

Wonders of Science Writing Lessons

Implementing the Structure and Style® Writing Method

Teacher's Manual

First Edition © March 2023
Institute for Excellence in Writing, L.L.C.

The purchase of this book allows its owner access to PDF downloads that accompany *Wonders of Science Writing Lessons*. See blue page for details and download instructions. Our duplicating/copying policy for these resources is specified on the copyright page for each of these downloads.

Copyright Policy

Wonders of Science Writing Lessons: Implementing the Structure and Style® Writing Method Teacher's Manual
First Edition version 2, March 2023
Copyright © 2023 Institute for Excellence in Writing

ISBN 978-1-62341-398-9

Our duplicating/copying policy for *Wonders of Science Writing Lessons Teacher's Manual*:

All rights reserved.

No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher, except as provided by U.S.A. copyright law and the specific policy below:

Home use: Because this Teacher's Manual may not be reproduced, each family must purchase its own copy.

Small group or co-op classes: Because this Teacher's Manual may not be reproduced, each teacher must purchase his or her own copy.

Classroom teachers: Because this Teacher's Manual may not be reproduced, each teacher must purchase his or her own copy.

Library use: This Teacher's Manual may be checked out of a lending library provided patrons agree not make copies.

Additional copies of this Teacher's Manual may be purchased from IEW.com/WOS-T

Institute for Excellence in Writing (IEW®)
8799 N. 387 Road
Locust Grove, OK 74352
800.856.5815
info@IEW.com
IEW.com

Printed in the United States of America

IEW® and Structure and Style® are registered trademarks of the Institute for Excellence in Writing, L.L.C.

These lessons are not intended as a science curriculum replacement, but rather their purpose is to broaden subject knowledge while students learn to write.

Contributors

Sabrina Cardinale
Sharyn Gregory
Denise Kelley
Andrea Pewthers
Heidi Thomas
Julie Walker

Designer

Melanie Anderson

Illustrator
Erin Covey

Contents

Introduction	5
Scope and Sequence	8
UNIT 1: NOTE MAKING AND OUTLINES	
Lesson 1 Dead Ants	11
UNIT 2: WRITING FROM NOTES	
Lesson 2 Honey Bees	17
Lesson 3 Bombardier Beetles	27
Lesson 4 Monarch Migration	33
UNIT 3: RETELLING NARRATIVE STORIES	
Lesson 5 Daedalus and Icarus	41
Lesson 6 Archimedes	51
Lesson 7 Jack and the Beanstalk	61
Lesson 8 Rumpelstiltskin	71
UNIT 4: SUMMARIZING A REFERENCE	
Lesson 9 Steam Engines	81
Lesson 10 Model T Ford	89
Lesson 11 Flight	97
Lesson 12 Spacesuits	107
UNIT 5: WRITING FROM PICTURES	
Lesson 13 Meteorite	119
Lesson 14 Message in a Bottle	129
Lesson 15 Science Lab	139
UNIT 6: SUMMARIZING MULTIPLE REFERENCES	
Lesson 16 Nikola Tesla	147
Lesson 17 Albert Einstein, Part 1	157
Lesson 18 Albert Einstein, Part 2	173
Lesson 19 Maria Telkes	183

UNIT 7: INVENTIVE WRITING

Lesson 20	Favorite Invention, Part 1.....	195
Lesson 21	Favorite Invention, Part 2.....	203
Lesson 22	Exploring a Place Outdoors, Part 1.....	213
Lesson 23	Exploring a Place Outdoors, Part 2.....	221

UNIT 8: FORMAL ESSAY MODELS

Lesson 24	Albert Einstein, Part 3.....	229
Lesson 25	A Prominent Scientist, Part 1.....	241
Lesson 26	A Prominent Scientist, Part 2.....	253

UNIT 9: FORMAL CRITIQUE AND RESPONSE TO LITERATURE

Lesson 27	George Washington Carver, Part 1.....	259
Lesson 28	George Washington Carver, Part 2.....	269
Lesson 29	Nathaniel Bowditch, Part 1.....	275
Lesson 30	Nathaniel Bowditch, Part 2.....	285

Appendices

I.	Modified MLA Format.....	293
II.	Mechanics.....	295
III.	Critique Thesaurus.....	299
IV.	Adding Literature.....	301
V.	Vocabulary.....	303
VI.	Review Games (Teacher’s Manual only).....	319

Welcome to *Wonders of Science Based Writing Lessons*. This Teacher's Manual shows reduced copies of the Student Book pages along with instructions to teachers and sample key word outlines. Please be aware that this manual is not an answer key. The samples provided in this book are simply possibilities of what you and your students could create.

Lesson instructions are directed to the student, but teachers should read them over with their students and help as necessary, especially with outlining and structure and style practice. It is assumed that teachers have viewed and have access to IEW's *Teaching Writing: Structure and Style* video course and own the *Seminar Workbook*. Before each new unit, teachers should review the appropriate information in that workbook and video. You can find references to the *Teaching Writing: Structure and Style* course in the teacher's notes for each new unit.

