

Unit V: STEM Designing Alarm Circuits

Content Area: **Science**
Course(s): **Science 5**
Time Period: **April**
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Enduring Understandings

Enduring Understanding (Science): Electrical energy can be transformed into other kinds of energy by electrical technologies, including by simple electrical circuits.

Enduring Understanding (Engineering): Electrical engineers use their creativity and knowledge of science and mathematics to solve problems related to electrical technologies.

Essential Questions

1. What is electrical engineering?
2. How do electrical technologies transform energy?
3. How do different kinds of circuits (simple, series, parallel) operate?
4. How do schematic diagrams help communicate information about circuits?
5. How can we use knowledge of electricity and the engineering design process to design an alarm circuit?

Content

 <http://www.eie.org/eie-curriculum/resources/what-technology-grade-4-worcester-ma>

http://www.eie.org/sites/default/files/PDG_DesigningAlarmCircuits.pdf

✘ <http://www.eie.org/eie-curriculum/resources/listing?resourceType=All&science=165&unit=2635&lesson=All&grade=All&engineering=All>

✘ <http://www.andythelwell.com/blobz/>

✘ http://www.bbc.co.uk/bitesize/ks2/science/physical_processes/electrical_circuits/play/

✘ http://www.bbc.co.uk/bitesize/ks2/science/physical_processes/circuits_conductors/play/

✘ http://www.bbc.co.uk/schools/scienceclips/ages/8_9/circuits_conductors.shtml

✘ <http://resources.woodlands-junior.kent.sch.uk/revision/science/electricity.htm>

✘ <http://www.watchknowlearn.org/Video.aspx?VideoID=50733&CategoryID=1764>

✘ <http://www.lessonpaths.com/learn/i/4-sci-62-copy/youtube-t36-bill-nye-electric-circuits-3>

Skills

Standards
