READING FOR ACADEMIC SUCCESS - AN OER TEXTBOOK FOR READING 7



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Portland Community College

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Reading for Academic Success - An OER Textbook for Reading 7

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1: UNDERSTANDING AN ACADEMIC TEXT

Topic: Reading and Memory

1.1: Unit Vocabulary

1.2: Topic Preview

1.3: Reading 1- Reading an Academic Text

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1.1: Unit Vocabulary

accurately	ambiguous	analyze	appropriate	aspects	bias
clarify	concept	critically	effective	effectively	efficient
efficiently	essential	familiar with	from scratch	highlight	highly
indicate	logic	overview	relevant	significantly	tool

Ex. A: Match the underlined words and their synonyms.

1. ___ She guessed everything right.	A. appropriate
2. ___ His answer was a bit unclear.	B. accurately
3. ___ That outfit is not okay for the job interview.	C. is biased
4. ___ The news article only shows one side.	D. ambiguous
5 ___ She finished the task quickly and well.	E. efficiently

1. ___ Try to think carefully about the argument.	A. from scratch
2. ___ My English skills have improved a lot.	B. critically
3. ___ Sleep is really important for your health.	C. significantly
4. ___ That information doesn't really matter here.	D. is irrelevant
5. ___ We had to build the project from the beginning.	E. essential

1. ___ He is very talented in math.	A. aspects
2. ___ Let's look closely at the information.	B. highly
3. ___ We discussed different parts of the problem.	C. tool
4. ___ Her argument makes a lot of sense.	D. analyze
5. ___ A calendar is a helpful thing to organize time.	E. is logical

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1.2: Topic Preview

Ex. A: Read this email from a student to an instructor. What advice would you give the student?

Profile Type — None —

Subject Help with Reading Assignments

Add Variable

Dear Professor Smith,

I hope you're doing well. I'm having a hard time understanding how to read and study the assigned texts for your class. I often read everything but still feel confused about the main ideas and what's important for the test. I also have a hard time focusing and often start thinking about things I have to do while I'm reading the texts. Is there any advice or resource you recommend? I really want to improve and keep up with the course.

Thank you for your time and support.

Best,
Andrea Alves



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1.3: Reading 1- Reading an Academic Text

Listen to the text: https://tinyurl.com/reading7text1

Ex. A: Read the article below. Stop after each paragraph to answer the questions to the right.

Reading an Academic Text

Reading academic texts can be challenging, especially when you know the material will be on a test. Some students read quickly but may not understand the main ideas **accurately**. **Others** read everything but forget the most important **aspects** of the text. This guide will help you develop a strategy to read more **effectively**, better **analyze** the text and remember more information for your exams. You will learn what to do before you read, while you read, and after you read—so you don't have to start studying **from scratch** every time.

Exercise

1. Do you usually remember everything you read?
2. What does "others" refer to?
3. What is the main idea of the text?

Before You Read: Prepare Your Mind

First, it is **essential** to take time to prepare before you start reading. This helps you connect new information with things you already know. Making this connection helps your brain remember and understand the ideas more easily. **Previewing** also helps you focus and know what to expect in the reading. Here are some strategies to use before reading:

1. Reading the title, headings, and any subheadings can help you understand the topic and purpose of the text. Ask yourself:
   - What is this text about?
   - What do I already know about this subject?
2. If your professor gives you questions to answer later, read them first. These questions usually **indicate** what ideas are most important. If no questions are provided, make your own. Knowing what to look for can help you read with more attention and less confusion.
3. **Preview the Text**
4. **Search for Information**

Exercise

4. Why is it important to make connections with what you already know?
5. What are some strategies you already use to preview a text?
6. Why is it important to come up with questions before you read?
7. What is the difference between a **preview** and an **overview**?

8. What are some good places to find images or short videos?

While You Read: Read with Purpose

Reading with purpose means you are not just reading the words, but you are thinking about the meaning. This helps you understand the ideas more **accurately**. Here are some tips for active reading:

1. Use a pen to **highlight** the most important sentences or phrases. These may include topic sentences, definitions and examples. Be careful not to highlight too much. That can make your notes **ambiguous**—unclear and not helpful. Focus on what is most useful.
2. **Take Notes in Your Own Words**
3. **Ask Questions While You Read**
   - What is the author's purpose?
   - Is the author showing any **bias**?
   - How does this idea connect to what I already read?

   Watch for bias—when a writer shows strong opinions without giving both sides. Recognizing bias helps you think **critically** about the information.

4. Signal words help show how ideas are connected. These words **clarify** meaning and structure, and they help you follow the author's **logic** more **accurately**.
   - **Cause and effect:** because, therefore, as a result
   - **Comparison:** similarly, likewise, also
   - **Contrast:** however, on the other hand, although
   - **Examples:** for example, such as, for instance
   - **Time order:** first, then, later, finally

Exercise

9. Do you usually highlight when you read?
10. What are some reasons why you should take notes while you read?
11. Do you think it's possible to find an unbiased text?
12. How can signal words help you decide how to organize your reading notes?

After You Read: Understand and Review

Finishing the text is not the last step. If the text will be on a test, you need to review and remember what you read. These steps will help you do that.

1. After reading, write a short summary of the most important aspects of the text. Use your own words to clarify your understanding. Ask yourself:
   - What were the main points?
   - What examples were given?
   - Did the author have any bias?

   Writing a summary helps you organize your thoughts and improve your understanding of the key ideas.

2. **Answer the Questions Again**
3. **Make Study Tools**
   - **Flashcards** with important vocabulary or concepts
   - **Concept maps** to show how ideas connect
   - **Lists or charts** to organize facts or examples

   These tools are highly effective and can help you study more efficiently. You do not need to study everything—focus on the most **relevant** and most **appropriate** information for the test.

4. **Practice with Others**

Extra Tips for Success

- **Take breaks:** Studying for a long time without breaks makes it hard to concentrate. Try reading for 25–30 minutes, then taking a 5-minute break.
- **Stay positive:** Reading academic texts in another language is not easy. If you don't understand everything, that's okay. Use the strategies and try again.
- **Ask for help:** If something is confusing or ambiguous, ask your teacher or a classmate. You can also look for videos or simpler articles to help you understand the topic.

Conclusion

Reading academic texts for a test is not just about finishing the reading. It's about understanding, thinking, and remembering. Use strategies before you read to prepare your mind. Read actively so you can understand the meaning **accurately**. After reading, **clarify** what you learned and use **tools** to help you review.

If you follow these steps, you will not need to start studying **from scratch** before every test. You will already know the material well—and feel more confident and prepared. With practice, your reading skills will improve **significantly**, and your academic success will grow.

