

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.

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Wonders of Science Writing Lessons: Implementing the Structure and Style® Writing Method Teacher's Manual
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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

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**

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.

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 | enthralled, 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 | | |

SAMPLE

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.

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.

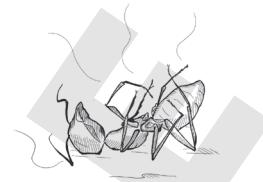
Day 4

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.

Lesson 1: Dead Ants



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. (See blue page to access your download.) 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?



123

 H_2O

ea.

X

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

Source Text***Read and Discuss***

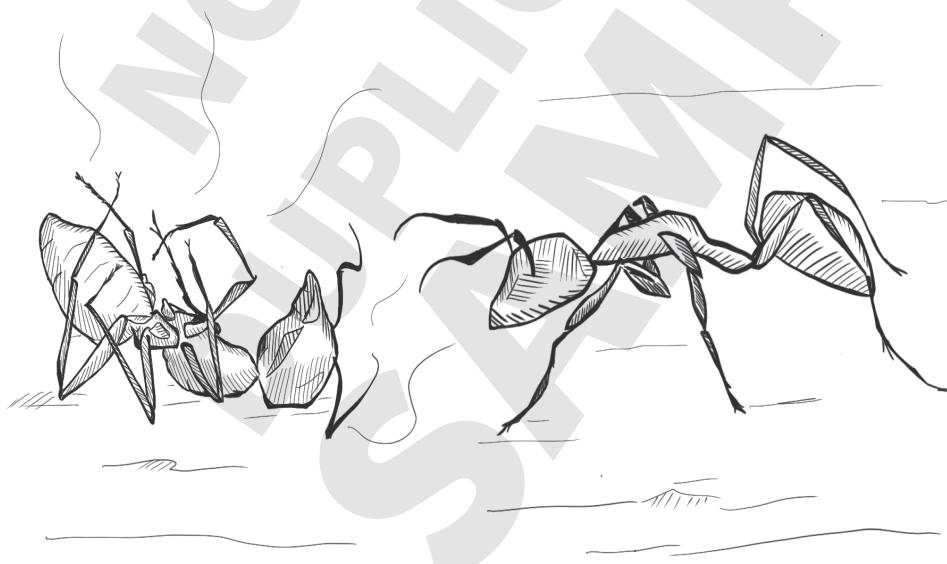
Read each source text with your students and ask questions to get them thinking about the information they will be working with. It is also important to make sure students understand words that may be unfamiliar to them in the text.

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.

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.

1. *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.

UNIT 1: NOTE MAKING AND OUTLINES

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 2: Honey Bees

| | |
|-------------------|----------------------------|
| Structure: | Unit 2: Writing from Notes |
| Style: | -ly adverb |
| Subject: | Honey Bees |

Teaching Writing: Structure and Style

Watch the sections for Unit 2: Writing from Notes. At IEW.com/twss-help reference the TWSS Viewing Guides.

Lesson 2: Honey Bees

UNIT 2: WRITING FROM NOTES

Lesson 2: Honey Bees

Goals

- to learn the Unit 2 Writing from Notes structural model
- to create a key word outline (KWO)
- to write a paragraph from the KWO
- to add a new dress-up: -ly adverb
- to be introduced to the composition checklist
- to use new vocabulary words: *craft, efficiently, instinctively, intently*



Assignment Schedule

Day 1

1. Play No-Noose Hangman. Directions for this game and all other suggested games can be found in the Teacher's Manual.
2. Read Mechanics and New Structure—Writing from Notes.
3. Read “Honey Bees.” Read it again and write a KWO.

Day 2

1. Review your KWO from Day 1.
2. Learn how to dress-up your writing. Read New Style and complete Style Practice.
3. Look at the vocabulary cards for Lesson 2. Complete Vocabulary Practice.
4. Using your KWO as a guide, begin writing a rough draft of your paragraph in your own words.
5. Go over the checklist. You will need to underline one -ly adverb. You may use more than one, but only underline one. Also, label the vocabulary words that you use. Put a check in the box for each requirement on the checklist you have completed.
6. See Appendix I. It explains how to format your papers.

