SN IN HIGH SCHOOLS
January 21, 2017

Charging the Future

Quest Through the Archives

Directions: After reading the article "Charging the future," use the archives at www.sciencenews.org to answer these questions:

1. **Search for an article discussing unusual materials that might be used to make batteries. Explain how the material could be beneficial in a battery.**

2. **Find an article that discusses the revamping of an early battery technology. Explain it.**

3. **Find an article that talks about alternatives to batteries for powering personal electronic devices. Describe what you find.**

SN EDUCATOR GUIDE

January 21, 2017

Charging the Future

Responses to Quest Through the Archives

1. **Search for an article discussing unusual materials that might be used to make batteries. Explain how the material could be beneficial in a battery.** Possible student response: https://www.sciencenews.org/article/idea-new-battery-material-isn't-nuts. In 2015, an article discussed the use of packing material peanuts to enhance the charging and discharging performance of a lithium-ion battery. Carbon-containing packing peanuts were baked and compressed into microsheets, which were then placed into the battery's anode.

2. **Find an article that discusses the revamping of an early battery technology. Explain it.** Possible student response: https://www.sciencenews.org/article/old-battery-gets-high-tech-makeover. This 2012 article discusses the redesign of Edison's nickel-iron battery, which was originally patented in 1901.

3. **Find an article that talks about alternatives to batteries for powering personal electronic devices. Describe what you find.** Possible student response: https://www.sciencenews.org/article/double-charging-material-makes-run-sun-extra-powerful. This 2016 article discusses a lightweight material that can capture and store solar as well as mechanical energy in a supercapacitor to power personal electronic devices.