Exercise

13. Do you usually review your notes before a test? Or do you read the text again?
14. Do you think it's better to summarize the text orally or in writing?
15. IDEA! If you can't answer your own questions, they may be excellent ones to ask in class or in group discussions.
16. What are some other examples of study tools? Which ones help you the most?
17. Do you think study groups can help you understand difficult concepts? How can you form a study group?

Ex. B: Read each statement and decide if it is True or False according to the text.

___ 1. It is **essential** to **highlight** everything important in the text so you remember it.

___ 2. When reading **critically**, you should consider the author's purpose and check for **bias**.

___ 3. **Starting from scratch** every time you study is unavoidable.

___ 4. Making an outline or **overview** of the text can help **clarify** its main ideas.

___ 5. If a word in the text seems **ambiguous**, it's not an important word.

___ 6. Reading **familiar** concepts very slowly and repeatedly is the most effective way to study.

___ 7. Recognizing **signal words** can help you understand the **logic** and structure of the text.

___ 8. After some **analysis**, it is **appropriate** to ignore sections of the text that seem **irrelevant** to your topic.

___ 9. If you want to understand and remember new **concepts**, it is more **effective** to copy the information from the text than to take notes in your own words.

___ 10. Reading **efficiently** means reading fast without checking for understanding.

___ 11. You should **highlight** only the sentences that indicate the main ideas or definitions.

___ 12. Learning how to study effectively is **highly** important for academic success.

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1.4: Reading Skills- Using Graphic Organizers

Ex. A: Read the text about graphic organizers.

Using Graphic Organizers to Take Notes

Many students take reading notes using traditional outlines. In addition to outlines, graphic organizers are visual tools that help students take notes efficiently and organize information from a text. Instead of writing long notes, students can use shapes, lines, and charts to highlight main ideas and relevant information clearly.

One common type of graphic organizer is a **mind map**. In a mind map, the main idea goes in the center, and related ideas branch out around it. This can highlight important connections and make the logic of the text easier to see.

Another useful organizer is a **Venn diagram**. It has two overlapping circles and is used to compare and contrast two concepts. The similarities go in the middle where the circles overlap, and the differences go in the outer parts.

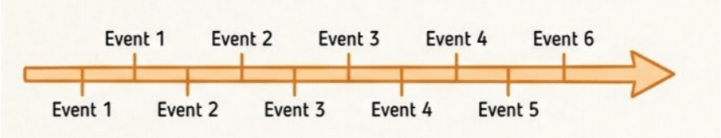
Students can also use a **timeline** to organize events in the correct order. This helps them understand the sequence of events, and it is especially helpful in historical or narrative texts.

Tables can also be very useful when taking notes. Students can use a chart or table to organize facts, examples, or details in rows and columns.

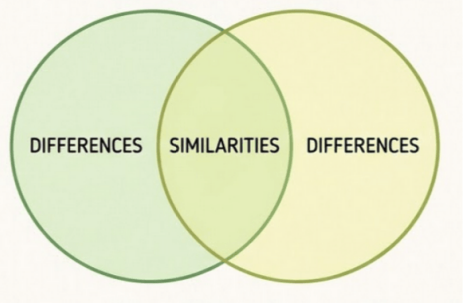
Graphic organizers are especially helpful when a text is complex because they make it easier to understand how the ideas are organized and remember important information. When students become familiar with these tools, they can more easily see the structure of the text, and they can significantly improve their note-taking skills.

Ex. B: Based on the information in the text, label each of the diagrams. Then, for each organizer, identify a specific type of text (e.g., a history book or a science article) where that tool would be most useful.

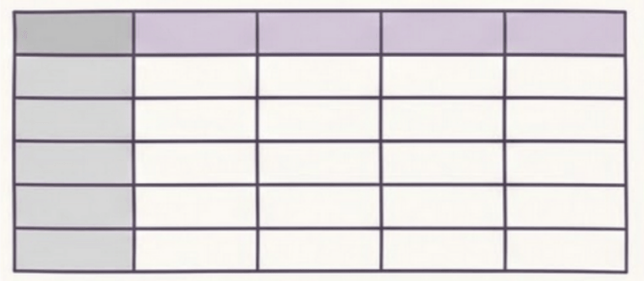
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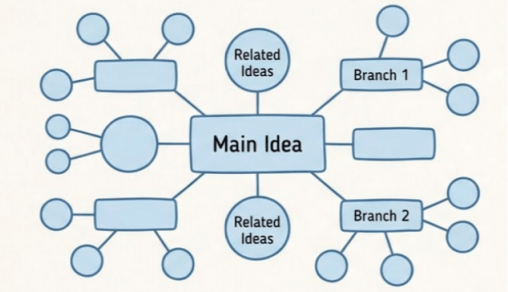
2



3



4



Ex. C: Now read these paragraphs. Choose the most appropriate graphic organizer to use for notes.

Paragraph #1

Solar energy and wind energy are two important forms of renewable energy. Solar energy comes from sunlight and is collected using solar panels. It works best in sunny places and during the daytime. Wind energy comes from moving air and is collected using wind turbines. It works best in places with strong and steady winds. Both types of energy are renewable, which means they do not run out. They also produce electricity without causing air pollution. However, both depend on weather conditions, so energy production can sometimes be inconsistent.

Paragraph #2

The development of the internet happened over many years. In 1969, researchers in the United States created one of the first computer networks that allowed computers to communicate. In the 1980s, more universities and research centers began using computer networks to share information. In 1991, a British scientist named Tim Berners-Lee introduced the World Wide Web, which made it easier for people to access information online. During the 2000s, the internet became common in homes, schools, and workplaces around the world. Today, billions of people use the internet every day for communication, research, and entertainment.

Paragraph #3

Many animals have different ways to adapt to cold environments. Polar bears have thick fur and a layer of fat to keep their bodies warm. Penguins have dense feathers and often stay close together in groups to share body heat. Arctic foxes change the color of their fur in winter so they can blend in with the snow. These adaptations help animals survive in extremely cold temperatures where food and shelter are limited.

Paragraph #4

Regular exercise is important for maintaining good health. It can improve physical health by strengthening muscles and the heart. Exercise also supports mental health by reducing stress and improving mood. In addition, it can increase energy levels and help people sleep better at night. Finally, exercise can help prevent certain diseases, such as heart disease and diabetes. Because of these benefits, health experts recommend that people exercise regularly.

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1.5: Vocabulary Review 1

Ex. A: Discuss these questions with your classmates.