Day 3

1. Review all vocabulary words learned thus far.
2. Finish writing your paragraph using your KWO, your Style Practice, and the checklist to guide you. Try your best not to look back at the source text.
3. Turn in your rough draft to your editor with the completed checklist attached. The back side of all checklists are blank so that they can be removed from this consumable book.

In Unit 2 students use the KWO to write a summary paragraph. As you model writing from the KWO, stress the importance of writing in your own words.

No-Noose Hangman

See Appendix VI for game directions. For this lesson use the following phrases and bonus questions:

FREE FROM HARM
Bonus: What is the vocabulary word? *secure* Can you finish the definition? *or threat of danger*

THREE KEY WORDS
Bonus: In addition to two or three key words, what may you write on each line of a KWO? *symbols, numbers, and abbreviations*

Exemplar

The Exemplars file contains a student's completed assignment for Lesson 2. The example is for the teacher and not intended to be used by the student.

See the blue page for download instructions.

UNIT 2: WRITING FROM NOTES

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.

Study for Vocabulary Quiz 1. It will cover words from Lessons 1–2.

Mechanics**Numbers**

Occasionally you will incorporate numbers into your writing. Here are rules to keep in mind:

1. Spell out numbers that can be expressed in one or two words.
twenty, fifty-three, three hundred
2. Use numerals for numbers that are three or more words.
123, 204
3. Spell out ordinal numbers.
the fifth flower, the first circle
4. Use numerals with dates. Do not include st, nd, rd, or th.
January 1, 2020
December 25 not December 25th
5. Use numerals with symbols.
\$500 100°C 25 mph
6. Never begin a sentence with a numeral.
100°C (212°F) is the boiling temperature of water. (incorrect)
The boiling temperature of water is 100°C (212°F). (correct)

New Structure

Writing from Notes

In Unit 2 you will use a key word outline (KWO) to write a paragraph. When you write from key word notes, you may use your own words, sentences, and ideas.

This is the first sentence of the source text:

Honey bees must have nectar and water to make honey.

Your key word notes may look something like this:

I. HB, nectar + H₂O = honey

Practice

Using the key word notes, write a sentence that communicates the main idea of the first sentence. Use a thesaurus for help. Here is an example:

Honey bees use flower nectar and water to make honey.

Honey bees instinctively make honey using nectar from a flower and water.

The Editor

Selecting and “hiring” an editor is key to your writing success. You will need to acquire an editor to complete your assignments in this book. The purpose of the editor is to look over your work to amend anything that is not correct or complete. When you receive your paper back with the corrections marked, you will then rewrite your paper including the changes suggested by your editor. This process is very important because through the editing process you will receive useful feedback from your editor and learn correct spelling, punctuation, and proper grammar usage.

Writing from Notes

Students should not try to remember and write the exact words of the source text.

They should use their notes to understand the key ideas and write those ideas in their own words. One note may become two or more sentences, or two notes may become one sentence.

Editing

When editing, Andrew Pudewa says, “Hands on structure, hands off content.”