Introduction

Introduction

The lessons in this book teach Structure and Style® in writing. As they move through various science themes and topics, they incrementally introduce and review the models of structure and elements of style found in the Institute for Excellence in Writing's *Teaching Writing: Structure and Style*®.

It is important to note that these lessons are not intended as a science curriculum replacement, but rather their purpose is to broaden subject knowledge while students learn to write. The primary purpose is for students to learn structure and style in writing.

Student Book Contents

- **Scope and Sequence Chart** (pages 8–9)
- **The Lesson Pages**
This is the majority of the text. It contains the instructions, source texts, worksheets, and checklists you will need for each lesson.
- **Appendix I: Modified MLA Format**
- **Appendix II: Mechanics**
This appendix contains a compilation of the correct mechanics of writing numbers, punctuating dates, referencing individuals, etc. that are found in many of the lessons. Well-written compositions are not only written with structure and style, but they also contain correctly spelled words and proper punctuation.
- **Appendix III: Critique Thesaurus**
This appendix provides a list of literary terms and their synonyms that are often used when critiquing various forms of literature. This page will be used in Unit 9.
- **Appendix IV: Adding Literature**
This appendix suggests various books and stories to be read or listened to.
- **Appendix V: Vocabulary Chart and Quizzes**
This appendix provides a list of the vocabulary words and their definitions organized by lesson as well as quizzes to take periodically. Twenty-two lessons include new vocabulary words. Every lesson includes vocabulary practice. The goal is that these great words will become part of your natural writing vocabulary.

Vocabulary cards are found on the blue page as a PDF download. Print them, cut them out, and place them in a plastic bag or pencil pouch for easy reference. Each week you should study the words for the current lesson and continue to review words from previous lessons.

Customizing the Checklist

The total point value of each assignment is indicated at the bottom of each checklist. This total reflects only the basic items and does not include the vocabulary words. If vocabulary words are included, add the appropriate amount of points and write the new total on the custom total line.

Important: Teachers and parents should remember IEW's EZ+1 Rule when introducing IEW stylistic techniques. The checklist should include only those elements of style that have become easy plus one new element. If students are not yet ready for a basic element on the checklist, simply have them cross it out. Subtract its point value from the total possible and write the new total on the custom total line at the bottom. If you would like to add elements to the checklist, assign each a point value and add these points to the total possible, placing the new total on the custom total line.

Reproducible checklists are available. See the blue page for download information.

Introduction

Checklists

Each lesson includes a checklist that details all the requirements of the assignment. Tear the checklist out of the book so that you can use it while writing. Check off each element when you are sure it is included in your paper. With each assignment, turn in the checklist to be used by the teacher for grading. Reproducible checklists are available. See the blue page for download information.

Teacher's Manual

The Teacher's Manual includes all of the Student Book contents with added instructions for teachers, including sample key word outlines and style practice ideas. Teachers may teach directly from this manual without the need of their own copy of the Student Book.

Teaching Writing: Structure and Style

Along with the accompanying Teacher's Manual for this Student Book, it is required that the teacher of this course has access to *Teaching Writing: Structure and Style*. This product is available in DVD format or Forever Streaming. For more information, please visit IEW.com/TWSS

Adapting the Schedule

Groups who follow a schedule with fewer than thirty weeks will have to omit some lessons. Because there are several lessons for each of the nine IEW units, this is not a problem. Teach lessons that introduce new concepts and omit some of those that do not.

6

Institute for Excellence in Writing

Grading with the Checklist

To use the checklists for grading, do not add all the points earned. Instead, if an element is present, put a check in the blank across from it. If an element is missing, write the negative point value on its line. Total the negative points and subtract them from the total possible (or your custom total).

Note: Students should have checked the boxes in front of each element they completed.

Encourage students to bring a thesaurus to class. Most students enjoy using an electronic thesaurus, but for those who prefer books, IEW offers a unique one entitled *A Word Write Now*.

This schedule is provided to emphasize to parents and students, particularly in a class setting, that teachers and students should not expect to complete an entire lesson in one day. Spreading work throughout the week will produce much better writing with much less stress. Parents teaching their own children at home should follow a similar schedule.

Introduction

Suggested Weekly Schedule

All of the instructions for what to do each week are included in the Assignment Schedule located on the first page of each lesson. While there may be slight variations, most lessons are organized as follows:

Day 1

1. Review vocabulary words or past lesson concepts.
2. Learn a new structural model and/or writing concepts.
3. Read the source text, write a key word outline (KWO), and tell back the meaning of each line of notes.

Day 2

1. Review the KWO from Day 1.
2. Learn a new stylistic technique and complete practice exercises.
3. Study the vocabulary words for the current lesson and complete vocabulary exercises.
4. Begin the rough draft using the KWO. Follow the checklist.

