

# i3 STC Kit Extension Activities

## North Carolina

Grade: 4 <sup>th</sup>	
Kit Name: <i>Electric Circuits</i>	
Essential Standard(s): (List number, standard, clarifying objectives where appropriate) 3.P.3.2 Recognize that energy can be transferred from a warmer object to a cooler one by contact or at a distance and the cooler object gets warmer.	
Unpack the Standard (What does it mean?? What is the "Big Idea"?): Students know that objects can transfer energy by touching or by giving off or receiving energy waves. Heat can move from one object to another in more than one way. Convection (more commonly gasses and liquids) and conduction (more commonly solids) are best understood at this level not as vocabulary terms, but rather through effects that may be observed using everyday materials such as water, air, cooking and heating utensils.	
What is the Engaging (will get the student interesting) Essential Question that the students will be trying to answer as a result of this Extension? How can energy be transferred from a warmer object to a cooler one? What happens to the cooler object when energy is transferred?	
Which activities in the kit touch on the Standard(s) and how can they be adjusted to better address the Standard(s)? No activity specifically touches on this standard directly. Therefore we would like to use these extensions as culminating activities at the end of the kit unit.	
Kit Activity	Extension Suggestions
End of Kit Unit	<a href="http://exchange.smarttech.com/details.html?id=9605d936-2638-4018-b852-f9fb41cbb243">http://exchange.smarttech.com/details.html?id=9605d936-2638-4018-b852-f9fb41cbb243</a> This website offers several videos to help teachers explain and illustrate convection, conduction, and radiation.
	Many other videos <a href="http://www.neok12.com/Heat-Temperature.htm">http://www.neok12.com/Heat-Temperature.htm</a>
	Lesson 4 – Where is Heat Coming From and Where is it Going? From <a href="http://powersleuth.org/docs/EMH%20Lesson%204%20FT.pdf">powersleuth.org/docs/EMH%20Lesson%204%20FT.pdf</a>
	<i>Physical Science Activities - Heat Energy, energy transfer, temperature observation, evidence, variables, measurement, and reasoning to understand. (3rd - 5th Grade)</i> <a href="http://www.homeofbob.com/science/actPlans/physical/rds/tempByTouchDSCS.html">http://www.homeofbob.com/science/actPlans/physical/rds/tempByTouchDSCS.html</a>
Additional Suggestions (Literature connections; online resources):  Energy Library – Books for (and recommended by) Students <a href="http://www.energyquest.ca.gov/library/kids_picks.html">www.energyquest.ca.gov/library/kids_picks.html</a>	