

Writing Trails

with

Men of Science

By
Laurie Barrie

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Other books by Laurie Barrie:

Writing Trails in American History
Immigrant Trails in American History
Writing Trails with Great Composers

Acknowledgements

This writing program is based upon
Andrew Pudewa's "Excellence in Writing" program.

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with
Men of Science

ISBN 1-930443-73-0

Logos School Materials
110 Baker Street
Moscow, ID 83843
Toll free: 866-562-2174
www.logoschool.com

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Writing Trails with Men of Science

Introduction

The goal of this resource is for children to learn to create a key word outline and retell the basic ideas of the text by using their key words. This resource provides a routine format of outlining, vocabulary study, and thesaurus study, to develop competency, independence, and creativity in writing.

Overview

1. INTRODUCTION: A sample has been given on page 8 and page 9. Use this sample as an introduction to this writing program. Write the William Herschel story on the board. Choose a student reader to read the story aloud. After the story has been read, tell the students they should choose three to four words from each numbered section that will help them remember the main idea of each sentence. Have the students write down three to four key words for each numbered section on notebook paper. Next, divide the students into pairs and have them retell the story to their partner by using their key word outlines. Tell the students the goal is *not* to retell the story verbatim. The goal is *not* to memorize the story. The goal *is* to communicate the *main idea* of the story by using *their* key words. After the stories have been retold, have the class openly discuss which key words should most likely have been chosen, and write them on the board. Talk briefly about the importance of choosing *KEY* words. Read the Herschel rewrite. Point out how the new chosen synonyms were used in the story. Encourage the students to write expressively and add creativity to the story while maintaining the facts from their key words.

2. STORIES FOR OUTLINING: Use the following format for weekly writing assignments:

- | | |
|-------------------------------------|-------------------------------------|
| a. student reader reads story aloud | e. thesaurus work independently |
| b. students read story silently | f. key word outline independently |
| c. rewrite title | g. retell story in pairs (optional) |
| d. vocabulary work independently | h. writing independently |

3. VOCABULARY: Have a dictionary readily available for every student. Be sure to inform students that some vocabulary words contain suffixes, and they should look up the root word. Have them carefully match the proper meaning of the word by reading the vocabulary word in context. When choosing a new synonym, have them add the original suffix to the new word.

4. THESAURUS: Have a thesaurus readily available for every student. Be sure to inform the students that each thesaurus word chosen will be used in place of the vocabulary words when rewriting from their key word outline.

5. KEY WORD OUTLINE: Have the students choose three to four key words from each section. They are to look at their key word outlines only, not the original story when writing.

6. ROUGH DRAFT: Every lesson should have a rewrite from the key word outline in rough draft form. Each rough draft should be double-spaced to allow plenty of room for editing. Rough drafts should be due two days after the writing assignment has been given.

7. FINAL DRAFT: After editing, the final draft should be written with single spacing, and carefully checked by the students before turning in. All three papers should be included when turning in the assignment. The final draft should be placed on top, with the rough draft and outline following.

8. GRADING: Follow the grading sheet provided and staple to each student's paper.

Proposed Schedule

Week	Lesson	Page #	Weekday	Work Assigned
One	da Vinci	12 & 13	Monday by Friday	Read story aloud Begin worksheet, Complete #1-4
Two	da Vinci	13	Monday Wednesday Friday	Begin rough draft Rough draft due Final draft due
Three	Galileo	14 & 15	Monday by Friday	Read story aloud Begin worksheet, Complete #1-4
Four	Galileo	15	Monday Wednesday Friday	Begin rough draft Rough draft due Final draft due
Five	Kepler	16 & 17	Monday by Friday	Read story aloud Begin worksheet, Complete #1-4
Six	Kepler	17	Monday Wednesday Friday	Begin rough draft Rough draft due Final draft due
Seven	Bacon	18 & 19	Monday by Friday	Read story aloud Begin worksheet, Complete #1-4
Eight	Bacon	19	Monday Wednesday Friday	Begin rough draft Rough draft due Final draft due
Nine	Boyle	20 & 21	Monday by Friday	Read story aloud Begin worksheet, Complete #1-4
Ten	Boyle	21	Monday Wednesday Friday	Begin rough draft Rough draft due Final draft due
Eleven	Newton	22 & 23	Monday by Friday	Read story aloud Begin worksheet, Complete #1-4
Twelve	Newton	23	Monday Wednesday Friday	Begin roughdraft Rough draft due Final draft due
Thirteen	Linnaeus	24 & 25	Monday by Friday	Read story aloud Begin worksheet, Complete #1-4
Fourteen	Linnaeus	25	Monday Wednesday Friday	Begin roughdraft Rough draft due Final draft due
Fifteen	Faraday	26 & 27	Monday by Friday	Read story aloud Begin worksheet, Complete #1-4
Sixteen	Faraday	27	Monday Wednesday Friday	Begin roughdraft Rough draft due Final draft due
Seventeen	Morse	28 & 29	Monday by Friday	Read story aloud Begin worksheet, Complete #1-4
Eighteen	Morse	29	Monday Wednesday Friday	Begin rough draft Rough draft due Final draft due
Nineteen	Babbage	30 & 31	Monday by Friday	Read story aloud Begin worksheet, Complete # 1-4
Twenty	Babbage	31	Monday Wednesday Friday	Begin rough draft Rough draft due Final draft due
Twenty-one	Pasteur	32 & 33	Monday by Friday	Read story aloud Begin worksheet, Complete #1-4
Twenty-two	Pasteur	33	Monday Wednesday Friday	Begin roughdraft Rough draft due Final draft due
Twenty-three	Koch	34 & 35	Monday by Friday	Read story aloud Begin worksheet, Complete #1-4
Twenty-four	Koch	35	Monday Wednesday Friday	Begin rough draft Rough draft due Final draft due
Twenty-five	Carver	36 & 37	Monday by Friday	Read story aloud Begin worksheet, Complete # 1-4
Twenty-six	Carver	37	Monday Wednesday Friday	Begin rough draft Rough draft due Final draft due