1. What is an example of something that is not **appropriate** to do in the classroom?
2. What **aspect** of your culture do you enjoy sharing with others?
3. Do you think the news is always **biased**?
4. What is one **aspect** of your life that has changed **significantly** since you moved to Oregon?
5. What is the most **essential** skill for success at work?
6. Do you often bake food **from scratch**? What is it?
7. Who is someone who is **highly** successful in your opinion?
8. What is an example of a behavior that **indicates** that someone is a good listener?
9. Do you think people always use **logic** when making big decisions?
10. What is an example of a **relevant** question in a job interview?

Ex. B: Choose the best form of the word to complete each sentence.

1. The scientist carefully ___ the data before she wrote the report. The ___ was careful.
   A. analysis
   B. analyzed
   C. analytical
2. The professor ___ the meaning of a term that seemed ambiguous. The ___ helped the students.
   A. clarified
   B. clarification
3. This program helps employees work more ___. The manager is happy with the program's ___ .
   A. efficient
   B. efficiently
   C. efficiency
   D. inefficient
4. The results of the study were quite ___ for our project. The ___ of the results is remarkable.
   A. relevance
   B. relevant
   C. irrelevance
5. The journalist tried to report the story as ___ as possible. She didn't want the story to be ___ .
   A. accuracy
   B. accurate
   C. accurately
   D. inaccurate
   E. inaccurately
6. We need a ___ explanation so everyone can understand the idea. We need to understand the ___ .
   A. logic
   B. logical
   C. logically
7. There was some political ___ in the article, so it did not seem objective. The author was ___ .
   A. bias
   B. biased
   C. unbiased
8. The team developed a very ___ strategy to solve the problem.
   A. effectively
   B. effective
   C. ineffective
   D. ineffectively

Ex. C: Choose the best word to complete each sentence. **For more help, look at the definitions below!**

accurately	aspects	critically	efficiently	highlight	overview
ambiguous	bias	effective	essential	highly	relevant
analyze	clarify	effectively	familiar with	indicate	significantly
appropriate	concept	efficient	from scratch	logic	tool

Note

Use the definitions at the bottom to help you.

When learners connect new readings and vocabulary to knowledge and life experience they already have, learning becomes more (1) _____ and (2) _____ . Instead of starting (3) _____ , students use ideas they are already (4) _____ in order to understand new (5) _____ . This helps them understand meaning (6) _____ , especially when a text is (7) _____ or complex.

By stopping to (8) _____ a text (9) _____ , learners can (10) _____ ideas they do not understand, examine different (11) _____ of the topic, and recognize possible (12) _____ . Making these connections helps students decide what information is (13) _____ to them and follow the (14) _____ flow of ideas more easily.

To help students, teachers usually (15) _____ key points and give an (16) _____ to (17) _____ the main ideas of a text. When learners use (18) _____ strategies and think effectively, comprehension improves (19) _____ , and new vocabulary becomes essential, (20) _____ meaningful, and easier to remember.

Definitions

1. producing the desired result; working well
2. doing something well without wasting time or effort
3. starting with nothing or from the beginning
4. having knowledge or experience of something
5. ideas
6. in a correct and exact way
7. having more than one possible meaning; unclear
8. to examine something carefully to understand it
9. by thinking carefully and questioning ideas
10. to make something easier to understand
11. parts or features of something
12. a preference or opinion that is not neutral or fair
13. closely connected to the topic or situation
14. clear and reasonable thinking or order of ideas
15. to emphasize or show what is important
16. a general summary or main idea
17. to show or point out
18. suitable or right for a situation
19. in an important or noticeable way; a lot
20. very; to a great degree

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1.6: Reading 2- How Memory Works

Ex. A: Use the **before you read** / **while you read** / **after you read** strategies that you learned from the first text to read the following article.

How Memory Works

1 Memory helps us learn, remember, and use information in our daily lives. It is how the brain saves and brings back knowledge. Memory is **essential** for learning a new language, because every word, sound, and rule must be **stored** and used again later. Memory has three main steps: encoding, storage, and retrieval.

2 **Encoding** is the first step. It means taking in information and giving it meaning. For example, when you read a new word in another language or hear it in a conversation, your brain changes that information into a form it can understand. Encoding works best when you are focused and active. To improve encoding, you can repeat the word out loud, write it in a sentence, or connect it to a picture or gesture. When learning vocabulary **from scratch**, it is helpful to learn the word with an image, a sound, and a personal example. This strategy makes the word easier to remember.

3 **Storage** is the second step. It means keeping information in the brain over time. Some memories last only a few seconds, while others stay for days, months, or even years. Storage becomes stronger when information is reviewed regularly. For vocabulary learning, spaced repetition is **highly** effective. This means reviewing words a little bit each day instead of studying everything at once. Another useful strategy is grouping words by topic (food, travel, emotions) or word type (verbs, nouns, adjectives). Using new words in speaking and writing also helps store them in long-term memory.

4 **Retrieval** is the third step in learning and refers to bringing stored information back when it is needed. There are two main types of retrieval: recognition and recall. Recognition means identifying information when it is presented, such as recognizing the correct meaning of a word when you see it in a multiple-choice quiz or hear it in a conversation. Recall means remembering a word or structure without any help, such as using a new word correctly in a spoken sentence or writing it from memory. To improve retrieval, language learners should practice active recall, which requires effort and strengthens memory. Effective study strategies include using flashcards without looking at the answer first, answering open-ended questions, completing sentences from memory, explaining the meaning and use of a word to a partner, and writing short texts using new vocabulary. Spacing retrieval practice over time, mixing old and new material, and using words in different contexts—speaking, listening, reading, and writing—also help learners retrieve language more quickly and **accurately** in real communication.

5 There are also two main types of memory: **explicit memory** and **implicit memory**, and both **play an important role** in learning a new language. **Explicit memory** is when you remember facts or events on purpose and with conscious effort. This includes memorizing vocabulary lists, grammar rules, verb conjugations, or spelling patterns. For example, when you study a list of new words, review flashcards, or practice grammar exercises, you are using explicit memory. This type of memory is often used in classroom learning and is especially helpful at the beginning stages of language study.

6 **Implicit memory**, on the other hand, is when remembering happens automatically, without conscious **awareness**. You do not actively think about what you remember the information, but it influences your behavior and skills. In language use, implicit memory helps you remember pronunciation **patterns**, sentence rhythm, and common phrases without thinking about the rules. For example, you may say a phrase correctly because it "sounds right," **even if** you cannot explain why. This type of memory supports fluent and **automatic** language use. Both types of memory work together: explicit memory helps you understand and organize the language, while implicit memory helps you use it more fluently and naturally. These two memory systems interact, but they are not the same. Explicit knowledge does not automatically become implicit. Knowing a rule consciously does not guarantee that you will apply it automatically in real-time conversation. To support the transition from explicit to implicit memory, it is **essential** to first develop a clear understanding of the information and then engage in regular practice through extensive reading, listening, speaking, and writing.

