Sample Lessons

Unit 2, Lesson 1

By Unit 2, Unit 1 activities have already been taught and include the following skills and strategies:

- Text connections
- Decoding-multipart-words strategy
- Oral and silent reading: fluency practice
- Think-pair-share strategy

Unit 2, Lesson 1, includes the following skills and strategies:

- Text connections
- Decoding-multipart-words strategy
- Oral reading: fluency practice (cold timing)
- Text structure
- Word-learning strategies (context clues)

Lesson 1 specifics across the three instructional tracks include the following:

Part A: Comprehension Strategies:
Text Structure
- As a class, participating in activities introducing text structure and Description-or-List.

Part B: Vocabulary Strategies:
Decoding-Multipart-Words Strategy
- Working with partners to complete a decoding-multipart-words strategy activity in the Workbook.

Part B: Vocabulary Strategies:
Word-Learning Strategy: Context Clues
- As a class, participating in activities centered on word-learning strategies (context clues).

Part C: Fluency Strategies:
Cold Timing
- Working with partners to complete a cold timing using the Unit 2 fluency passage.

Part A: Comprehension Strategies:
Text Connections
- Using the Content Reader table of contents to find the assigned lesson.
- Working with partners to complete a text-connections chart in the Workbook.
Unit 2 • Lesson 1

Reading Skills and Strategies
• Make text connections.
• Identify text structure.
• Decode multipart words.
• Use word-learning strategies.

Comprehension Strategies
Activity Text Connections

1. Direct students to Content Reader page 1.
2. On what page will you find Unit 2, Lesson 1? 18.
   Direct students to page 18.
3. Direct students to Workbook page 13. Show Transparency 1: Text-Connections Chart (T1).

Routine • Making Text Connections
a. Assign student partners.
b. Read question 1 to students.
   • What’s the topic of the lesson?
c. Ask students to discuss question 1 and then to write the answer.
d. Ask students what they wrote. Write on T1. Living Things
e. Repeat steps b–d for question 2. to learn more about living things
f. Repeat steps b–d for question 3. Accept reasonable responses.

Unit 2 Science
Lesson 1
Content Reader

As You Read!
You’ll Learn
■ The characteristics of living things
■ The needs of living things

It’s Important
Why
Cells are the basic unit of all living things.

Terms
Key
■ organisms
■ cells
■ stimulus
■ autotrophs
■ heterotrophs
■ homeostasis

Living things, or organisms, can be as large as whales or so small you can’t see them without a microscope. All the organisms on Earth are different. What do you think they have in common?

Characteristics of Living Things
All living things share six basic traits, or characteristics. First, living things are made of cells. Second, their cells contain chemicals that carry out various activities. Third, the cells of living things use energy to perform life functions. Fourth, all organisms respond to their environment. Fifth, living things grow and develop. Sixth, all organisms reproduce.

Cellular Organization
Cells are the smallest parts of living things. They make up the form of an organism and carry out all the functions in the organism’s body. Organisms may contain only one cell, or they may contain many cells. In multicelled organisms, cells are specially designed to do certain jobs. For example, a paramecium contains only one cell.

Living Things

Activity

Text Structure

1. Direct students to Content Reader page 18.
2. Read Unit 2, Lesson 1, to yourself. Allow six minutes.
3. Textbook authors organize, or arrange, paragraphs in certain ways to help you gather meaning. This organizational arrangement is called text structure.
4. Show Transparency 5: Text-Structure Overview (T5).
5. Point to each type of text structure as you read each title.
   • Description-or-List Chart
   • Order-or-Sequence Chart
   • Cause-and-Effect Chart
   • Compare-and-Contrast Chart
6. Ask students to read aloud each text structure.
Where does a main idea usually appear in a paragraph? Idea:

Supporting details usually follow the main idea. The main idea

Supporting Details

- Energy
- Starches, or carbohydrates, provide cells with energy. All the jobs cells do require energy to sustain life for the organism.
- Response to Environment
- Have you ever looked under a rock in the woods? You probably saw dozens of tiny bugs running in all directions. By lifting the rock, you did light on these dark environment. The light a stimulus, something that changed the bugs’ surroundings and caused them to react. Their response was to run away from the light.
- Growth and Development
- Living things grow as they progress through their life cycle. They go through a series of changes that make them more complex. When living things are fully developed, they are able to reproduce, or produce offspring.

