



GRADES 6-8

ACTIVITY 1 **INDUSTRIAL IMPACT**

Planet Power is a fascinating film that follows the amazing journey of Solar Impulse 2, a plane powered only by sunlight, as it is flown around the world by Bertrand Piccard and André Borschberg. Solar Impulse 2 captures sunlight to produce the electricity that powers its motors and all the electronic equipment on board. We depend on electricity to power almost everything that is part of our lives.

Part 1. Planet Power also tells the story of the inventors and scientists who brought electricity into our lives. This story reaches a peak with the flight of Solar Impulse 2, the result of 13 years of effort to break boundaries in aviation technology, environmental sustainability, and human achievement. Review this timeline to track the history of electricity.

1749 Benjamin Franklin proved that lightning was electrical by “capturing” it with his lightning rod.

1800 Alessandro Volta invented the first battery.

1821-31 Michael Faraday built the first electric motor and electric generator using kinetic energy and electromagnetism.

1838 Artist Samuel Morse found a way to send electrical signals along copper wires.

1880 Thomas Edison created the first modern light bulb with a carbon filament.

1882 Nikola Tesla and Thomas Edison each devised a system that would bring electric power into people’s homes. After an extended debate over which was better, Tesla’s “alternating current” (AC) system was implemented.

1954 Scientists made the first solar panels that could power a device for several hours.

2016 Piloted by Bertrand Piccard and André Borschberg, Solar Impulse 2 completed the first round-the-world flight without using a single drop of fossil fuel.

Choose one event from the timeline and research its impact on science, industry, human working conditions, and the environment, and use the information you find to fill in the chart on the next page.

