

Informational Picture Books: Organisms & Energy

An 8th grade science/library Co-teaching lesson

Time Frame:

Three 45 min. class periods, One 90 min. class period

Authors:

Shannon Johns
Jessika Christensen

Created Date :

March 17, 2014

Summary:

Students will research and understand how organisms obtain energy from their environment and present the information in a narrative nonfiction picture book format.

USOE Core Curriculum Tie:

Library Media/Information Literacy (7-12)
Standard 1 -5

- Define the task and identify the information needed.
- Identify, evaluate, and select resources
- Locate and access information within resources
- Engage Information
- Organize, synthesize, and present information

8th Grade Integrated Science

Standard 4 Objective 4

Analyze various forms of energy and how living organisms sense and respond to energy

Materials:

- List of organisms for students to research
- Good examples of Informational Picture Book Styles (see list of suggested titles below)
- Art supplies for bookmaking
- Access to computer lab for research and digital storytelling

Suggested Titles:

- *Redwood* by Jason Chin
- *Coral Reefs* by Jason Chin
- *Island* by Jason Chin
- *Gravity* by Jason Chin
- *One Beetle Too Many* by Kathryn Lasky
- *Brave Girl* by Michelle Markel
- *Down the Colorado* by Deborah Kogan Ray
- *No Monkeys, No Chocolate* by Melissa Stewart and Allen Young
- *Florence Nightingale* by Demi
- *Moonshot* by Brian Floca
- *What Darwin Saw* by Rosalyn Schanzer
- *When the Beat was Born* by Laban Carrick Hill
- *A Splash of Red* by Jen Bryant
- *Water Dance* by Thomas Locker
- *The Boy who Loved Math* by Deborah Heiligman
- *Galapagos George* by Jean Craighead George
- *Parrots over Puerto Rico* by Susan L. Roth and Cindy Trumbore
- *Look Up* by Annette LeBlanc Cate
- *Locomotive* by Brian Floca

Background For Teachers:

An informational picture book is a type of narrative nonfiction that presents factual information in a story-type format. This lesson is designed to follow classroom learning of the science content.

Student Prior Knowledge:

All organisms have specialized features that sense and respond to energy. Not all organisms have developed the same types of organs to sense their environment. Different organisms sense with varying intensity or degree of change in energy. Organisms have adapted unique methods to sense and respond to changes in energy within their environment.

Intended Learning Outcomes:

- Students will effectively research to find, evaluate, and relay information.
- Students will use science vocabulary to accurately explain how an organism senses energy
- Students will create an informational picture book using appropriate format and design

Instructional Procedures:

Day 1 (45 min.) Science Teacher:

- Teach & Review prior knowledge about how organisms sense energy from their environment
- Assign, or allow students to choose, an organism to research from the list created by teacher
- Pass out project description and go over science expectations

Day 2 (45 min.) Library Teacher

- Begin by reading a science based Informational Picture Book (Jason Chin Books recommended)
- Point out the facts taught in the book and discuss how it important for authors of nonfiction Books to do thorough research in order to relay accurate information
- Review the steps of good research and reliable resources
- Remind students to use a variety of sources (book, reference, data base, internet), and to use Their own words to paraphrase and summarize the information
- Have students look over the information they need to research about their organisms and Have them organize their notes page
- As students research both teachers circulate and scaffold as needed-

Day 3 (45 min.) Library Teacher

- Tell students that the goal today is to explore and learn about the components of an Informational Picture Book.
- Refer back to the book that was read yesterday and compare it to a narrative picture book Discuss how they are the same and different.
- Explain that in authors of informational picture books use a variety of methods to convey facts. These books must be fun and engaging while still teaching accurate facts. Those methods might include: maps, inset boxes, glossary, afterword, etc. while using a narrative type format.
- Because these are picture books, the author also has to decide what kinds of illustrations to use. The pictures are usually fun, colorful and engaging, but yet still accurately illustrate the facts.
- Pass out a picture book to each group of 2 or 3 students. Have them look through the book and look for ways that facts are presented. Remind them to also pay attention to the illustrations.
- After a few minutes ring a bell and have students pass their book to the next group. Allow students to look through a variety of books to get ideas for their own picture book.
- Allow students time to start brainstorming the methods they want to use and how want to illustrate their picture book.
- Have students create a loose outline of how their book will be organized.

Day 4 (90min.) Both Teachers

- Today students will create their picture books. Refer students to the rubric and go over the Expectations.
- Have students look back at the outline they made for their picture book.
- Remind students to use their own words in the text of their book.
- Provide a variety of art supplies and resources for students to use to create their books.
- Both teachers circulate and scaffold as needed.
- (students may need to finish their books at home)

Assessment Plan:

Picture Books will be shared with the class. Individual students and teacher will use the provided rubric to evaluate the science content and the presentation of information

Name: _____ Period: _____ Date: _____

Organisms & Energy Research

Objective: You will be researching an organism to learn how it senses energy from its Environment. You will then create an Informational Picture book to show what you learned.

Project Requirements & Point Distribution:

Research Requirements:		10 Points Possible
Research & Notes	Notes are organized and neat (2 pts.) Required material has been researched (3pts.)	/5
Citation	Sources (including pictures) are cited correctly (3pst.) A variety of types of sources are used (2 pt.)	/5
Science Requirements: (Pick three from the following four energy types)		30 Points Possible
Light	Sense organs are identified (3pts) Description of how organism responds to increase (2pts) and decrease (2pts) in light energy is described Accurate illustration is present (3pts)	/10
Motion	Sense organs are identified (3pts). Description of how organism responds to increase (2pts) and decrease (2pts) in motion is described. Accurate illustration is present (3pts)	/10
Sound	Sense organs are identified (3pts). Description of how organism responds to increase (2pts) and decrease (2pts) in sound energy is described. Accurate illustration is present (3pts)	/10
Heat	Sense organs are identified (3pts) Description of how organism responds to increase (2pts) and decrease (2pts) in heat energy is described. Accurate illustration is present (3pts)	/10
Picture Book Requirements		20 Points Possible
Cover/Book	Organism name is identified in the title (1pt) Organism is pictured on the cover (1pt). Author (Student name & class period) are listed (1pt.) Cover is colorful and engaging (1pt.) Pages are bound into a book (1 pt.)	/5
Illustrations	Pictures are colorful, engaging, and done neatly (2pt.) Pictures correlate with the text (1.) Pictures help illustrate the science content (2pt.)	/5
Text	Text relays facts in a fun and engaging manner (2pt.) Text is divided into short sections on each page (1pt.) Text is legible and makes sense (1pt.) Text is edited for spelling & grammar mistakes (1pt.)	/5
Presentation of Facts	Facts are included with story (2pt.) Methods such as inset box, glossary, map, or Afterword are used to promote reader's understanding (2pt.) Citation page is included (1pt.)	/5
Total Points		/60