7. **Point** to the Description-or-List Chart. **Description-or-List** is the most common way of organizing information in a textbook. That’s why you’ll learn about this type of text structure first. Description-or-List includes a main idea and supporting details.

8. **What’s a main idea? Idea:** The most important thing a paragraph is about. **Accept** reasonable responses.

9. **Where does a main idea usually appear in a paragraph? Idea:** In the first sentence in a paragraph. **Accept** reasonable responses.

10. **What are supporting details? Idea:** Statements that tell more about the main idea. **Accept** reasonable responses.

11. **Where do you usually find supporting details? Idea:** After the main idea. **Accept** reasonable responses.

12. **Direct** students to **Content Reader** page 18: Characteristics of Living Things, paragraph 1. **Read** this paragraph to yourself. **Allow** one minute.

**ROUTINE • Using the Description-or-List Chart**

a. **I’ll use the Description-or-List Chart for the Content Reader information I just read.**

b. **Model** think-aloud for T6.

**Think-Aloud**

**Main Idea:** First, I need to find the main idea of this paragraph, or the most important thing this paragraph is about. The main idea is usually the first sentence. **Read Content Reader** page 18: Characteristics of Living Things, paragraph 1, sentence 1. This sentence is the main idea because the meaning is general and it’s also the first sentence. Six basic traits or characteristics should come next. I’ll read to see if I’m right. **Read** the rest of paragraph 1. I’m right. The rest of the sentences give specific information about the first sentence. The first sentence is the main idea. I’ll write All living things share six basic traits or characteristics in the box labeled “Main Idea.”

**Supporting Details:** Next I need to find the supporting details about the main idea. Supporting details tell me more about the main idea. Supporting details usually follow the main idea. The main idea says there are six basic traits or characteristics. The rest of the sentences included these six basic traits or characteristics. **Read** the rest of paragraph 1 after sentence 1. I’ll write one sentence in each “Supporting Detail” box. **Write** Living things are made of cells. Their cells contain chemicals that carry out various activities. The cells of living things use energy to perform life functions. All organisms respond to their environment. Living things grow and develop. All organisms reproduce.
14. When could you use the Description-or-List Chart? Accept reasonable responses.

15. Why should you use the Description-or-List Chart? Accept reasonable responses.

PART B Vocabulary Strategies

Activity  Decoding-Multipart-Words Strategy


2. You’ve seen the top strategy before. It’s the decoding-multipart-words strategy. The decoding-multipart-words strategy will now always appear on a page like this.

Life Comes from Life

Long ago, people believed living things could come from nonliving things. This idea was disproved in 1668. At that time, people believed flies could spontaneously arise from meat. An Italian doctor named Francesco Redi conducted a controlled experiment. He covered one jar of meat. Another jar was left uncovered. Flies laid eggs on the uncovered meat. The eggs hatched into young flies called maggots. The covered meat showed no signs of maggots because flies could not enter the jar.

Even after Redi’s experiment, many people still thought living things could arise from nonliving things. In the nineteenth century, a French chemist named Louis Pasteur set up some experiments. He showed that bacteria must already be present for new bacteria to appear. Pasteur’s results convinced people that living things come only from other living things. This happens through reproduction.

ROUTINE - Decoding Multipart Words

a. Assign student partners.

b. Have students write organisms in the “Word” box. Write on T7.

c. Read Step 1 to students.
   • Step 1: Underline all the vowel sounds.

d. Ask students to discuss and complete Step 1.

e. Ask students what they did. Write on T7. Review vowel sounds as needed. Organisms.

f. Read Step 2 to students.
   • Step 2: Make a slash between the word parts so each part has one vowel sound.

g. Ask students to discuss and complete Step 2.


i. Read Step 3 to students.
   • Step 3: Go back to the beginning of the word, and read the parts in order.

j. Ask students to discuss and complete Step 3.

