energy storage and why it is so important for the future of renewable energy. Students explore the different parts of a battery as the Solar One Educator demos how to make an aluminum air battery out of household materials.

Energy Conservation and Efficiency

Grade Level: 3rd to 12th

Students will learn that different appliances use different amounts of energy and what that means for the environment. Solar One Educator will test different light bulbs and appliances to explore ways that students can conserve energy in their classrooms or home.

Wind Turbine Design

Grade Level: 3rd to 12th

Using the engineering design process, students will analyze which design elements make the most efficient wind turbine blade. Solar One Educator will demonstrate using a mini wind turbine and students will discuss what they infer about how size, shape and other variables can impact the success of a design.

To schedule a virtual classroom session complete this Google Form or email vera@solar1.org