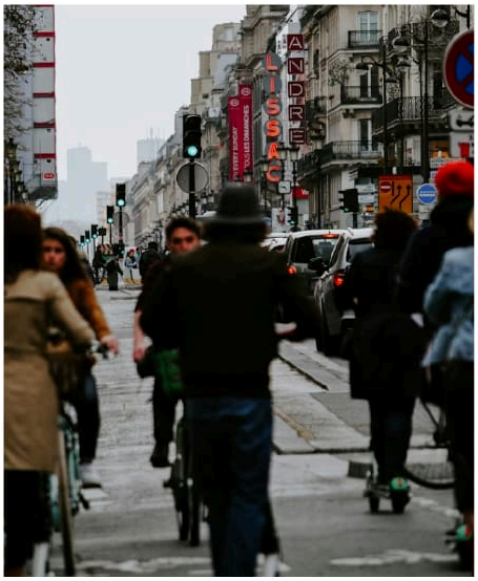
7 Understanding how memory works can help you study more **effectively**. By focusing on encoding, storage, and retrieval, and by using strategies like repetition, visualization, and active practice, you can build strong and lasting memories. These methods are especially important for learning new vocabulary in another language and for turning new words into confident, automatic use.

Note

Explicit memory and recall are related but not exactly the same. Explicit memory is the broad "umbrella term" for the storage of conscious knowledge, such as facts and personal events. On the other hand, recall is a specific method used to retrieve that information. While explicit memory represents the information itself, recall is the process of generating it from scratch—such as answering an essay question—rather than simply identifying it from a list. In other words, recall is a specialized tool used to access and measure what is stored in explicit memory.

Note

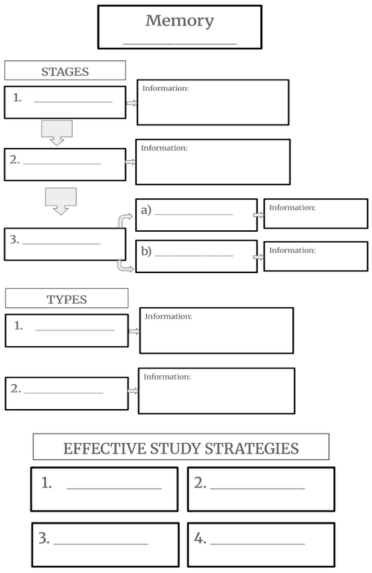
Another helpful reading strategy is to connect what you've read to your daily life. This will help you make the text more meaningful. Based on what you've learned from this text, what are some strategies you can use to remember more information when you read a text?



(Photo by Matt Seymour on Unsplash.com)

Ex. B: Now take notes. Use information from the text to fill out the graphic organizer **or** the guided outline.

Graphic Organizer



Guided Outline

Memory: _____

A. **Stages of Memory Formation**
   1. 1st stage: _____
      a. Information: _____
   2. 2nd stage: _____
      a. Information: _____
   3. 3rd stage: _____
      a. 1st type: _____
         i. Information: _____
      b. 2nd type: _____
         i. Information: _____

B. **Two Main Types of Memory**
   1. 1st type: _____
      a. Information: _____
   2. 2nd type: _____
      a. Information: _____

C. **Effective Memory Strategies**
   1. _____
   2. _____
   3. _____
   4. _____

Ex. C: Use your notes from the graphic organizer to answer these questions.

1. **What is the main purpose of the passage?**
   A. To compare different language-learning methods used in classrooms
   B. To explain how memory functions and how it supports language learning
   C. To argue that implicit memory is more important than explicit memory
   D. To describe common problems language learners face when studying vocabulary
2. **According to the passage, which of the following best describes encoding?**
   A. Storing information in long-term memory through repetition
   B. Actively retrieving information during communication

C. Transforming new information into a meaningful form
D. Grouping vocabulary by topic or word type

3. **Which strategy is mentioned as most helpful for strengthening storage of vocabulary?**
   A. Studying all vocabulary in one long session
   B. Focusing only on recognition activities
   C. Memorizing grammar rules before learning vocabulary
   D. Reviewing words regularly over time
4. **The word "retrieval" in paragraph 4 is closest in meaning to:**
   A. recovery
   B. understanding
   C. organization
   D. exposure
5. **What can be inferred about active recall from the passage?**
   A. It is less effective than recognition for long-term learning
   B. It requires more mental effort than recognition
   C. It should only be used by advanced language learners
   D. It is mainly useful for learning grammar rules
6. **Which of the following is an example of recognition, as described in the passage?**
   A. Writing a paragraph using new vocabulary from memory
   B. Explaining a word's meaning to a partner
   C. Identifying the correct word meaning in a multiple-choice question
   D. Completing a sentence without looking at notes
7. **Look at the end of Paragraph 2. In the sentence *"This strategy makes the word easier to remember,"* the word "This" refers to:**
   A. Learning vocabulary from scratch
   B. Repeating the word out loud
   C. Connecting a word to an image, sound, and personal example
   D. Writing the word in a sentence
8. **Why does the author state that *explicit knowledge does not automatically become implicit*?**
   A. Because explicit memory is weaker than implicit memory
   B. Because conscious understanding alone does not lead to automatic language use
   C. Because implicit memory develops only in childhood
   D. Because grammar rules interfere with communication
9. **Which of the following best summarizes the author's view on effective language learning?**
   A. Understanding memory processes and practicing actively leads to better learning.
   B. Recognition activities are sufficient for vocabulary development
   C. Implicit memory develops without the need for practice
   D. Memorization is the most important factor in learning a language

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1.7: Vocabulary Review 2

Ex. A: Fill in the blanks with the correct word from the list below.

accurately	aspects	critically	from scratch	logic
ambiguous	bias	efficiently	highlight	overview
analyze	clarify	essential	highly	relevant
appropriate	concept	familiar with	indicate	significantly

1. He built his own business entirely _____ , without help from anyone.
2. She is a _____ respected researcher in the field of neuroscience.
3. The arrows on the map _____ where the emergency exits are located.
4. Gravity is a scientific _____ that explains why objects fall to the ground.
5. The scientist recorded the data very _____ . There were no mistakes.
6. At the beginning of the class, the teacher gave a/an _____ of what students would learn.
7. Journalists must try to avoid showing personal _____ in their reporting. They need to be impartial.
8. Your examples should always be _____ to the topic you are discussing.
9. The instructions were so _____ that nobody could agree on what they meant.
10. Drinking enough water is a/an _____ part of staying healthy.
11. The company trained its employees to work more _____ so that projects could be completed faster.
12. In business emails, it is **not** _____ to use informal language.
13. We studied the different _____ of culture, such as traditions, language, and values.
14. Could you _____ what you mean by “alternative solution”? I didn’t quite understand.
15. Students are encouraged to read _____ and not believe everything they see online.