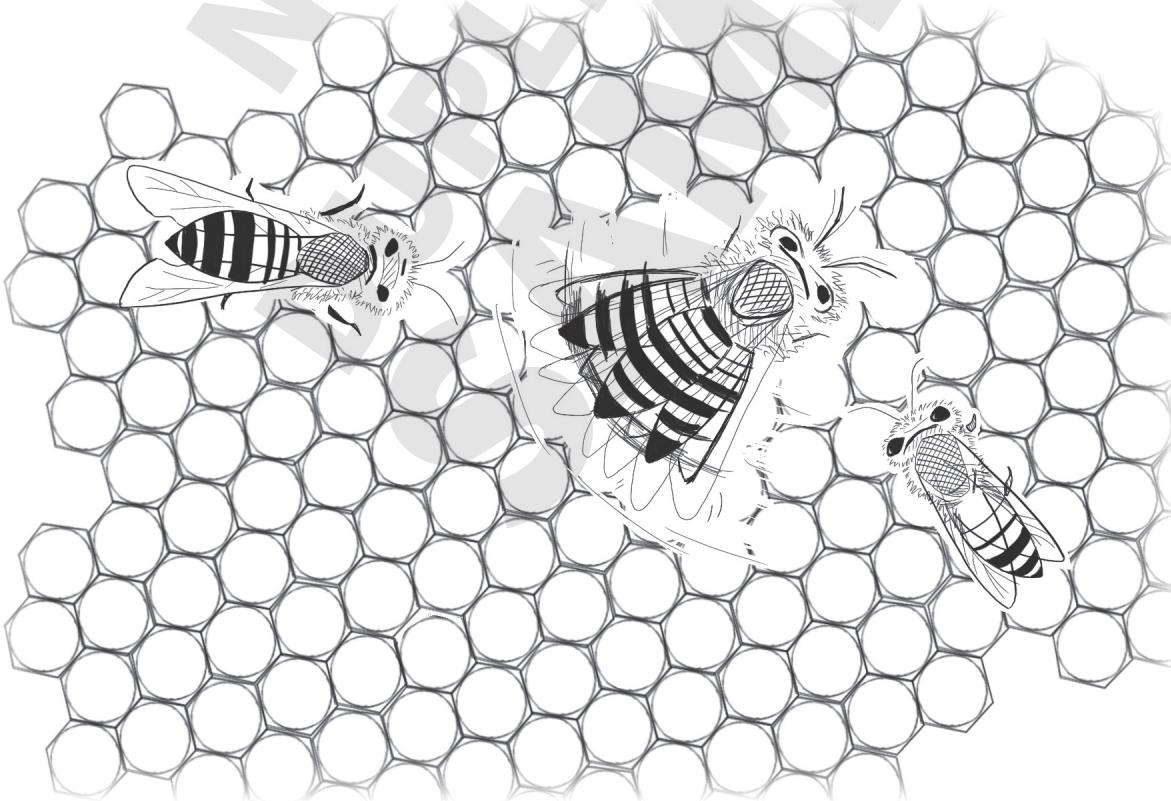
Make the paper grammatically legal; however, refrain from meddling with content.

UNIT 2: WRITING FROM NOTES

Source Text

Honey Bees

Honey bees must have nectar and water to make honey. When worker bees find flowers full of nectar, they fly back to the hive to tell the other bees. They do not use words or maps to show where the nectar is. They perform the waggle dance. The waggle dance looks like the number eight. The honey bee makes one circle and waggles as it turns around to make the other circle. This dance tells the other bees exactly where to find the flowers. The waggle dance is an innate behavior. No one has taught the honey bee how to do it. It just knows how.



Sample

Lesson 2: Honey Bees

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.

- I. *HB, nectar + H₂O = honey*
1. *worker, B,  others*
2. *X words, X maps →, nectar*
3. *perform, waggle, dance*
4. *WD, looks, 8*
5. *, waggle, another, *
6. *WD, tells, others, find, *
7. *WD, innate, behavior*
8. *X taught, how*
9. *just, knows*

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

After writing *waggle dance* the first time, simply write *WD*.

Use the scientific name for water: *H₂O*.

Tell Back

Require students to use the KWO to tell back the summary in complete sentences.

Help as needed.

UNIT 2: WRITING FROM NOTES

New Style**Dress-Ups**

There are many IEW elements of style. The first element you will be introduced to is called a dress-up because it will help you “dress up” your writing. The IEW dress-ups are descriptive words, phrases, or clauses that you add to a sentence. You will learn six dress-ups. To indicate that you have added a dress-up to a sentence, you should underline it. Although you may use more than one of a specific type of dress-up in a paragraph, only underline one of each type in each paragraph.

