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Resource ID#: 148646

Primary Type: Tutorial

**Direct Link:** <http://www.cpalms.org/uploads/pd/stemlearn/148646/story.html>

## Sparks Fly: Discovering Central Ideas

Click "View Site" to open a full-screen version. This tutorial is designed to help secondary science teachers learn how to integrate literacy skills within their science curriculum. The focus on literacy across content areas is designed to help students independently build knowledge in different disciplines through reading and writing. This tutorial will demonstrate a series of steps that teachers can use with students to help them determine the central ideas of a science text. It will also demonstrate how students can trace a text's explanation or depiction of a complex process. Finally, it will explain what an effective summary contains.

### General Information

**Subject(s):** Science, English Language Arts

**Grade Level(s):** 9, 10, 11, 12

**Intended Audience:** [Educators](#)

**Suggested Technology:** Computer for Presenter, Internet Connection, Speakers/Headphones, Adobe Flash Player, Smart Phone/Tablet

**Instructional Time:** 30 Minute(s)

**Resource supports reading in content area:** Yes

**Keywords:** fireworks, energy, chemistry, physics, explosion, central idea, main idea, key details, text features

**Instructional Component Type(s):** [Tutorial](#), [Professional Development](#)

**Resource Collection:** Original Teacher Tutorials

### Additional Information/Instructions

**By Author/Submitter**

This interactive tutorial can be completed using a computer or tablet with a modern browser.

### Source and Access Information

**Contributed by:**

**Name of Author/Source:** Kris Ryan

**Access Privileges:** Public

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### Aligned Standards

Name	Description
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[LAFS.910.RST.1.2:](#)

Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

[LAFS.910.RST.4.10:](#)

By the end of grade 10, read and comprehend science/technical texts in the grades 9–10 text complexity band independently and proficiently.

Describe the quantization of energy at the atomic level.

[SC.912.P.10.9:](#)

**Clarifications:**

Explain that when electrons transition to higher energy levels they absorb energy, and when they transition to lower energy levels they emit energy. Recognize that spectral lines are the result of transitions of electrons between energy levels that correspond to photons of light with an energy and frequency related to the energy spacing between levels (Planck's relationship  $E = h\nu$ ).

## Related Resources

Text Resource

Name	Description
<a href="#">Fireworks!:</a>	This informational text is intended to support reading in the content area. The article describes the composition and workings of fireworks. Details are also given as to how the colors, lights, sounds and propulsion are produced by fireworks' components.