Ex. B: Read the questions and choose the correct answer.

Questions	A	B
1. Which of these sentences is **ambiguous**?	I saw the man with the telescope.	I saw the man yesterday.
2. What subject in school often requires students to **analyze** data in graphs?	history	math
3. Which sentence is **accurate**?	My sister speak English.	My sister speaks English.
4. Which outfit is more **appropriate** for a job interview?	jeans	suit

5. What is an example of **bias** in the workplace?	women making less money than men	having a woman for a boss
6. Which is **essential** for human survival?	food	video games
7. What is an example of a food you can make **from scratch**?	bread	instant noodles
8. On a map, what does a red star in each country usually **indicate**?	the country's largest city	the country's capital
9. What section of a book gives an **overview?**	the table of contents	the last chapter
10. Which sentence has the correct **logic**?	All cats are animals. A tiger is a cat. Therefore, a tiger is an animal.	All cats are animals. A dog is an animal. Therefore, a dog is a cat.

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2: UNDERSTANDING VOCABULARY IN CONTEXT

Topic: Robots and AI

2.1: Unit Vocabulary

2.2: Topic Preview

2.3: Reading Skills- Using Context Clues

2.4: Reading 1- Robots in Health Care

2.5: Vocabulary Review 1

2.6: Reading 2- Artificial Intelligence in the Workplace

2.7: Vocabulary Review 2

2.8: Critical Thinking- The Trolley Problem

2.9: Writing- Personal Response Paragraphs

2.10: Writing- Summary-Response Essays

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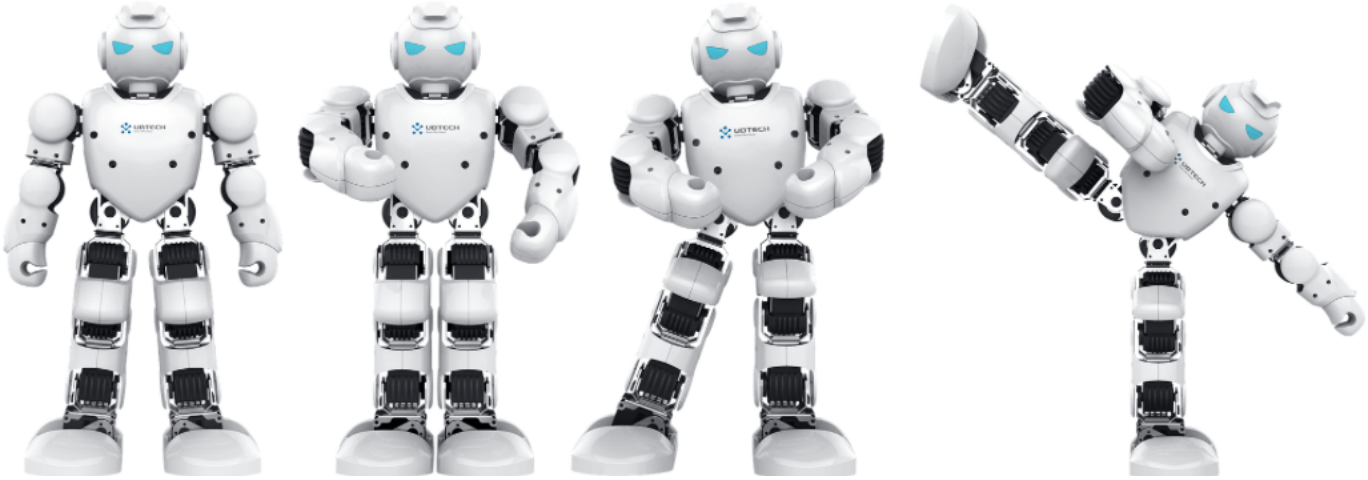
2.1: Unit Vocabulary

acceptable	address (verb)	at first glance	blindly	circumstances	controversial
delicate	dilemma	eliminate	ethically	explicit	harm
inevitable	inference	innocuous	lead to	mundane	obstacle
obvious	outcome	potential	pretend	range from...to	relatively
skeptical	somewhat	straightforward	unintended	violation	vulnerable

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2.2: Topic Preview

Ex. A: Complete the survey below about robots. Then compare your answers with others.

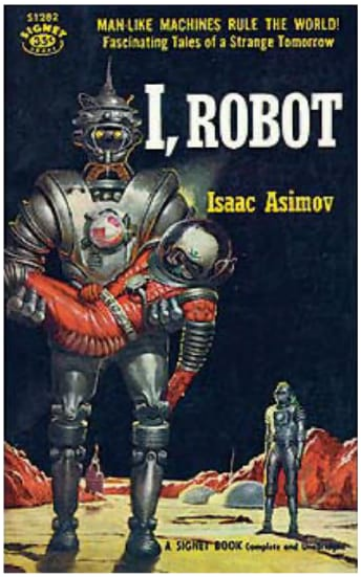


Survey Questions	Very disinterested	Somewhat disinterested	Somewhat interested	Very interested
1. How interested are you in having a robot that helps clean your home?	**write answer here**	**write answer here**	**write answer here**	**write answer here**
2. How interested are you in having a robot that provides security for your home?	write answer here	write answer here	write answer here	write answer here
3. How interested are you in having a robot that helps care for a child or aging relative?	write answer here	write answer here	write answer here	write answer here

Ex. B: Read the article below. Then ask yourself: How do you know the meaning of the highlighted words?

Robot Rules

1. Isaac Asimov was a **remarkable** science fiction author who imagined many worlds with robots. He believed these robots would be human-like machines, and they would be able to walk and **perform** various tasks. In his stories, he **introduced** the idea that robots should follow three basic rules, called the Three Laws of Robotics, which first appeared in his short story "Runaround" in 1942:
    - **First Law:** A robot may not **harm** a human being or allow a human being to be injured.
    - **Second Law:** A robot must follow the orders given by humans, unless doing so would break the First Law.
    - **Third Law:** A robot must protect itself, as long as this does not break the First or Second Law.



2. According to the Oxford English Dictionary, Asimov was the first person to use the word robotics, although he did not know this at the time and believed the word already existed. The word robot, however, comes from the Czech word robota, which means “forced labor.”
3. Over time, other writers also began using the Three Laws of Robotics in their work. The term robotics and the Three Laws have appeared not only in science fiction, but also in other **genres** of books, movies, and television shows. Today, scientists continue to **speculate** how the Three Laws of Robotics might influence future technology.

Ex. C: Now review these words that were highlighted in the text and fill out the chart below.