-ly Adverb Dress-Up

In this lesson you will learn the first dress-up: the *-ly* adverb.

An *-ly* adverb is an adverb that ends in *-ly*. Adverbs are words that modify verbs, adjectives, or other adverbs. Most often they tell *how* or *when* something is done.

Notice how the meaning of this sentence changes when different *-ly* adverbs are added:

Honey bees perform the waggle dance.

Honey bees eagerly perform the waggle dance.

Honey bees instinctively perform the waggle dance.

Now you choose an *-ly* adverb.

Honey bees carefully perform the waggle dance.

 From now on, include an *-ly* adverb in each paragraph you write. Mark the *-ly* adverb by underlining it.

**-ly Adverbs**

angrily

anxiously

boldly

carefully

eagerly

excitedly

fearfully

foolishly

futilely

hopefully

humbly

hysterically

innocently

intrepidly

joyfully

longingly

mysteriously

probably

savagely

sheepishly

smugly

stubbornly

suspiciously

tirelessly

woefully

Style Practice**-ly Adverb Dress-Up**

You must include an -ly adverb in the paragraph you write for this lesson. You may look at the list on the previous page or at a longer list found on the *Portable Walls for Structure and Style® Students* or on the IEW Writing Tools App. Some of your vocabulary words may be helpful as well. Write a few ideas on the lines below.

Note: A vocabulary word that is an -ly adverb may count as an -ly adverb and a vocabulary word.

What -ly adverbs could express . . .

1. how the worker bees fly back to the hive?

speedily, directly, intently, swiftly

2. how the honey bees find the flowers?

easily, effortlessly, successfully, fervently

3. how the bees make honey?

instinctively, expertly, cleverly, skillfully

4. how the dance tells other bees where to find the flowers?

directly, instantly, helpfully, efficiently

Suggested Answers

To model strong word choices, the suggested answers have come from a thesaurus.

Vocabulary

Students may use vocabulary words from any lesson if they so desire. *Efficiently, instinctively, and intently* are vocabulary words.

Look at your KWO and consider -ly adverbs to include in your composition.

UNIT 2: WRITING FROM NOTES

Vocabulary Practice

Listen to someone read the vocabulary words for Lesson 2 aloud.

Speak them aloud yourself.

Read the definitions and sample sentences on the vocabulary cards.

Write the part of speech and the definition beside each word.

craft *verb; to make or produce with care, skill, or ingenuity*

efficiently *adverb; producing desired results with little or no waste*

instinctively *adverb; a strong natural tendency or ability*

intently *adverb; very concentrated in attention; focused*

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

Before students begin to write, preview the checklist. This ensures that the students understand expectations.



Unit 2 Composition Checklist

Lesson 2: Honey Bees

Name: _____

Lesson 2: Honey Bees

Writing from Notes

STRUCTURE

- MLA format (see Appendix I)
- title centered
- checklist on top, final draft, rough draft, key word outline



Institute for Excellence in Writing
Listen. Speak. Read. Write. Think!

STYLE

11 Dress-Ups (underline one of each)

- ly adverb

(25 pts each) _____ 25 pts

MECHANICS (-1 pt per error)

- capitalization
- end marks and punctuation
- complete sentences
- correct spelling

_____ pts
_____ pts
_____ pts
_____ pts

VOCABULARY

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

_____ 100 pts

Total: _____ 100 pts

Custom Total: _____ pts

DUPLEX

**NOT FOR
SAMPLE**

Checklist

If your students are handwriting their assignments, disregard the MLA requirement on the checklist.

In each lesson students are directed to give their editors a rough draft with the completed checklist attached. The back sides of all checklists are blank so they can be removed from this consumable book.

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

Wonders of Science Writing Lessons: Student Book

25

Instruct students to tear the checklist out of the book so that they can use it while writing. Train students to check what they do and do what they check.