### Word-Learning Strategy: Context Clues

1. **Direct** students to *Content Reader* page 18.
2. Your textbooks often try to define new or difficult words. Sometimes the words are bold and highlighted. Direct students to *Content Reader* page 18: Living Things, paragraph 1, sentence 1, organisms. These words are bold and highlighted to draw your attention to them. Typically, the definitions of these bold and highlighted words come right before or right after the word.

3. What do you do when you’re reading and come across a word you don’t know? Accept reasonable responses.

### The Needs of Living Things

**Food**

Remember that organisms are made up of cells, and cells need energy. Living things must get energy from food in order to live. Some organisms, like green plants, can make their own food. These are called autotrophs. All other organisms are heterotrophs. Heterotrophs must get food from other organisms for the energy they need. For example, a rabbit is a heterotroph. It eats a dandelion, an autotroph. A hawk is another heterotroph. It eats the rabbit.

Water

Water is important to life. Most organisms cannot live more than a few days without it. Living things need water to grow and to reproduce. They need water to break down food and to get other chemicals from the environment.

### A Place to Live

For an organism to survive, it must live in a place that meets its needs. Its surroundings must provide food, water, and adequate space. Autotrophs must get enough sunlight to make their own food.

### Stable Internal Conditions

An organism’s environment provides the resources for survival. However, its surroundings may change. An organism must be able to regulate the conditions inside its cells, even if the environment outside its body changes.

**Homeostasis** is the ability to maintain stable internal conditions within cells. Without homeostasis, living things could not adjust to changes in temperature, moisture, or chemicals in their environment. For example, desert animals conserve water in their bodies. The stored water helps them survive long periods without rain.

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**Activity**
- **STRONG**
- **TEACHER SUPPORT**
- **AVERAGE**
- **BEGINNER**

**Revision**
- What are the four basic needs of all living things? (food, water, a place to live, and stable conditions inside the body)
- What do you do when you’re reading and come across a word you don’t know? (Accept reasonable responses)

**Lesson Assessment**

**Critical Thinking**

1. List: What are the six things all organisms have in common?
2. List: What are the four basic needs of all living things?
3. Compare and Contrast: Because autotrophs and heterotrophs different!
4. Define: What is a stimulus? What is a response?

**Writing in Science**

Describe the experiments of Redi and Pasteur. Without autotrophs, living things could not adjust to changes in temperature, moisture, or chemicals in their environment. For example, desert animals conserve water in their bodies. The stored water helps them survive long periods without rain.
Continued: Unit 2 • Lesson 1

**Part C**

10 minutes

**TEACHER SUPPORT**

**Fluency Strategies**

**Activity**

**Cold Timing**

**NOTE:** The procedure for cold timing has been included below for teacher reference. As students become more familiar with the procedure, reduce teacher support to encourage student independence.

1. Remember, each week you’ll do two timings with a partner. You’ll do a cold timing at the beginning of the week and a hot timing at the end of the week to see how much you’ve improved.

2. ▶ Direct students to **Workbook** page 1 as needed. Show Transparency 3: Fluency Sample (T3) as needed.

3. **Review** the numbers on the right side of the sample passage, the procedures for conducting a timing, and the use of a slash at the end of the timing as needed.

4. **Now you’ll do your cold timing using a new fluency passage.**

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**Fluency Sample**

**Transparency 3/Workbook page 1**

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**Assessment Masters**

<table>
<thead>
<tr>
<th>Unit 2</th>
<th>Fluency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Date</td>
</tr>
</tbody>
</table>

**The Basics of Bird Flu**

Bird flu is an infection caused by a virus. Bird flu is also called avian flu. It occurs naturally in birds, but most wild birds don’t become sick from it. It spreads easily to domesticated birds. Chickens, turkeys, and geese can become quite ill. In rare cases, humans can catch the disease from infected birds. Millions of birds and several humans have died from bird flu.

**Cause of Bird Flu**

Bird flu is caused by a type of flu virus that is different from the ones that affect people. It is passed from wild birds to domesticated birds. The virus can be spread through contact with infected birds, their droppings, or their nasal secretions.