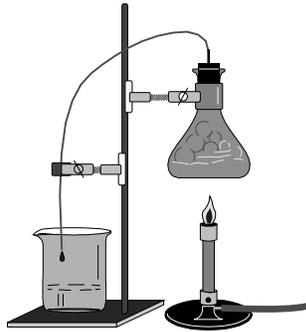
Sample Lesson

Sample

Name: _____

Date: _____

John Herschel
(example)



(1) John Herschel was born in 1792, and died in 1871. (2) He was a British astronomer and chemist. (3) He followed in his father's footsteps by observing the double stars and nebulae. (4) He also added to his father's catalogs. (5) In 1834, he led an expedition to the Cape of Good Hope (6) to study the stars of the southern hemisphere. (7) He discovered over 500 new nebulae and cataloged (8) the stars and nebulae of the northern and southern hemispheres. (9) Herschel believed that all human discoveries seem to be only for the purpose of (10) confirming more and more strongly the truths from on high and contained in the sacred writings.

1. Read the story above and create a new title on the line below.

Star Discovery

2. Vocabulary: In the story above, underline the vocabulary words listed below and define each one.

- a. observing: To make a systematic or scientific observation of
- b. expedition: A journey undertaken for a definite purpose
- c. confirming: To establish or support the certainty or validity of; verify

3. Thesaurus: Look up the vocabulary words in a thesaurus and write a new synonym to replace each vocabulary word in your final writing assignment.

Vocabulary word	Synonym word
a. observe(ing)	a. <i>inspecting</i>
b. expedition	b. <i>voyage</i>
c. confirm(ing)	c. <i>validating</i>

4. Outline the story by choosing three to four key words from each numbered section. Use your synonym words in place of each vocabulary word.

(1) *John Herschel, 1792, 1871*

(2) *British, astronomer, chemist*

(3) *Inspecting, double stars, nebula*

(4) *Added, to, father's, catalogs*

(5) *1834, voyage, Cape of Good Hope*

(6) *Study, stars, southern, hemisphere*

(7) *Discovered, 500, nebulae, cataloged*

(8) *Stars, nebulae, n. & s. hemisphere*

(9) *Believed, discoveries, only, purpose*

(10) *Validating, truth, from, high*

5. Rewrite the story on a separate sheet of paper using your key-word outline. Use your new title for the story and underline your chosen synonym words. Always check your work in the following areas:

- Title
- Indentation
- Spelling
- Punctuation
- Neat cursive
- Name & date

Star Discovery

John Hirschel was born in 1792, and died in 1871. He was a British citizen who was also a famous astronomer and chemist. He spent many hours inspecting double stars and nebulae. John Hirschel added new information into his father's catalogs, who was also a scientist. In 1834, Herschel led a voyage to the Cape of Good Hope. His purpose was to study the stars of the southern hemisphere. During John Herschel's lifetime, he discovered over 500 nebulae, and cataloged the stars of the northern and southern hemispheres. He believed that scientific discoveries were only for the purpose of validating the truth from on high.