Day 3

1. Review vocabulary words.
2. Finish writing your composition and check each item on the checklist.
3. Submit your composition to an editor with the completed checklist attached.

Day 4

1. Write or type a final draft, making any corrections your editor asked you to make.
2. Paperclip the checklist, final draft, rough draft, and KWO together. Hand them in.

The lessons are organized in such a way that all new concepts regarding structure are introduced on day 1, and new style concepts and vocabulary words are introduced on day 2.

Students will benefit from learning new structure and style concepts with a teacher. In addition, students should plan to read the source text and begin KWOs with a teacher. These instructions are also found on day 1.

The instructions on day 3 and day 4 may be completed by students more independently. However, teachers and/or parents should be available to help and to edit.

Scope and Sequence

Lesson	Subject and Structure	Style (First Introduced)	Vocabulary Words
Unit 1 1	Dead Ants introduction to structure	introduction to style	pungent, secure signal, transport
Unit 2 2	Honey Bees	-ly adverb	craft, efficiently instinctively, intently
3	Bombardier Beetles		aggressively, caustic generate, lethally
4	Monarch Migration title rule	<i>who/which</i> clause	arduous, intuitively vital, wondrous
Unit 3 5	Daedalus and Icarus		construct, glide resolutely, surreptitiously
6	Archimedes	strong verb banned words: <i>think/thought, go/went</i>	conclude, ingenious reside, substantiate
7	Jack and the Beanstalk	<i>because</i> clause	clamber, desperately germinate, vigorously
8	Rumpelstiltskin	banned words: <i>say/said</i>	alchemist, brag dash, incredulously
Unit 4 9	Steam Engines topic-clincher sentences		
10	Model T Ford	quality adjective banned words: <i>good, bad, big, small</i>	fabricate, launch momentous, significant
11	Flight	<i>www.asia</i> clause	enthraling ponderous, replicate, suspend
12	Spacesuits	#2 prepositional opener	durable, explosively monitor, penetrating
Unit 5 13	Meteorite		dilapidated, mesmerized reveal, speedily
14	Message in a Bottle	#3 -ly adverb opener	bob, cautiously pen, resourceful
15	Science Lab		ardently, detect methodically, rancid

Lesson	Subject and Structure	Style (First Introduced)	Vocabulary Words
Unit 6 16	Nikola Tesla source and fused outlines		
17	Albert Einstein, Part 1	#6 vss opener	accept, accomplish inquisitively, technical
18	Albert Einstein, Part 2 works consulted		grieved, instantly plead, solve
19	Maria Telkes additional sources required		devise, immigrate industriously, potable
Unit 7 20	Favorite Invention, Part 1 body paragraphs	#5 clausal opener <i>www.asia.b</i> clause	alter, innovative persistently, unique
21	Favorite Invention, Part 2 introduction and conclusion		certainly, consequently furthermore, similarly
22	Exploring a Place Outdoors, Part 1		explore, investigate meander, scrutinize
23	Exploring a Place Outdoors, Part 2		
Unit 8 24	Albert Einstein, Part 3	#1 subject opener #4 -ing opener	achievement, advantage benefit, contribution
25	A Prominent Scientist, Part 1 additional sources required		
26	A Prominent Scientist, Part 2		
Unit 9 27	George Washington Carver, Part 1		antagonist, climax protagonist, theme
28	George Washington Carver, Part 2		
29	Nathaniel Bowditch, Part 1 character analysis		
30	Nathaniel Bowditch, Part 2		

Lesson 1: Dead Ants

Structure: Unit 1: Note Making and Outlines
Style: Introduction to Structure and Style
Subject: Dead Ants

Teaching Writing: Structure and Style

Watch the sections for Unit 1: Note Making and Outlines. At IEW.com/twss-help reference the TWSS Viewing Guides.

Lesson 1: Dead Ants

UNIT 1: NOTE MAKING AND OUTLINES

Lesson 1: Dead Ants

Goals

- to learn the Unit 1 Note Making and Outlines structural model
- to create a key word outline (KWO)
- to retell the content of a source text using just your outline
- to use new vocabulary words: *pungent, secure, signal, transport*



Assignment Schedule

Day 1

1. Read Introduction to Structure and Style and New Structure—Note Making and Outlines.
2. Read “Dead Ants.” Read it again and write a key word outline (KWO).

Day 2

1. Review your KWO from Day 1.
2. Look at the vocabulary cards for Lesson 1. Complete Vocabulary Practice.
3. Try to add at least one vocabulary word to your KWO.

Day 3

1. Prepare to give an oral report using your KWO. Read. Think. Look up. Speak. Practice telling back the information one line at a time. Read a line; then, look up and talk about it. Then read the next line, look up, and talk about it. Continue through the outline this way.
2. Practice until the presentation of the paragraph is smooth. It is important to realize that you are not trying to memorize the exact words of the source text. You are trying to remember the ideas and communicate those ideas in your own words.