**How to Get Bird Flu**

Bird flu can be transmitted to humans in a few ways:

1. **Direct Contact:** If a person handles an infected bird (such as a dead bird) or its droppings.
2. **Indirect Contact:** If a person handles contaminated objects or surfaces, such as clothes, cages, or equipment used to care for birds.
3. **Respiratory Route:** If an infected person coughs or sneezes and the virus enters the air, and another person inhales it.

**Prevention**

To prevent bird flu, it is important to:

- **Avoid Contact:** Avoid contact with birds and bird droppings.
- **Wash Hands:** Wash your hands often with soap and water, especially after handling birds or bird droppings.
- **Use Gloves:** Wear gloves when handling birds or bird droppings.
- **Disinfect Surfaces:** Disinfect surfaces that have come into contact with birds or bird droppings.
- **Seek Medical Attention:** If you develop symptoms of flu, seek medical attention immediately.

**Symptoms of Bird Flu**

Bird flu symptoms are similar to those of the common flu. They include:

- Fever
- Muscle pain
- Sore throat
- Runny or stuffy nose
- Cough
- Headache

**Prevention**

To prevent bird flu, it is important to:

- **Avoid Contact:** Avoid contact with birds and bird droppings.
- **Wash Hands:** Wash your hands often with soap and water, especially after handling birds or bird droppings.
- **Use Gloves:** Wear gloves when handling birds or bird droppings.
- **Disinfect Surfaces:** Disinfect surfaces that have come into contact with birds or bird droppings.
- **Seek Medical Attention:** If you develop symptoms of flu, seek medical attention immediately.

**Treatment of Bird Flu**

Treatment of bird flu includes:

- **Antiviral Medications:** Antiviral medications can reduce the severity of symptoms and can be used to treat infections caused by specific types of flu virus.
- **Chest Physical Therapy:** Chest physical therapy can help prevent complications such as pneumonia.
- **Antibiotics:** Antibiotics may be prescribed if a bacterial infection develops.

**Important Points to Remember**

- **Report Injuries:** Report any injuries to your instructor immediately.
- **Stay Safe:** Stay safe by following all safety procedures.
- **Be Prepared:** Be prepared for any emergency by having the appropriate supplies and equipment.

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**Unit 2**

**Fluency**

<table>
<thead>
<tr>
<th>Check box</th>
<th>Cold Timing</th>
<th>Hot Timing</th>
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</thead>
<tbody>
<tr>
<td>Word Count</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

**Fluency Sample**

**Transparency 3/Workbook page 1**

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**Teacher’s Edition: Unit 2, Lesson 1**

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Continued: Unit 2 • Lesson 1
Lesson Wrap-Up

Conclude lesson with a brief review of reading skills and strategies taught (make text connections, identify text structure, decode multipart words, and use word-learning strategies).

5. All week you’ll practice reading your fluency passage. At the end of the week, you’ll do your hot timing to see how much you’ve improved. You’ll also check to see whether you’ve reached your goal line.

Routine - Conducting Cold Timing


b. Ask Partner 1 to read aloud to Partner 2. Remind students not to interrupt.

c. Time students for one minute. Monitor students.

d. Ask Partner 2 to tell Partner 1 each word missed, and ask Partner 1 to read aloud each sentence correctly. Review how to correct an error as needed.

e. Ask Partner 2 to read aloud to Partner 1. Remind students not to interrupt.

f. Time students for one minute. Monitor students.

g. Ask Partner 1 to tell Partner 2 each word missed, and ask Partner 2 to read aloud each sentence correctly. Review how to correct an error as needed.

h. Have students calculate CWPM. Guide as needed. Provide students with calculators as needed.
The Basics of Bird Flu

Bird flu is an infection caused by a virus. Bird flu is also called avian flu. It occurs naturally in birds, but most wild birds don’t become sick from it. It spreads easily to domestic birds. Chickens, turkeys, and geese can become quite ill. In rare cases, humans can catch the disease from infected birds. Millions of birds and several humans have died from bird flu.

How the Virus Spreads

Strains of the bird flu virus are often carried by ducks and other waterbirds. These birds pass the virus to other birds. The virus spreads through saliva, mucus, and airborne particles. The virus can be carried on tractors, cages, and clothing. Outdoor markets full of birds and people are a good place for spreading the disease. People who have contact with sick birds may become infected. One infected person may spread the disease to another person.