UNIT 2: WRITING FROM NOTES

Intentionally blank so the checklist can be removed.

SAMPLE

Lesson 3: Bombardier Beetles

| | |
|------------|----------------------------|
| Structure: | Unit 2: Writing from Notes |
| Style: | no new style |
| Subject: | Bombardier Beetles |

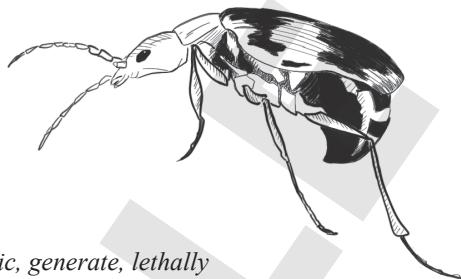
Lesson 3: Bombardier Beetles

UNIT 2: WRITING FROM NOTES

Lesson 3: Bombardier Beetles

Goals

- to practice the Units 1 and 2 structural models
- to create a 1-paragraph KWO
- to write a 1-paragraph summary
- to take Vocabulary Quiz 1
- to use new vocabulary words: *aggressively, caustic, generate, lethally*



Assignment Schedule

Day 1

1. Play Around the World.
2. Take Vocabulary Quiz 1.
3. Read “Bombardier Beetles.” Read it again and write a KWO.

Day 2

1. Review your KWO from Day 1.
2. Complete Style Practice.
3. Look at the vocabulary cards for Lesson 3. Complete Vocabulary Practice.
4. Using your KWO as a guide, begin writing a rough draft in your own words.
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 paragraph. Try your best not to look back at the source text.
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.

Around the World

See Appendix VI for game directions. Use the vocabulary chart on page 304, Lessons 1–2. Because there are only eight words, it is fine to repeat. You are helping students prepare for the quiz.

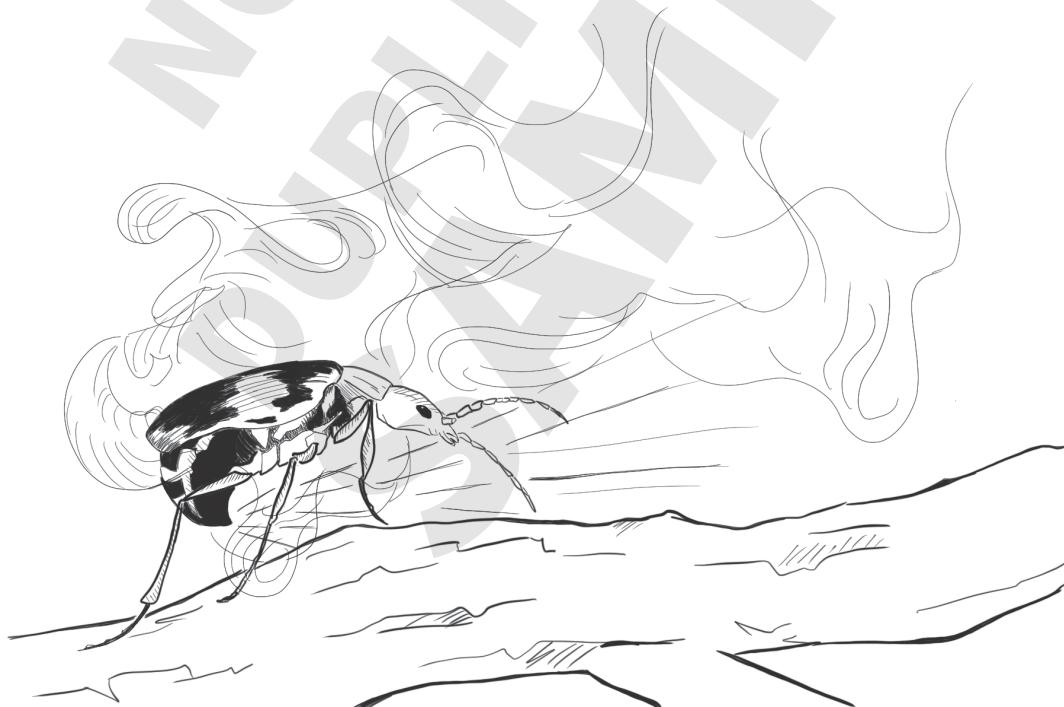
Motivate

When students turn in their final drafts, read some of their compositions aloud. Clap for them! It motivates writers to hear their pieces being read aloud. This is why we write—for an audience.