WORD	I already knew it.	I guessed it.	I used a dictionary.
remarkable	⬜	⬜	⬜
perform	⬜	⬜	⬜
introduced	⬜	⬜	⬜
harm	⬜	⬜	⬜
genres	⬜	⬜	⬜
speculate	⬜	⬜	⬜

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2.3: Reading Skills- Using Context Clues

Ex. A: Read the article below and then complete the exercises that follow.

Using Context Clues

When English is your second language, you will probably find *many* words you don't understand. So it's not really a good idea to look up *every* new word in the dictionary. If you look up every word, your reading is interrupted, and you lose track of the ideas.

Also, you may not remember all the new words. When you read them again, you often have to look them up again later.

Another way to read is to guess what most of the new words mean. This is a natural way to learn language. You may not guess the exact meaning the first time you see a new word, but you can get a general meaning. When you see the word again in other situations (contexts), you can improve your understanding of the word. When you guess, you think actively, and you are like a detective. In other words, you need to look for clues to help you solve the mystery. This article shows you how to use the following kinds of clues:

1. Your knowledge of the world
2. Punctuation clues
3. Definition clues
4. Example clues
5. Comparison and contrast clues
6. Referent clues

As you work through the following exercises, do not use a dictionary. Guess the meanings from the context.

1. Using your knowledge of the world

Often you can guess the meaning of a word just by using your own knowledge of the world and how things work. For example:

*I didn't sleep well because my neighbor's dog was **yapping** all night.*

You can guess the meaning of **yapping** by thinking about your knowledge of dogs and your knowledge of sleep. How can dogs wake you up? They can jump on you or make a noise. So, you can guess that **yapping** is some kind of noise, probably like barking. In most situations, this is enough information for you to continue reading. It doesn't matter if you know exactly what kind of noise it is.

Ex. 1: Using your knowledge of the world

1. The desert is so **arid** that very few plants can grow there because there is almost no rain.

   ***Arid** is probably _____*

2. She picked the **irises** and arranged them in a vase to put on the coffee table.

   *An **iris** is probably _____*

2. Using punctuation clues

With punctuation clues, the meaning of a word is explained immediately after the word between parentheses, commas, or dashes. This type of clue is very common, especially in college textbooks. Look at the examples below:

Parentheses: *A **tornado** (a violent storm of twisting wind) struck Edmonton and caused damage.*

Commas: *A **tornado**, a violent storm of twisting wind, struck Edmonton and causing damage*

Dashes: *A **tornado**–a violent storm of twisting wind–struck Edmonton and causing damage*

Ex. 2: Using punctuation clues

1. The **deluge**, a flood of rain, threatened to drown the little town.

   *A **deluge** is* _____

2. **Sleet** (half rain and half snow) can be very difficult to drive in due to poor visibility.

   ***Sleet** is* _____

3. Using definition clues

A word's meaning is often given by including its definition in the sentence. The definition is connected to the word with a linking word, usually a verb. Here are some examples of linking words: ***is, was, are, means, i.e.*** *(that is),* ***involves, is called, that is*** and ***resembles***. This type of clue is also very common in college textbooks. Look at the following examples:

*A cane **resembles** a walking stick.*

*Giggling **involves** laughing in a silly way.*

*Portland **is** a city in the state of Oregon.*

Ex. 3: Using definition clues

1. **Breaking even** involves making enough money to pay for business costs but no more.

   ***Breaking even** is* _____

2. Many new businesses **go bankrupt**, which means they lose everything.

   *To **go bankrupt** is* _____

4. Using example clues

Example clues give you examples of the unknown word. You must figure out what the examples have in common in order to figure out the meaning of the word. Examples are usually introduced by phrases like these: ***such as, for instance, including, for example***, and ***like***. Look at this sentence:

*Large **corporations** like Walmart, Alibaba, and Microsoft are often less innovative than smaller ones.*

This sentence gives you four examples of large **corporations**. Think about the examples. What do they have in common? They are all large companies. So, a **corporation** must be a company.

Ex. 4: Using example clues

1. A great part of Canada's economy is based on its **natural resources**, for instance coal, oil and wood.

   *A **natural resource** is* _____

2. The reporter talked to many auto-industry **executives**, e.g., company presidents and vice-presidents.

   *An **executive** is* _____

5. Using comparison and contrast clues

Comparison clues show that two or more things are alike. Words like ***similar, as well as, both*** and ***likewise*** show this.

*Washing windows is a **tedious** job. Similarly, cleaning the oven is very boring.*

The word **similarly** shows that there is something the same in the two sentences. We can guess that **tedious** and **boring** must have similar meanings.

With contrast clues, you use the opposite of known information to figure out the meaning. Connecting words like ***however, yet, on the other hand, instead of, but, while*** and ***although*** are often used. For example:

*Although some old people **abhor** change, most of them enjoy new things.*

In this sentence the word **although** shows some opposite meaning in the two parts of the sentence. The opposite meaning must be between **abhor** and **enjoy**. So, **abhor** probably means dislike.

Ex. 5: Using comparison and contrast

1. A soft cloth will soak up a lot of water. Likewise, a sponge is very **absorbent**.

   ***Absorbent** means _____*

2. Instead of **vegetating** at home, lots of old people are very active in the community.

   *To **vegetate** is _____*

6. Using referent clues

Referent clues is when an unknown word is referred to (mentioned) again using a synonym or explanation of the word. Synonyms often follow words like *this, that, these, those*, or *the*. Sometimes, however, there is no obvious clue. The reader just sees that the meanings are probably similar from the ideas in the sentence. Look at this example:

She yelled out the window at her neighbor's dog. Then she said to her husband, "That hound is always waking me up at night with its barking. Tomorrow I'm going to complain."

In this example, **that** comes before the unknown word. This suggests that a **hound** has already been mentioned. We can guess that that **hound** refers to the dog. So, a **hound** is probably a dog.

Ex. 6: Using referent clues

1. Cathy gave a **shower** for her friend Jill. Everyone gave presents to Jill for her baby at the party.

   *A **shower** is _____*

2. **Junk mail** is a huge cause of pollution. These advertising flyers are put in mailboxes and usually not even looked at before they are thrown in the garbage.