Symptoms and Treatments

Bird flu symptoms are like those of the common flu. They are cough, fever, muscle pain, and sore throat. People infected with a weak strain of the virus may have only a mild eye infection. People infected with a powerful strain may develop serious respiratory problems. Lung problems are the most common cause of death in patients.

The Federal Drug Administration has approved four drugs for the treatment of bird flu. However, viruses can change their genetic makeup. They may become resistant to the drugs. Then the drugs will no longer work.

Prevention

There is now a vaccine to protect against the most dangerous strain of bird flu. So far, it seems to be working. However, scientists worry that someday the virus may become immune to this vaccine. The first defense against avian flu is to avoid travel to regions where outbreaks have occurred. Here’s what you can do to prevent the spread of the disease. Wash your hands often. Don’t eat raw eggs. Be sure the poultry you eat is fully cooked. These steps will help keep you safe.
APPENDIX A

Text-Connections Chart

1
What’s the topic of the lesson?

2
What’s your purpose for reading?

3
What do you know about the topic?
Dian Fossey

Dian Fossey was a famous scientist who studied mountain gorillas. She had been interested in animals her whole life. She went to college as a preveterinary student. But then Fossey changed her major to occupational therapy so she could help people learn to live and work independently. Fossey worked for many years as an occupational therapist.

Fossey became interested in gorillas after she read a book about them by a zoologist. A zoologist is a scientist who studies animals. Fossey traveled to Africa and spent six weeks there. While in Africa, she met Dr. Louis Leakey, a famous scientist, who later asked her to return to Africa to study gorillas. Fossey agreed. Her life would forever be changed.

Fossey lived among the gorillas for almost eighteen years. She spent countless hours watching the gorillas, living among them, and imitating their behaviors and sounds so she could earn their trust. Fossey was so interested in gorillas she studied about them intensely, earning her doctorate from Cambridge University in 1976. She later became a professor at Cornell University and wrote a book about her experiences, *Gorillas in the Mist*. This book is one of the best-selling books about gorillas of all time. In fact, the book was so popular it became a movie.

One day, when a gorilla touched Fossey’s hand, she became the first known person ever to have voluntary contact with a gorilla. She became very close to one gorilla. She named this gorilla Digit. Fossey watched Digit grow, and the two of them became very close. Digit was later killed by poachers. Poachers are people who kill animals that are endangered or that live on protected land. Fossey was so upset over Digit’s death she developed the Digit Fund (now called the Dian Fossey Gorilla Fund) to raise money for the protection of gorillas.

In 1985, Fossey was killed. Her death is still considered an unsolved mystery. Her dream was to preserve the safety of gorillas and to watch their numbers grow.
APPENDIX A

Text-Structure Overview

- Description-or-List Chart
- Order-or-Sequence Chart
- Cause-and-Effect Chart
- Compare-and-Contrast Chart
**Context-Clues Strategy**

When you come across a word you don’t know,

**Step 1:** Read the sentence containing the word.

**Step 2:** Look for a definition or for examples of the word in the sentence.

**Step 3:** Read before or after the sentence for a definition or for examples of the word.

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**Decoding-Multipart-Words Strategy**

**Step 1:** Underline all the vowel sounds.

**Step 2:** Make a slash between the word parts so each part has one vowel sound.

**Step 3:** Go back to the beginning of the word, and read the parts in order.

**Step 4:** Read the whole word.
Living things, or organisms, can be as large as whales or so small you can’t see them without a microscope. All the organisms on Earth are different. What do you think they have in common?

**Characteristics of Living Things**

All living things share six basic traits, or characteristics. First, living things are made of cells. Second, their cells contain chemicals that carry out various activities. Third, the cells of living things use energy to perform life functions. Fourth, all organisms respond to their environment. Fifth, living things grow and develop. Sixth, all organisms reproduce.

