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## **Audubon Classroom Program – NY**

### **Before the Audubon presenter comes:**

Please review the Curriculum Integration Guide information and materials with your class. We don't need you to teach the lesson, but it helps if students have some basic background in the concepts that we are teaching.

### **When the Audubon presenter is in your class:**

Please remember that we are guests in your school. We appreciate you being present during the lesson, helping with discipline and making connections between our lesson and other things that your students are doing.

### **After the Audubon presenter leaves:**

Please keep the learning going. There is a post visit activity to do, along with many other ways to keep the students learning.

There is a teacher survey at <http://auduboncnc.org/classroomevaluation> that you can complete to tell us how we are doing and what we can do to better suit your needs.

# Electricity Footprint

## Curriculum Integration Guide

### Pre-visit Activities

- Ask students what uses electricity in their homes and brainstorm a list of the things that they think use the most electricity.
- Ask students what electricity is and where it comes from.

### Extend the learning

- Use the post-visit activity to reinforce the concepts.
- Explore the graph that shows how sources of energy have changed in the U.S. from 1950-2020.

<https://www.eia.gov/energyexplained/electricity/electricity-in-the-us.php>

### Resources

- Watch this five-minute video that explains, in a simple way, how electricity is generated and transmitted to a light switch in a home. <https://www.youtube.com/watch?v=20Vb6hLQSG>
- Explore the parts of a wind turbine and how it works. <https://www.energy.gov/maps/how-does-wind-turbine-work>
- Read *A Beginner's Guide to Electricity and Magnetism* by Gill Arbuthnott. This book explains the history of electricity, how it gets from its original source to your electrical socket and what might happen in the future.

### New York State Science Learning Standards

4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

### Objective of the program

Students will list ways humans use electricity, order and explain the way coal and wind are turned into electricity and describe the positive, negative or neutral impacts different sources of energy have on the environment.

## Electricity Footprint

### Post-visit Activity

Today you learned about **electricity**. Complete the activities below to remind yourself what you learned.

Draw a line from the resource to the category it belongs. Remember, non-renewable resources can eventually be used up and *cannot* be replaced. Renewable resources *cannot* be used up. One is done for you.



Wind



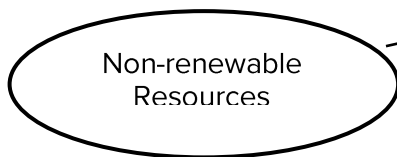
Sun



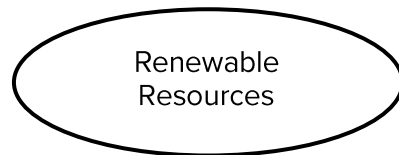
Coal



Natural Gas



Non-renewable  
Resources



Renewable  
Resources

What is one negative impact of using non-renewable resources to generate electricity?

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Why are we increasing our use of renewable resources to generate electricity?

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