Day 4

1. Review the vocabulary words.
2. After practicing, use your KWO and give an oral report to a friend or family member as explained on Day 3. If applicable, be prepared to give the oral report in class.

Literature Suggestions

If you wish to incorporate literature into the curriculum, see a suggested list of books in Appendix IV.

Students will benefit from reading the source text and beginning KWOs with a teacher. Teachers should plan to teach New Structure, New Style, and introduce the vocabulary words. These items are always found in Day 1 and Day 2 of the Assignment Schedule.

Vocabulary

Print the vocabulary cards for Lesson 1. Hold up the cards. Read each definition and ask your students to guess which word it matches by looking at the pictures.

Introduction to Structure and Style

In this book you will learn many ways to make your writing more exciting and more enjoyable to read. You will learn to write with *structure* and with *style*.

Structure

What is structure? The dictionary defines structure as “the arrangement of and relations between the parts or elements of something complex.”

What has structure? Think of a house. What had to happen before the house was built? The architect had to draw the blueprints, the plans, for the builders to follow. The builders had to follow the plans so that each contractor could arrive on time. You cannot put the walls up before the foundation is poured. You certainly cannot put the roof on before the frame is finished. Each step must be completed in order so that the house has proper structure.

Writing a paper, in some ways, is similar to building a house. A paper contains many facts and ideas. If you were just to begin writing without planning, your facts and ideas would probably not be arranged in the most logical way. Your composition would not be structured well and would not communicate your thoughts effectively. In this course you will “draw plans” for everything before you write. Your “plans” will be outlines, and they will follow a particular model of structure for each type of composition.

Style

What comes to your mind when you hear the word style? Many people think of clothes. Clothes come in a variety of styles. One would dress differently to attend a wedding than to go to a baseball game. That is because formal events require a formal style of clothing, whereas casual settings do not.

Similarly, there are also different styles of language. Below are two sentences that communicate the same information in different styles. Which do you like better?

He mixed the liquids.

After the scientist combined the two elements, he cautiously stirred the mixture as green smoke filled the room.

You probably like the second sentence better because it is more descriptive. When you write, you must realize that the readers are not with you and cannot see, hear, or feel what is in your mind. This means that you must fill in the details and paint vivid pictures with your words. Descriptive words will help readers see, hear, feel, and experience the scene you are writing about as the second sentence does. The IEW elements of style will give you the tools you need to do just this.

New Structure

Note Making and Outlines

In Unit 1 you will practice choosing key words to form an outline—a key word outline (KWO). A KWO is one way to take notes. Key words indicate the main idea of a sentence. By writing down these important words, you can remember the main idea of a text.

Read the source text. Then locate two or three important words in each sentence that indicate the main idea. Transfer those words to the KWO. Write the key words for the first fact of the KWO on the Roman numeral line. Write no more than three words on each line.

Symbols, numbers, and abbreviations are “free.” Symbols take less time to draw than it would take to write the word. Abbreviations are commonly accepted shortened forms of words. Can you guess what each of the following might stand for?



As you form the KWO, separate key words, symbols, numbers, and abbreviations with commas.

After you have completed the KWO, you must test it to ensure the words you chose will help you remember the main idea of the sentence. For this reason whenever you finish writing a KWO, put the source text aside and use your outline to retell the paragraph line by line, sentence by sentence.

Encourage students to use symbols, numbers, and abbreviations.

A symbol is legal if it can be written in less time than it takes to write the word.

Symbols  = speak/tell  = to/across/next  = flower

Numbers 123 = numbers

Abbreviations H_2O = water ea. = each X = no/none

Read and Discuss

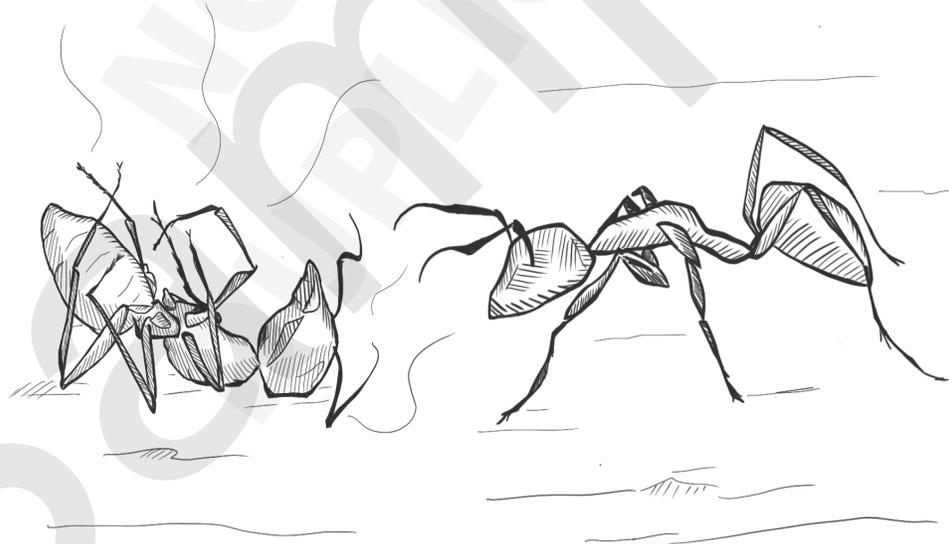
Read each source text with your students and ask questions to get them thinking about the information they will be working with. It is also important to make sure students understand words that may be unfamiliar to them in the text.