Source Text

Bombardier Beetles

Bombardier beetles have a unique way to scare off predators. They spray hot acid at their enemies. Bombardier beetles have two compartments inside their abdomens. Each compartment contains a different chemical. When a beetle detects an enemy, it releases a protein that triggers the chemicals to mix together and make formic acid. The acid can get as hot as 100°C (212°F). The beetle shoots the acid out the tip of its abdomen with a loud popping noise. It has enough acid to make twenty sprays. The spray can kill small insects and injure larger predators including humans.

**Mechanics**

Write temperatures in degrees Celsius with Fahrenheit in parentheses. Express temperatures with the $^{\circ}$ symbol rather than the word. Use C for Celsius and F for Fahrenheit.

Do not use spaces or periods between the temperature, symbol, and abbreviation.

Sample

Lesson 3: Bombardier Beetles

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.

- I. BB, unique, scare, predators
1. spray, acid, enemies
2. BB, 2, compartments, abdomen
3. ea., compartment, different, chemical
4. ○○, enemy, mix = formic acid
5. acid, hot, 100°C/212°F
6. shoots, abdomen, POP
7. enough, acid, 20, sprays
8. spray, kill, injure

Reminder

Students should write two or three key words per line. Compound nouns such as *formic acid* count as one key word.

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.

UNIT 2: WRITING FROM NOTES

Style Practice**-ly Adverb Dress-Up**

You must include an -ly adverb in the paragraph you write for this lesson. Write a few ideas on the line below each sentence. Choose your favorite to write on the blank in the sentence. You may look at the list found on page 22, the *Portable Walls for Structure and Style Students*, or the IEW Writing Tools App. Some of your vocabulary words may be helpful as well.

1. Bombardier beetles forcefully spray hot acid.

-ly adverbs aggressively, forcefully, powerfully, instinctively

2. The spray instantly injures predators.

-ly adverbs effectively, potently, successfully, instantly

Look at your KWO and consider -ly adverbs to include in your composition.

Vocabulary Practice

Listen to someone read the vocabulary words for Lesson 3 aloud.

Speak them aloud yourself.

Read the definitions and sample sentences on the vocabulary cards.

Write the correct words in the blanks. You may use derivatives of the words.

Bombardier beetles generate spray from the acid in their abdomens.

The beetle shoots the caustic acid at predators.

Enemies are lethally injured by the spray.

Bombardier beetles aggressively use hot acid to scare off predators.

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



Unit 2 Composition Checklist

Lesson 3: Bombardier Beetles

Name: _____

STRUCTURE

- MLA format (see Appendix I)
- title centered
- checklist on top, final draft, rough draft, key word outline

STYLE

¶1 Dress-Ups (underline one of each)

- ly adverb

MECHANICS (-1 pt per error)

- capitalization
- end marks and punctuation
- complete sentences
- correct spelling

VOCABULARY

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

Writing
from
Notes



Institute for
Excellence in
Writing
Listen, Speak, Read, Write, Think!

_____ 25 pts
_____ 25 pts
_____ 25 pts

(25 pts each)

_____ 25 pts

_____ pts
_____ pts
_____ pts
_____ pts

Total: _____ 100 pts
Custom Total: _____ pts

Checklist

If your students are handwriting their assignments, disregard the MLA requirement on the checklist.

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

UNIT 2: WRITING FROM NOTES

Intentionally blank so the checklist can be removed.

SAMPLE