Integrating an electrical circuit into any discipline can support:

- Understanding of foundational scientific principles.
  - How do electrons flow?
  - What makes the light turn on?
  - What does the battery do?
  - How does a switch work?
- Understanding of the concept of a loop—an idea central to computing, mathematics and science. Fine motor skill development—tweezers, teeny LED lights, placement of copper tape, sewing with conductive thread...this is tricky stuff!
- Creative, multimodal expression of meaning.
  - How does the placement of the light convey meaning?
  - How can the elements of the circuit be integrated into an artistic representation of an idea?
- Flexible, interdisciplinary thinking. Let’s help children break down the disciplinary silos of learning that can inhibit transfer and limit problem solving.
- Positive affect. When learning is fun, kids learn more!

Ideas for Paper Circuits in English Language Arts:

- Create an artistic representation of the character from a book. Integrate a circuit in a way that shows understanding of the character’s strengths, experiences, or limitations.
- Create an artistic representation of the setting or a moment of action from a novel. Integrate circuits to communicate meaning.
- Write a How-To text on the creation of paper circuits.
- Publish online, using video, text and images, the process of creating a paper circuit so that others can learn from the process.
- Read a series of informational texts about the scientific discoveries that led to an understanding of electricity, the ways that electricity changed culture, the ways that electricity is used, the importance of conserving electricity, the environmental impact of electricity...and then talk, write, represent, publish...and make a circuit!