Locate Key Words

Model how to find key words. Reread the first sentence. Ask your students, "If I want to remember the main idea of that sentence, what three words are key words?" (Underline those words.) Sentence by sentence, repeat the process as the students give key word suggestions.

Source Text**Dead Ants**

When an ant dies, it produces a chemical called oleic acid. The smell of the oleic acid alerts the other ants in the colony. They then carry the dead ant to the midden. The midden is the garbage dump that is also known as the ant cemetery. If oleic acid is placed onto a live ant, the other ants will try to carry the live ant to the midden. This is because most ants do not have eyes or ears, so they rely on their sense of smell. Burying their dead is called necrophoresis. It helps prevent the spread of disease in their nest. Oleic acid allows the ants to deal with their dead while keeping the colony safe.

**Mechanics**

Contractions are not used in academic writing.

The KWOs in the Teacher’s Manual are only samples. Every class and each student will have unique outlines.

Sample

Lesson 1: Dead Ants

Key Word Outline

On the lines below, write no more than three key words from each sentence of the source text. Choose words that will best help you remember the meaning of the sentence. Use symbols, numbers, and abbreviations freely. They do not count as words. However, be sure you can remember what they mean.

- I. _____ *A, die →, oleic acid*
1. _____ *smell, OA, alerts, colony*
2. _____ *carry, dead A →, midden*
3. _____ *dump = ant cemetery*
4. _____ *OA, placed, live A →, midden*
5. _____ *A, X eyes, X ears, smell*
6. _____ *bury, dead = necrophoresis*
7. _____ *prevent, disease, nest*
8. _____ *OA, keep, colony, safe*

Cover the source text and tell the meaning of each line of notes in your own words. If a note is unclear, check the source text and add what you need to in order to make it clear.

Writing the KWO

Symbols, numbers, and abbreviations are free. Using them allows room for other key words.

Since *ants* is the title, simply write *A* when writing the KWO.

After writing *oleic acid* the first time, simply write *OA*.

X = no/none

In a classroom setting, write class ideas on a whiteboard. Students may copy these or use their own ideas.

Tell Back

Telling back the KWO is an important step in the prewriting process.

Read.
Think.
Look up.
Speak.

Andrew Pudewa teaches, “You may look at your notes, and you may speak to your audience, but you may not do both at the same time.”

Vocabulary

Students study vocabulary to become better thinkers, speakers, and writers.

Allow students to use derivatives of words.

Vocabulary Practice

Listen to someone read the vocabulary words for Lesson 1 aloud.

Speak them aloud yourself.

Read the definitions and sample sentences on the vocabulary cards.

Write four sentences using one of this lesson’s vocabulary words in each sentence. You may use derivatives of the words. For example, you may add an -ed, -s, or -ing to a basic vocabulary word.

pungent *The ants took the dead body to the pungent garbage dump.*

secure *The midden keeps the ant colony secure from disease.*

signal *The smell of oleic acid signals the colony that there is a dead ant.*

transport *The dead ants are transported to the midden.*

Think about the words and their meanings so you can use them in your assignments.

Lesson 27: George Washington Carver, Part 1

Structure:	Unit 9: Formal Critique body paragraphs
Style:	no new style
Subject:	critique of “The Plant Doctor”

Teaching Writing: Structure and Style

Watch the sections for Unit 9: Formal Critique. At IEW.com/twss-help reference the TWSS Viewing Guides.

Lesson 27: George Washington Carver, Part 1

UNIT 9: FORMAL CRITIQUE AND RESPONSE TO LITERATURE

Lesson 27: George Washington Carver, Part 1

Goals

- to learn the Unit 9 Formal Critique structural model
- to create a KWO
- to write the body paragraphs of a short story critique
- to learn and practice critique vocabulary
- to use new vocabulary words: *antagonist*, *climax*, *protagonist*, *theme*



Assignment Schedule

Day 1

1. Play a vocabulary game such as Vocabulary Lightning.
2. Read New Structure—Formal Critique Model: Body Paragraphs.
3. Read “The Plant Doctor.”
4. Write a KWO by answering the Story Sequence Chart questions.

Day 2

1. Review your KWO from Day 1.
2. Complete Style Practice.
3. Look at the vocabulary cards for Lesson 27. Complete Vocabulary Practice.
4. Using your KWO as a guide, begin writing a rough draft.
5. Go over the checklist. Put a check in the box for each requirement you have completed.

