

Elizabeth Petersen
Electricity from Heat

Everyone knows the purpose of an electric generator: to convert various kinds of energy into electricity, but has anyone ever built an electric generator that converts heat into electricity? The purpose of this STEM project was to discover an answer to this question. The answer is yes, and in this project, a replica of a thermoelectric generator was constructed. This design, though similar to others, is at a slight advantage due to the modifications made to make it easier to manage. In order to construct this device, thermoelectric plates were soldered together at the wires, glued between a hood and a bread tin, connected to a voltage regulator, and a stand for the device was constructed out of steel. It was hypothesized that the generator would be able to produce a measurable voltage that would be able to power another device. After some testing, it was confirmed that the hypothesis was correct because the completed generator did indeed have the ability to charge an iPhone. It can be concluded that this project successfully met its objectives as it functioned as predicted and confirmed the hypothesis.