   ***Junk mail** is _____*

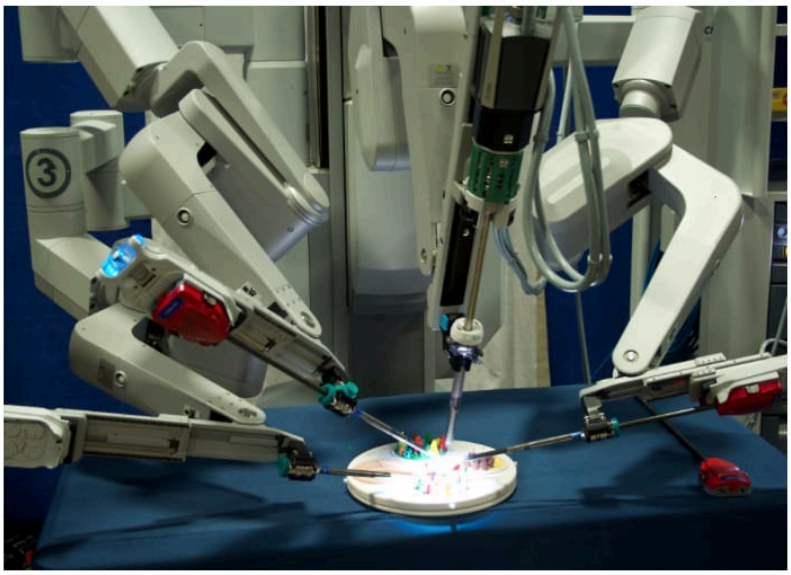
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2.4: Reading 1- Robots in Health Care

Ex. A: Read the article below and answer the questions in the column on the left.

Robots in Health Care

1. Robots are becoming more common in hospitals and clinics around the world. Their use in healthcare is growing quickly, and many experts believe this change is **inevitable** as technology continues to improve. Hospitals are always looking for ways to make care safer and more efficient. Robots can help by doing certain tasks faster or more accurately than humans. Because some of the repetitive tasks are being performed by non-humans, treatment can be more affordable. However, some people remain **skeptical**. They worry that robots may not understand patients' emotions or respond well in unexpected situations. Because healthcare is such an essential service, many people believe that human judgment and compassion must always remain central to medical care. In order to gain a better understanding of this topic, it is necessary to consider both the benefits and possible concerns.
2. Healthcare robots can perform many different tasks in hospitals. Their roles **range from** simple support jobs to more complicated medical procedures. For example, some hospitals use delivery robots that travel through hallways carrying medicine, food trays, or laboratory samples. These robots follow digital maps and avoid **obstacles** as they move. Others help transport medical equipment between departments. By doing these **mundane** jobs, robots allow nurses and other staff to spend more time caring directly for patients. In busy hospitals, this support can be extremely helpful.
3. Some of the most advanced robots are used in surgery. Surgical robots allow doctors to control very small instruments with great precision while watching a high-definition screen. Because the robot's movements are extremely controlled, surgeries can be **relatively** less invasive than traditional procedures. This often means smaller cuts, less pain, and faster recovery times for patients. Robots are already used in some heart surgeries and other **delicate** operations. These systems do not replace surgeons; instead, they act as tools that help doctors perform complex procedures more carefully.



4. Technology can also help patients who experience **isolation** during long hospital stays. Being in a hospital for many days can make people feel lonely or disconnected from family and friends. To **address** this problem, some hospitals provide small robots with screens that allow patients to communicate with doctors or family members through virtual visits. These robots can move around the room so patients can easily talk to people even if they cannot get out of bed. Some service robots also "talk" to patients. They cannot truly feel emotions but can **pretend** to show care, which brings comfort when patients are **vulnerable**.
5. Despite these advantages, many people still feel uncomfortable with robots in healthcare. Some patients say that interacting with a machine instead of a human can feel **unsettling**. When a robot speaks with a recorded voice or moves automatically, it may seem strange to patients who expect personal care from nurses and doctors. It can be especially **disturbing** when patients or patients need to receive bad news and are expecting a friendly and supportive voice from someone with true **empathy**. A few people even describe some medical robots as **creepy**, especially when they have human-like faces or voices.

Because of this reaction, designers are trying to create robots that look friendly and simple rather than too human.

6. There are also practical concerns about using robots in hospitals. Like any technology, robots can sometimes malfunction. If a robot stops working during an important task, hospital **staff** must be ready to take control quickly. Along the same lines, hospitals also need trained technicians to maintain and repair the machines, which can be expensive. In addition, the cost of purchasing and maintaining robotic systems can be very high, which means that not every hospital can afford them.
7. Another concern is the effect on employment. Some healthcare workers worry that robots could make certain jobs **obsolete**, especially routine tasks such as transporting supplies or organizing medications, and therefore, they may end up losing their jobs. However, many experts argue that robots will mainly change jobs rather than **eliminate** them. New roles may appear, such as robot technicians, programmers, or specialists who train staff to work with robotic systems.
8. Robots are already part of major hospitals in the US and in the world, and they are likely to become a larger part of healthcare in the future. Although some people remain skeptical, many hospitals are already seeing benefits from using these technologies. Instead of replacing humans, robots may work alongside doctors, nurses, and therapists to improve efficiency, safety, and patient recovery. As technology continues to develop, it is important for hospitals to keep exploring how robots can support medical professionals while maintaining the human connection that patients need.

Exercise

1. What does **inevitable** mean?
   A. excellent
   B. something we can avoid
   C. something we cannot avoid
   D. a concern
2. What does **skeptical** mean?
   A. having doubts
   B. extremely tired
   C. excited and happy
   D. interested and curious
3. What does **obstacle** mean?
   A. a thing that looks like a map
   B. a thing that helps us move
   C. a thing that blocks the way
4. What does **mundane** mean?
   A. complex tasks
   B. everyday tasks
   C. fun tasks
5. What does **relatively** mean?
   A. when compared to others
   B. very
   C. much
   D. dangerously
6. What does **delicate** mean?
   A. sensitive
   B. easy
7. What does **isolation** mean?
   A. pain
   B. separation from others
   C. feeling nervous
8. Based on context, the words **unsettling**, **disturbing,** and **creepy** are:
   A. positive
   B. negative
   C. neutral
9. What does **creepy** mean?
   A. causing fear
   B. causing pain
10. What does **staff** mean?
    A. people who work at a place
    B. patients in a hospital

11. What does **obsolete** mean?
    A. no longer used; outdated
    B. used repeatedly for years
    C. failing to work well
    D. tired of working and giving up
12. What does **eliminate** mean?
    A. hire
    B. get rid of

Ex. B: Reread the text and complete the table with advantages and disadvantages mentioned in the text.

Advantages	**Disadvantages**
Write your answers here	Write your answers here

Ex. C: Based on the article, decide if the following statements are true or false.

___ 1. Some patients feel nervous about receiving health care from robots.

___ 2. Some hospitals already use robots to deliver food and medicine.

___ 3. Robots cannot perform any surgical tasks.

___ 4. Surgical robots can help reduce pain and improve healing time.

___ 5. Robots can provide emotional support to patients.

___ 6. Robots that look too much like humans always make patients feel more comfortable.

___ 7. Some people are afraid that robots could make dangerous mistakes during surgery.

___ 8. Robots are now able to fully replace human doctors in hospitals.

___ 9. Robotic health care will likely become more common in the future, especially in large cities.

Ex. D: Discuss these questions.