Day 3

1. Review all vocabulary words learned thus far.
2. Finish writing your three body paragraphs.
3. Turn in your rough draft to your editor with the completed checklist attached.

Day 4

1. Write or type a final draft, making any corrections your editor asked you to make.
2. Paperclip the checklist, final draft, rough draft, and KWO together. Hand them in.

Mechanics

Titles of short stories are placed in quotation marks. Commas and periods always go inside closing quotation marks.

In Lessons 27–28 students write a 5-paragraph formal critique. They begin by forming the body paragraphs based on the Story Sequence Chart. Help students focus on writing about the story rather than simply telling the story. Using words from the Critique Thesaurus in Appendix III will help.

Remind students that these paragraphs do not contain topic or clincher sentences.

Exemplar

The Exemplars file contains a student's completed assignment for Lessons 27–28. The example is for the teacher and not intended to be used by the student.

See the blue page for download instructions.

UNIT 9: FORMAL CRITIQUE AND RESPONSE TO LITERATURE

New Structure**Formal Critique Model: Body Paragraphs**

In Unit 9 you will write critiques of literature. Do this by combining your knowledge of how to retell narrative stories (Unit 3) with how to write introduction and conclusion paragraphs (Units 7 and 8). You may follow this model to critique short stories, movies, novels, plays, and television shows.

The model contains an introduction, three body paragraphs, and a conclusion. The body paragraphs follow the Story Sequence Chart. The elements required in the introduction and conclusion are specific to critiques. Notice the paragraphs in this model do not contain topic or clincher sentences.

	I.	Introduction	<i>attention getter, background</i>
Story	II.	Characters and Setting	
Sequence	III.	Conflict or Problem	
Chart	IV.	Climax and Resolution	
	V.	Conclusion	<i>your opinion/why, message/moral, last sentence → title</i>

Like other 5-paragraph compositions, write from the inside out beginning with the body paragraphs. When you write a critique, it is not necessary to tell about every character or detail of the story. Instead, provide a brief summary of different parts of the story in order to give your opinion about those specific parts. To do this, use the Story Sequence Chart.

Although Unit 9 does not contain topic or clincher sentences, each body paragraph may begin with the focus of the paragraph. For example, the first body paragraph may begin “The Plant Doctor” *is set in* _____. In this paragraph you will explain the setting and indicate the characters of the story.

The second body paragraph may begin *The problem is* _____. In this paragraph indicate the primary conflict or problem of the story and how the characters attempt to solve the problem.

The third body paragraph may begin *The climax occurs* _____. After indicating the climax of the story, the rest of the paragraph explains how the author brought the story to an end. When applicable, this paragraph may tell the message or moral of the story.

Critique Thesaurus

Use the words on the Critique Thesaurus in Appendix III to enhance your critique. In the body paragraphs, use words that describe the *setting, characters, conflict, climax, and resolution*.

Source Text**The Plant Doctor**

Growing up on a rural farm near Diamond, Missouri, in the aftermath of the U.S. Civil War, George Washington Carver understood firsthand the difficulties farmers face. As a child of slaves whose father died before he was born and mother was kidnapped by lawless bushwhackers when he was just one, young George was raised by his mother's former owners Susan and Moses Carver, whom he called Aunt and Uncle and whose last name he chose as his own. Despite being hardworking and resourceful, the Carvers grew barely enough food for the family. George was fascinated with plants and spent hours traipsing through the forests and fields surrounding the farm, collecting every specimen he could find to transplant in his flourishing garden. He created paint from plants and other natural resources because he was too poor to purchase paint. People from town regularly brought their diseased plants to George for him to diagnose and make healthy again. Soon he was known as the Little Plant Doctor. Whether the plant was yellowing from malnourishment or covered with fungus or bugs, George examined and experimented until he could give a diagnosis and a solution to the problem.

George craved more knowledge than he could learn at home. Unfortunately, the only school near him was exclusively for white people, so George left the farm at the age of eleven and set off on his own to Neosho, Missouri, to enroll in a school for black children. George's thirst for knowledge drove him for seventeen

Mechanics

Separate a city and state with a comma. When a city and state are placed in the middle of a sentence, place a comma on both sides of the state.

UNIT 9: FORMAL CRITIQUE AND RESPONSE TO LITERATURE

difficult years. He traveled from town to town and job to job, supporting himself and attending school when he could. Eventually, he enrolled in college to study plants, reasoning “I could help poor black farmers work their farms more efficiently if I studied horticulture.” Scientists were learning that some crops deplete the nutrients of soils while others replenish them. His teacher Dr. Wallace taught him “Nations last only as long as their topsoil.” Plentiful crops and successful farms depended on good soil, so George studied how to create healthy soil.

