

# Fun Facts: Earth Day - April 22nd

## TEACHING GUIDE



### About Fun Facts

Fun Facts are student-friendly handouts that tie statistics from the Census Bureau to holidays, anniversaries, and other observances. These fact sheets—which are designed to be used at varying grade levels and across different subjects—can be used at the end of class (if students finish their work early), during a lighter day (perhaps when a substitute teacher is present), or on/before a holiday (when there may be an opportunity for flexibility outside the curriculum).

### Using Earth Day Fun Facts in the Classroom

Teachers should first review the different types of renewable energy with students.

Renewable energy resources freely exist in nature, never run out, and do not pollute the environment. By contrast, nonrenewable energy—which includes coal, propane, petroleum, and natural gas—formed millions of years ago and will run out someday. Types of renewable energy include:

- **Biomass energy:** Energy generated from animals and plants, such as wood, dried vegetation, crop residue, and even garbage. When biomass is burned, the energy is released as heat.
- **Geothermal energy:** Energy generated from heat in the ground—for example, from the hot rock found a few miles beneath the Earth's surface or from the extremely hot molten rock (magma) found even deeper underground.
- **Hydroelectric energy:** Energy extracted from flowing water, often in a river, that spins the blades of a turbine connected to a generator.
- **Wind energy:** Energy extracted from moving air (wind) that turns the blades of a wind turbine connected to a generator.
- **Solar energy:** Energy generated from the sun, often through solar panels, which are made of materials that can be found in computer chips. When sunlight hits the panels, it knocks electrons loose from their atoms to generate electricity.



Then, teachers should give students time to read and digest the information in the Earth Day Fun Facts handout. Below is a list of ideas for using the fact sheet with students at all grade levels:

## Elementary School Level

**Class mural:** Teachers could have students cut out pictures from magazines (or draw their own images) that illustrate examples of why they love the Earth. Each student would then glue his or her picture to the mural and explain what it represents. For example, a student could add a picture of the sun to the mural and say, "I love the Earth because it gives us a way to create energy from the sun." Students could use examples from the Fun Facts handout or their own examples. If preferred, students could create their own individual collages instead.

**Helping hands:** Teachers could ask students to trace their hand and cut out their drawing. On each finger, students would write one example of how they will help the Earth, save energy, and/or reduce pollution. Teachers should encourage students to come up with at least one example that is based on something they learned from Fun Facts. Students could decorate their paper hands, and teachers could post them around the room.

## Middle School Level

**Persuasive writing:** In Fun Facts, teachers could have students review the percentages of the American workforce that biked and walked to work. Teachers could start a conversation about this by asking students how they get to school, how long it usually takes, and why they use that method of travel. Teachers would then ask students to write pros and cons of different modes of transportation they could take to get to school, keeping in mind the impact on the environment. Students could consider what changes in their community would make biking and walking more popular, and (with teachers' help) they could write a pitch to the local city council pushing for those changes.

**Quickwrite:** Teachers could ask students to answer the following prompts in a 5-minute Quickwrite response, during which students typically write freely about a topic: What do the numbers in the "Feelin' Hot, Hot, Hot" section tell you about the way Americans heat their homes, and why do you think certain methods are more common than others? How many homes are heated by renewable energy resources versus nonrenewable energy resources? Do you know how your house is heated, and if so, how?

## High School Level

**Discussion:** Using renewable energy 100 percent of the time comes with positives and negatives. Teachers could have students brainstorm using a T-chart (writing the pros on one side and the cons on the other) and discuss their ideas as a class. Positive examples include: It reduces our carbon footprint; it never runs out; it improves public health; and the industry is more labor-intensive, which creates jobs. Negative examples include: It often relies on the weather, which changes from day to day; it costs more money to produce than nonrenewable energy; and structures to harness renewable energy cannot be built everywhere.

**Social media showcase:** Students could write two social media posts commemorating Earth Day. Teachers could ask students to create one post that includes information from Fun Facts and one post of their own design. If students have social media accounts and would like to actually share their posts, teachers could encourage them to do so (using the popular hashtag #earthday).