

Incorporating Common Core Writing Standards into Science



Sarah Ratelis

19 Mar 2012 6:12 PM

Share |

20

- Comments 1



I don't know about your school district but my district is gearing up to adopt and implement the Common Core Standards (CCS). It is important to note that the CCS do not contain CONTENT standards for Science (or Social Studies). The National Academy of Science issued Science Frameworks in July 2010 and July 2011 and this document is being used as the basis for a new set of national content standards which are being called the Next Generation Science Standards (NGSS). A preliminary report is due in April 2012 with a final document by early 2013.

While the CCS are primarily focused on Language Arts and Mathematics, CCS do impact science instruction because science is expected to provide practical application of ELA and Math skills. So science teachers have been given the task of developing lessons that meet the reading and writing standards for science (see p59-66 [Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#))

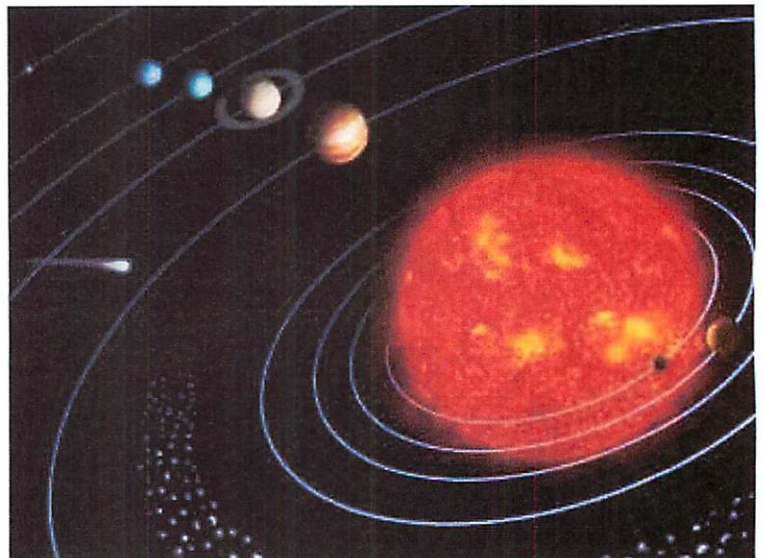
One of the major writing themes in the Common Core is writing to persuade using specific details taken from student led research. According to the standards students are expected to "become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner". In this blog I am going to give you an example of how I incorporated the Common Core Writing Standards into one of my science lessons.

This quarter I have been going over the solar system with my 8th graders. I discovered from pretesting that most already had general knowledge about the planets. So I developed a short unit to review the required content standards to free up time to give my students a chance to work on writing skills using science content. Traditional reports on the planet can easily be found on the internet and I struggle with getting students to read and process the information instead of just doing a straight cut and paste job. One approach I have found that makes it harder for a student to be passive is RAFTS (Role, Audience, Format, Topic and Strong Verb). In this approach to writing I give the students a specific role and format for the final written piece. This usually requires them to transform information into the proper format so students who try to just print out a web page or a section of an encyclopedia are required to redo the assignment to meet the criteria.

I noticed that our textbooks were printed around 2006, the same time that the International Astronomical Union (IAU) was working on a formal definition of a planet. In August of 2006 the formal definition of a planet included a) it must orbit the sun, b) it must be spherical in shape and c) it must have cleared the area around its orbit of other objects. This means that Pluto no longer meets the definition of a planet because it doesn't meet condition "C".

I decided that I would design a lesson that will challenge my students to define what makes a planet a planet? I created the follow RAFTS:

The Society for the Preservation of Pluto as a Planet (SP3) is introducing a bill to the state legislation to pass a law to officially name Pluto a Planet. You are an astronomer, writing a letter to the editor to either support or reject this bill. In your letter you should include your personal definition of what makes a planet a



planet and at least three strong reasons/facts to back up your opinion.

I started the lessons using the student response system to poll the class on what they thought were characteristics of planets. I found it interesting to see what they thought before we started the lesson with ideas such as a planet must have a moon, or we must be able to stand on it. We then watched some great video clips about the delisting of Pluto and created a data chart about the physical properties of the 8 major planets and the 5 Dwarf planets.

To help my student plan for their letters we made a double entry organizer to list reasons to support Pluto's reinstatement as a Major Planet and reasons against. In class we used the IWB as an anchor chart to gather all our ideas. Students then wrote 300 word letters to the editors as homework.

I think this lesson represents what the CCS expects from Science and Social Studies content teachers. My students had to review primary sources, because we were working with and beyond the textbook. They also had to evaluate ideas and determine which ones are the most persuasive and to write with a specific purpose.

Over to you.

How are you adjusting your science curriculum and instruction based on the new Common Core Standards? How do you incorporate writing in your science classes?

This article is from Planet's educator-penned blogging series: the Planet Teachers' Lounge.

In order to comment on this blog and any other article in the Planet community, you first need to register with the site.