Booker T. Washington approached Carver to establish an agriculture department at his Tuskegee Normal and Industrial Institute in Macon County, Alabama, an all-Black college Washington had established to help ex-slaves learn a trade to be able to make a living. At the time, 85% of all southern Blacks were farmers barely able to make ends meet. George Washington Carver found his chance to help Black farmers succeed. At the time, farmers in the South planted only cotton. Cotton plants severely depleted the soil of necessary nutrients, especially nitrogen, needed to grow healthy crops. When weather or unhealthy soil destroyed the crop or the market prices declined, farmers could not afford to replant their fields or feed their families. He had to find a way to convince the farmers to diversify their crops to replenish the topsoil and provide food for their families. “Plant legumes like peanuts and sweet potatoes to replenish the nitrogen, and the soil will stay healthy and produce good crops,” he implored them. “You will also have food to feed your families and surplus to sell.” He wanted them to dream about being more than tenant farmers.

Because peanuts and sweet potatoes were South American crops the farmers were unfamiliar with, he had a difficult time convincing them. He produced a pamphlet with 125 recipes for the legumes, even pointing out that the skins and shells provided excellent nourishment for their cattle and pigs.

To gain their trust, he established The Farmer's Institute. He and his students loaded up wagons with informational bulletins and jars of food products made from peanuts and sweet potatoes for the wives to sample. They dispersed across the state and visited farm after farm offering a free soil analysis and solutions for improving the farm's yield. The farmers listened, but most went right back to farming cotton because that was what they knew how to do.

In February 1904 George Washington Carver opened an official notice from the Department of Agriculture that read, "The boll weevil is moving north at a steady rate. It knows no political boundaries, and it has crossed from Mexico into Texas. At this state we can see no reason why it will not proceed into your region." Boll weevils lay their eggs in the boll of the cotton plant, where the fiber is formed. When the eggs hatch, the baby beetles eat the cotton fiber inside the boll and destroy the crop. George Washington Carver warned the farmers of the coming calamity and once again explained the folly of relying on a single crop. Would they take his advice?

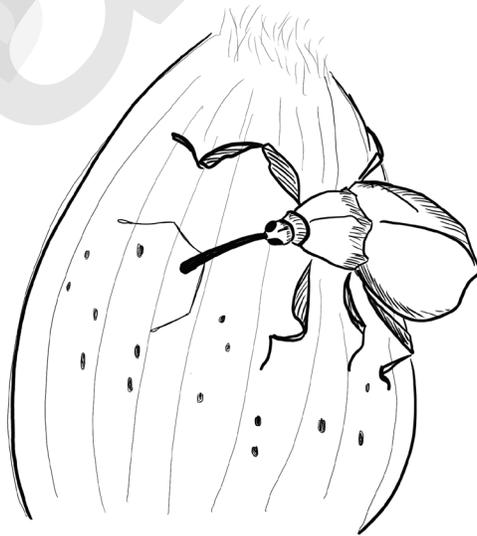
The many farmers who planted sweet potatoes and peanuts were unaffected by the beetle. They grew enough to feed their families and livestock as well as extra to sell. They harvested an abundance of peanuts. On the other hand, those who had sown cotton were devastated as the boll weevil ate its way into Alabama.

UNIT 9: FORMAL CRITIQUE AND RESPONSE TO LITERATURE

“What are we going to do with all these peanuts?” the farmers who took Carver’s advice asked. “We can’t eat them all!” Carver locked himself in his science lab with three bushels of peanuts. He separated the peanut into its individual elements—sugar, starch, fat, oil, gum, pectin, and amino acids. By the time he emerged from his lab three days later, he had over three hundred uses for the peanut, including cleaning agents, skin and hair products, fabric dyes, and plastic.

Using the techniques Carver taught them, farmers averaged 266 bushels of peanuts and \$75 profit per acre. Soon peanut farms covered over ten million acres. By 1920 peanuts brought almost \$80 million a year to the South.

Because he received national attention after the boll weevil crisis, the government called on him during the Great Depression to teach families how to grow gardens and raise chickens to survive the difficult time. George Washington Carver used science to help poor Southern farmers be more than tenant farmers.



Sample

Lesson 27: George Washington Carver, Part 1

Key Word Outline—Story Sequence Chart

Identify the Story Sequence Chart elements. Use words such as *setting*, *characters*, *conflict*, *climax*, *resolution*, and their synonyms found on the Critique Thesaurus in Appendix III.

Characters and Setting

When and where does the story occur? This is the *setting*.

Name and describe each main *character*.

II. setting, S U.S., factual, < details

1. m character, resourceful, George W. Carver

2. > Civil War, struggles, farmers

3. studies, horticulture, help, ♥

4. ☁ deplete, soil, nitrogen

(5.) crop rotation, benefit, GWC admirable

Conflict or Problem

What does the main character want or need? This is the *conflict*.

Tell what the main characters do, say, and think in order to solve the problem.

Tell how they feel as they try to solve the problem.

III. problem, GWC, "plant, legumes" SP + P

1. X ☁, R. sympathize, GWC

2. pamphlet, 125 recipes SP + P

3. marvel, innovative 💡

4. GWC, Farmer's Institute, farmers, ed, soil

(5.) X 🌀, plant ☁, R. frustrated!