Grading Writing

Key Word Outline Rough Draft

Worksheet	10	_____
Title/indent	4	_____
Underlining	3	_____
Synonyms	3	_____
Grammar	10	_____
Spelling	5	_____
Punctuation	10	_____
Capitalize	5	_____
Content	50	_____

Total 100 _____

Comments: _____

Key Word Outline Rough Draft

Worksheet	10	_____
Title/indent	4	_____
Underlining	3	_____
Synonyms	3	_____
Grammar	10	_____
Spelling	5	_____
Punctuation	10	_____
Capitalize	5	_____
Content	50	_____

Total 100 _____

Comments: _____

Key Word Outline Rough Draft

Worksheet	10	_____
Title/indent	4	_____
Underlining	3	_____
Synonyms	3	_____
Grammar	10	_____
Spelling	5	_____
Punctuation	10	_____
Capitalize	5	_____
Content	50	_____

Total 100 _____

Comments: _____

Key Word Outline Final Draft

Title/indent	10	_____
Grammar	10	_____
Spelling	10	_____
Punctuation	10	_____
Capitalization	5	_____
Corrections	25	_____
Cursive	15	_____
Neatness	15	_____

Total 100 _____

Comments: _____

Key Word Outline Final Draft

Title/indent	10	_____
Grammar	10	_____
Spelling	10	_____
Punctuation	10	_____
Capitalization	5	_____
Corrections	25	_____
Cursive	15	_____
Neatness	15	_____

Total 100 _____

Comments: _____

Key Word Outline Final Draft

Title/indent	10	_____
Grammar	10	_____
Spelling	10	_____
Punctuation	10	_____
Capitalization	5	_____
Corrections	25	_____
Cursive	15	_____
Neatness	15	_____

Total 100 _____

Comments: _____

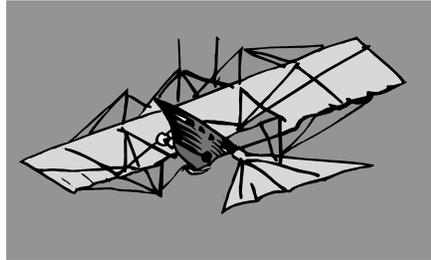
Sample

Lessons

Name: _____

Date: _____

Leonardo da Vinci



(1) Leonardo da Vinci was born in 1452, and died in 1519. (2) Many consider Leonardo da Vinci to be the founder of modern science. (3) He was an experimental scientist. (4) He designed many of the structures and public works of the city of Milan. (5) His notebooks were filled with information on anatomy, physics, biology, and many other forms of science. (6) God enlightened his mind to scientific information well advanced for his time. (7) Leonardo da Vinci was also a famous architect and painter. (8) He was a man of high morals, who was very gracious and kind. (9) The testimony of his faith in God was evident in his great art work. (10) *The Last Supper* is considered one of his great masterpieces. (11) Leonardo da Vinci helped put in place the developments of modern science.

1. Read the story above and create a new title on the line below.

2. Vocabulary: In the story above, underline the vocabulary words listed below and define each one.

a. designed: _____

b. morals: _____

c. advanced: _____

3. Thesaurus: Look up the vocabulary words in a thesaurus and write a new synonym to replace each vocabulary word in your final writing assignment.

Vocabulary word	Synonym word
a. designed	a.
b. morals	b.
c. advanced	c.

4. Outline the story by choosing three to four key words from each numbered section. Use your synonym words in place of each vocabulary word.

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

(6) _____

(7) _____

(8) _____

(9) _____

(10) _____

(11) _____

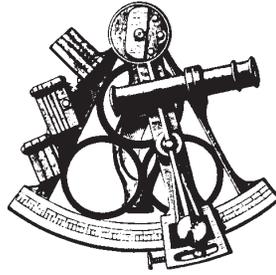
5. Rewrite the story on a separate sheet of paper using your key-word outline. Use your new title for the story and underline your chosen synonym words. Always check your work in the following areas:

- Title
- Indentation
- Spelling
- Punctuation
- Neat cursive
- Name & date

Name: _____

Date: _____

Galileo Galilei



(1) Galileo Galilei was born in 1564, and died in 1642. (2) He was an Italian physicist and astronomer, (3) who was taught by monks during his formative years. (4) Then in 1851, he entered the University of Pisa. (5) In 1609, Galileo built a telescope with twenty times magnification. (6) With this telescope he discovered vast mountains and craters on the moon, (7) the four largest satellites of Jupiter, (8) the phases of Venus, and the discovery of sun spots. (9) Galileo made new discoveries and often questioned Aristotle and other scientists. (10) Galileo's studies helped lead Isaac Newton to discover the laws of physics.

1. Read the story above and create a new title on the line below.

2. Vocabulary: In the story above, underline the vocabulary words listed below and define each one.

a. vast: _____

b. phases: _____

c. questioned: _____

3. Thesaurus: Look up the vocabulary words in a thesaurus and write a new synonym to replace each vocabulary word in your final writing assignment.

Vocabulary word	Synonym word
a. vast	a.
b. phases	b.
c. questioned	c.

4. Outline the story by choosing three to four key words from each numbered section. Use your synonym words in place of each vocabulary word.

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

(6) _____

(7) _____

(8) _____

(9) _____

(10) _____

5. Rewrite the story on a separate sheet of paper using your key-word outline. Use your new title for the story and underline your chosen synonym words. Always check your work in the following areas:

- Title
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