**Cellular Organization**

Cells are the smallest parts of living things. They make up the form of an organism and carry out all the functions in the organism's body. Organisms may contain only one cell, or they may contain many cells. In multicelled organisms, cells are specially designed to do certain jobs. For example,
humans have skin cells, muscle cells, and blood cells that perform specific tasks within the body.

**Chemicals**

All cells contain chemicals necessary for life. Chemicals in the cell’s nucleus, or control center, direct all cell activity. Proteins and fats, or lipids, aid in cell growth and repair.

**Energy**

Starches, or carbohydrates, provide cells with energy. All the jobs cells do require energy to sustain life for the organism.

**Response to Environment**

Have you ever looked under a rock in the woods? You probably saw dozens of tiny bugs running in all directions. By lifting the rock, you shed light on their dark environment. The light was a **stimulus**, something that changed the bugs’ surroundings and caused them to react. Their response was to run away from the light.

**Growth and Development**

Living things grow as they progress through their life cycle. They go through a series of changes that make them more complex. When living things are fully developed, they are able to reproduce, or produce offspring.
Life Comes from Life

Long ago, people believed living things could come from nonliving things. This idea was disproved in 1668. At that time, people believed flies could spontaneously arise from meat. An Italian doctor named Francesco Redi conducted a controlled experiment. He covered one jar of meat. Another jar was left uncovered. Flies laid eggs on the uncovered meat. The eggs hatched into young flies called maggots. The covered meat showed no signs of maggots because flies could not enter the jar.

Even after Redi’s experiment, many people still thought living things could arise from nonliving things. In the nineteenth century, a French chemist named Louis Pasteur set up some experiments. He showed that bacteria must already be present for new bacteria to appear. Pasteur’s results convinced people that living things come only from other living things. This happens through reproduction.
The Needs of Living Things

Despite the great diversity, or variety, of life, all living things must meet four basic needs to survive. Every organism must have food, water, a place to live, and stable conditions inside its body.

Food

Remember that organisms are made up of cells, and cells need energy. Living things must get energy from food in order to live. Some organisms, like green plants, can make their own food. They are called autotrophs. All other organisms are heterotrophs. Heterotrophs cannot make their own food. Heterotrophs must feed on other organisms for the energy they need. For example, a rabbit is a heterotroph. It eats a dandelion, an autotroph. A hawk is another heterotroph. It eats the rabbit.

Water

Water is important to life. Most organisms cannot live more than a few days without it. Living things need water to grow and to reproduce. They need water to break down food and to get other chemicals from the environment.

A Place to Live

For an organism to survive, it must live in a place that meets its needs. Its surroundings must provide food, water, and adequate space. Autotrophs must get enough sunlight to make their own food.

Stable Internal Conditions

An organism’s environment provides the resources for survival. However, its surroundings may change. An organism must be able to regulate the conditions inside its cells, even if the environment outside its body changes.

Homeostasis is the ability to maintain stable internal conditions within cells. Without homeostasis, living things could not adjust to changes in temperature, moisture, or chemicals in their environment. For example, desert animals conserve water in their bodies. The stored water helps them survive long periods without rain.

Lesson Assessment

Review
1. List What are the six things all organisms have in common?
2. List What are the four basic needs of all living things?
3. Compare and Contrast How are autotrophs and heterotrophs different?
4. Define What is a stimulus? What is homeostasis?

Critical Thinking
What kinds of living things are autotrophs? What kinds of living things are heterotrophs?

Writing in Science
Describe the experiments of Redi and Pasteur, and explain what they showed.
APPENDIX A

Text-Connections Chart

Name ____________________________ Date __________

1 What’s the topic of the lesson? ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

2 What’s your purpose for reading? ___________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

3 What do you know about the topic? _________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
Context-Clues Strategy

Decoding-Multipart-Words Strategy

Step 1: Underline all the vowel sounds.

Step 2: Make a slash between the word parts so each part has one vowel sound.

Step 3: Go back to the beginning of the word, and read the parts in order.

Step 4: Read the whole word.

Word Meaning from Context

When you come across a word you don’t know,

Step 1: Read the sentence containing the word.

Step 2: Look for a definition or for examples of the word in the sentence.

Step 3: Read before or after the sentence for a definition or for examples of the word.