Climax and Resolution

What event in the story reveals how the conflict will work out (whether the problem will be solved or not)? This is the *climax*.

What is the outcome for the main characters at the end of the story? This is the *resolution*.

IV. climax, boll weevil, destroy

1. 🍌, babies, eat, ☁, R. fear!

2. resolution, GWC, encourages SP + P

3. F 🌀, Do?, X eat, all

4. GWC, lab, 3 bushels P, parts

(5.) 300 uses, avg. 266 bushels, \$75 acre

These paragraphs do not contain topic-clincher sentences.

II. Characters and Setting

The story is set in the South during the time immediately following the United States Civil War. The main character that students must mention is George Washington Carver. Students should focus on Carver's interest in and study of plants.

III. Conflict or Problem

In this paragraph students critique the main problem: George Washington Carver needs to convince poor Southern farmers to plant crops other than cotton to replenish topsoil and provide food for their families.

IV. Climax and Resolution

The climax occurs when a boll weevil infestation threatens the cotton crop. Farmers must listen to Carver and plant sweet potatoes and peanuts for their farms and families to survive. Those who follow Carver's advice have an abundance of crop to eat and to sell.

UNIT 9: FORMAL CRITIQUE AND RESPONSE TO LITERATURE

Style Practice**Dress-Ups and Sentence Openers**

Look at your KWO and consider where you can include various clauses as well as strong verbs, quality adjectives, -ly adverbs, and sentence openers.

Vocabulary Practice

Listen to someone read the vocabulary words for Lesson 27 aloud.

Speak them aloud yourself.

Read the definitions and sample sentences on the vocabulary cards.

Write four sentences using one of this lesson's vocabulary words in each sentence.

antagonist *The farmers who George Washington Carver must convince to plant*

 sweet potatoes and peanuts are the antagonists in the story.

climax *The invasion of the boll weevil into Alabama is the climax of the story.*

protagonist *George Washington Carver is the protagonist.*

theme *Carver's resourcefulness in helping the farmers succeed is the theme*

 of this story.

Think about the words on the critique vocabulary chart in Appendix III.

Try to use words from this chart in sentences or phrases that could be in your critique.



Unit 9 Composition Checklist

Lesson 27: George Washington Carver, Part 1 body paragraphs

Formal Critique

Name: _____



Institute for Excellence in Writing

Listen. Speak. Read. Write. Think!

STRUCTURE

- MLA format (see Appendix I) _____ 1 pt
- checklist on top, final draft, rough draft, key word outline _____ 1 pt

Body

- Unit 9: 3 paragraphs follow Story Sequence Chart (Unit 3) and include words from the Critique Thesaurus page in each paragraph _____ 15 pts

STYLE

¶2 ¶3 ¶4 Dress-Ups (underline one of each) (1 pt each)

- ly adverb _____ 3 pts
- who/which* clause _____ 3 pts
- strong verb _____ 3 pts
- quality adjective _____ 3 pts
- www.asia.b* clause _____ 3 pts

Sentence Openers (number; one of each as possible) (1 pt each)

- [1] subject _____ 3 pts
- [2] prepositional _____ 3 pts
- [3] -ly adverb _____ 3 pts
- [4] -ing _____ 3 pts
- [5] clausal – *www.asia.b* _____ 3 pts
- [6] vss _____ 3 pts

CHECK FOR BANNED WORDS (-1 pt for each use): think/thought, go/went, say/said, good, bad, big, small _____ pts

MECHANICS

- spelling, grammar, and punctuation (-1 pt per error) _____ pts

VOCABULARY

- vocabulary words – label (*voc*) in left margin or after sentence _____

Total: _____ 50 pts
 Custom Total: _____ pts

Checklist

Teachers are free to adjust a checklist by requiring only the stylistic techniques that have become easy, plus one new one. EZ+1

Reminder

Titles of short stories are placed in quotation marks. Commas and periods always go inside closing quotation marks.

Appendix IV: Adding Literature

Great literature will be a valuable addition to these lessons. Many of these titles have not been reviewed by the Institute of Excellence in Writing. These selections are provided simply to assist you in your own research for books that may be used to supplement this writing curriculum.

Teachers should read the books before assigning them to their students.

The Diary of Curious Cuthbert by Jack Challoner

How We Crossed the West: The Adventures of Lewis and Clark by Rosalyn Schanzer

My Side of the Mountain by Jean Craighead George

Sea Clocks: The Story of Longitude by Louise Borden

The Wheel on the School by Meindert DeJong

Electrical Wizard: How Nikola Tesla Lit Up the World by Elizabeth Rusch

On a Beam of Light: A Story of Albert Einstein by Jennifer Berne

Kon-Tiki and I by Erik Hesselberg

A Weed Is a Flower: The Life of George Washington Carver by Alike

Carry On, Mr. Bowditch by Jean Lee Latham