

General Description

Students will research an energy topic and then create a book to share what they learned with classmates and other students.

Objectives

Students will research information about a specific energy source, renewable or non-renewable, consolidating that information into an easily read book to be presented to fourth graders at their school.

Arizona State Standards

SC06 S5C3 PO1 Identify various way in which electrical energy is generated using renewable and non renewable resources (e.g., wind, dams, fossil fuels, nuclear reactions)

SC06 S2C2 PO2 Describe how scientific knowledge is subject to change as new information and or technology challenges prevailing theories

W06 S1C1 PO1 Generate ideas through a variety of activities (e.g., prior knowledge, discussion with others, printed material or other sources)

W06 S3C2 PO1 Record information (e.g., observations, notes, lists, charts, map labels and legends) related to the topic

W06 S3C2 PO2 Write a summary based on the information gathered that include(s):

- a. topic sentence
- b. supporting details
- c. relevant information

W06 S3C3 PO1 Write a variety of functional texts (e.g., directions, recipes, procedures, rubrics, labels, posters, graphs/tables)

W06 S3C4 PO1 Write persuasive text (e.g., essay, paragraph, written communications) that:

- a. establishes and develops a controlling idea
- b. supports arguments with detailed evidence
- c. includes persuasive techniques
- d. excludes irrelevant information

LS E1 Prepare and deliver an organized speech and effectively convey the message through verbal and nonverbal communications with a specific audience

Teacher Information

Creating a book is an effective way for students to summarize what they have learned about a particular topic. Educating and entertaining an audience of peers or younger students will give purpose to the book and provide a meaningful writing experience.

In order to have enough resources for your students you can contact the following different locations to receive free materials:

Arizona Department of Commerce Energy Office
Phone (602) 280-1402 or 1-800-352-5499
Especially “Bright Ideas” series and “Just Conserve It” series

Arizona Public Service Company
Phone (602) 250-2291
Especially “Ways to Save Energy”

Materials

Activity Card 6-3a
Activity Card 6-3b

Procedures/Exploration

1. Ask students the purpose of books. Make a list of their answers on the board. Make sure that students include the points that books inform and entertain the reader. Discuss the different formats of books such as pop-up books, wordless books, picture books with few words, storybooks, textbooks, etc. Provide examples if possible.
2. Tell students that creating books is not only a way to entertain and inform readers but it is also a good indicator of what the author knows about a particular topic. Tell students they will write a book about an energy topic of their choice. The students can choose a topic from the
3. Energy Book Idea List, Activity Card 6-3a or suggest their own. The books will be shared with the rest of the class or with younger students if possible.
4. Hand out the APS booklet “The Energy Kids.” Tell the students that this is an example of an information book. They can choose to do their book in this type of format or a storybook format (puzzles and games are optional in the information format).
5. Suggested writing steps include:
 - gathering information about their topic
 - creating a main character such as a light bulb or kilowatt
 - planning a storyline or focus for the book
 - writing the book
 - illustrating and coloring the book
 - making a book cover
6. Have students choose a topic from the Energy Book Idea List, Activity Card 6-3a or create their own idea and begin research using energy brochures, energy books from the library, encyclopedias, magazines, etc.
7. Give the students the rubric, Activity Card 6-3b, which will be used to grade their task.
8. The students may work alone or with a partner. Use Six Trait Writing during this task.
9. Provide time for the students to read their book to the class or to another class.

Energy Book Idea List

Sixth Grade
Activity: 3
Activity Card: 6-3a

Student's Name:

Date:

Sunspot Builds a Solar House

Mr. Shade Landscapes his Yard

Bright Bulb Saves Electricity

Gus Builds a Windmill

Ms. Current Explores New Energy Sources

...Learns About Energy Conservation

...Carpools to Work

...Leaves Electrical Appliances On

...Uses His Bike Instead of a Car

...Takes a Trip to the Star Center

...Fixes Dinner

...Makes an Electric Car

...Finds a Geothermal Area

...Builds a Dam

...Visits Hoover Dam

...Mines for Coal

...Takes a Bus Instead of a Car

...Uses Biomass Energy

...Practices Electrical Safety

The Pink Panther Insulates his Home

Robbie Reads his Meter

Frankie Cooks Hot Dogs with the Sun

Energy Book Rubric

Sixth Grade
Activity: 3
Activity Card: 6-3b

Student's Name:

Date:

Energy Book Rubric

CATEGORY	4	3	2	1
Writing Process	Student devotes a lot of time and effort to the writing process (prewriting, drafting, reviewing, and editing). Works hard to make the story wonderful.	Student devotes sufficient time and effort to the writing process (prewriting, drafting, reviewing, and editing). Works and gets the job done.	Student devotes some time and effort to the writing process but was not very thorough. Does enough to get by.	Student devotes little time and effort to the writing process. Doesn't seem to care.
Creativity	The story contains many creative details and/or descriptions that contribute to the reader's enjoyment. The author has really used his imagination.	The story contains a few creative details and/or descriptions that contribute to the reader's enjoyment. The author has used his imagination.	The story contains a few creative details and/or descriptions, but they distract from the story. The author has tried to use his imagination.	There is little evidence of creativity in the story. The author does not seem to have used much imagination.
Requirements	All of the written requirements (# of pages, # of graphics, type of graphics, etc.) were met.	Almost all (about 90%) of the written requirements were met.	Most (about 75%) of the written requirements were met, but several were not.	Many requirements were not met.
Characters	The main characters are named and clearly described in text as well as pictures. Most readers could describe the characters accurately.	The main characters are named and described. Most readers would have some idea of what the characters looked like.	The main characters are named. The reader knows very little about the characters.	It is hard to tell who the main characters are.
Neatness	The final draft of the story is readable, clean, neat and attractive. It is free of erasures and crossed-out words. It looks like the author took great pride in it.	The final draft of the story is readable, neat and attractive. It may have one or two erasures, but they are not distracting. It looks like the author took some pride in it.	The final draft of the story is readable and some of the pages are attractive. It looks like parts of it might have been done in a hurry.	The final draft is not neat or attractive. It looks like the student just wanted to get it done and didn't care what it looked like.
Spelling and Punctuation	There are no spelling or punctuation errors in the final draft. Character and place names that the author invented are spelled consistently throughout.	There is one spelling or punctuation error in the final draft.	There are 2-3 spelling and punctuation errors in the final draft.	The final draft has more than 3 spelling and punctuation errors.
Accuracy of Facts	All facts presented in the story are accurate.	Almost all facts presented in the story are accurate.	Most facts presented in the story are accurate (at least 70%).	There are several factual errors in the story.