1. Based on what you've learned, how do you feel about robots in hospitals?
2. How would you feel if a robot delivered your pills in a hospital? If a robot helped with your surgery?
3. What kind of questions do you think a patient should ask before agreeing to robotic surgery?
4. Do you think older patients are more uncomfortable with healthcare robots than younger patients?
5. If a hospital introduced fully autonomous surgical robots, would you feel supportive or **skeptical**?
6. What could hospitals do to help **skeptical** patients become more open-minded about medical robots?

7. Do you think being open-minded about technology is always positive, or is it sometimes dangerous?

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2.5: Vocabulary Review 1

Ex. A: Discuss these questions with your classmates.

1. What is an example of technology that is **relatively** cheap?
2. Do you think it is **inevitable** that robots will be common in homes? Why or why not?
3. Do you think robots can truly help people who are feeling **isolated**?
4. What is a machine or technology that has become **obsolete**? What do people use instead now?
5. Are you **skeptical** of the use of new technology such as AI or self-driving cars? Why or why not?
6. What are some **obstacles** people face when they move to a different country?
7. What are some examples of jobs you think AI will **eliminate**?
8. What kinds of **mundane** tasks do you enjoy doing?

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2.6: Reading 2- Artificial Intelligence in the Workplace

Ex. A: As you read the article, use context clues and a dictionary to determine the meaning of new words.

Artificial Intelligence in the Workplace: A Modern Dilemma

1. Artificial Intelligence (AI) is quickly changing the way we work. It's a **controversial** topic, creating both excitement and worry in the workforce. AI is **no longer** a futuristic concept; it's here now, helping or hurting people's jobs. Moving forward, we will need to consider the advantages (pros) and disadvantages (cons) of AI in the workplace, looking at the **dilemma** it presents for employees and employers.

The Pros: How AI Helps Us Work

2. **At first glance**, the benefits of AI are **obvious**. The main advantage is efficiency. AI systems can handle **mundane** and repetitive tasks with incredible speed. These tools can write messages, summarize information, analyze data, and help people complete tasks more quickly and effectively. For example, in factories, robots, an example of AI, can perform the same motion countless times without getting tired. For this reason, human workers become more available to focus on more complex and interesting jobs that require creativity and human judgment.
3. AI is also helping businesses save money, making products and services more affordable. When machines do the heavy lifting, production costs go down. AI can work around the clock, which is something human workers cannot do. This **leads to** higher productivity and often better **outcomes** for the company. Furthermore, AI can process massive amounts of data and accurately detect patterns that human analysts might miss. This ability is crucial in fields **ranging from** finance **to** medicine.
4. Another important advantage is safety. AI-powered machines can take on dangerous jobs, such as working in toxic environments or lifting extremely heavy objects. This helps prevent serious harm to human workers. AI in manufacturing and logistics is helping to create a safer work environment for everyone.
5. AI also allows for better decision-making. By analyzing data, AI can make **inferences** and predictions that are **relatively** accurate. For instance, in customer service, AI chatbots can instantly provide relevant information. This quick response is often seen as **acceptable** by customers, as long as the answers are **straightforward** and clear. The intention of AI here is to assist, making the work of human employees faster and more effective.

The Cons: The Challenges and Worries

6. Despite the many advantages, the use of AI in the workforce can also **lead to** problems. The most discussed concern is the loss of jobs. It is **inevitable** that as AI systems become more capable, they will replace human workers in certain roles. This is a serious concern, and many people wonder what the future of employment will look like. The move from human labor to AI can **lead to** social and economic instability. For instance, customer service representatives may be replaced by intelligent chatbots, and data entry clerks by algorithms that process information accurately and instantly. This automation means that a significant portion of the workforce may suddenly find their skills are no longer relevant.
7. Another major challenge is the issue of bias. AI systems learn from the data they are given. If that data includes historical human biases (like race or gender preferences), the AI will learn and repeat these unfair biases. People might **blindly** follow the AI's suggestions, not realizing the decisions are based on unfair or ambiguous information. Companies must consider this risk seriously, as it can be a **violation** of fair employment practices. For example, imagine a company uses an AI tool to review job applications and select candidates for an interview. If this AI was trained on historical hiring data where primarily male candidates were hired for management roles, the system might learn to detect and favor male applicants over equally qualified female applicants, even without an **explicit** instruction to do so.
8. Furthermore, there is a risk that workers will over-rely on AI. They may stop learning important skills because the AI does all the difficult thinking. This can be an **innocuous** change at first glance, but over time, it can harm the development of human expertise. If the AI makes a mistake, and the human worker is simply following instructions without understanding, the consequences can be serious. We must not simply blindly use AI; we must use it thoughtfully.

The Future: A Partnership, Not a Replacement

9. The question is not whether AI will be in the workforce, but how we will integrate it. The future primarily involves a partnership

between humans and AI. We need to create a plan that ensures AI is used **ethically** and fairly. We must make sure that all changes are **acceptable** to society and that no one is left behind.

10. In conclusion, the rise of AI creates a true **dilemma**. It offers incredible potential for productivity and safety, but it also brings serious risks of job loss and systemic bias. The path forward is not a **straightforward** one. We must be prepared to **address** the **ethical** and economic challenges that are **inevitable** in this new era of work. The key is careful planning and investment in education and retraining so that humans can work alongside AI, not compete with it.

> *AI brain fry* is a **relatively** new concept identified by psychologists. AI brain fry means a type of cognitive exhaustion that can happen when people use or supervise too many AI systems. Many modern workplaces expect employees to work with several AI tools **simultaneously**. For example, workers may need to check AI-generated reports, interpret results, and correct mistakes. Under these **circumstances**, the brain must process large amounts of information very quickly and can **potentially** create more work instead of less. Over time, this can **lead to** the feeling of mental overload that people call AI brain fry.

Ex. B: Put an X next to the sentence which best expresses the main idea of the article.

1. ___ AI will completely replace human workers in most industries.
2. ___ AI is too dangerous to be used in the workplace and should be avoided.
3. ___ AI is mainly useful for customer service and data analysis.
4. ___ AI has benefits in efficiency and safety, but also creates serious challenges.

Ex. C: Based on the article, decide if the following statements are true or false.

___ 1. Artificial intelligence is already being used in many workplaces today.

___ 2. One major advantage of AI is that it can perform **mundane** and repetitive tasks without getting tired.

___ 3. The text says that AI can only be used in factories.

___ 4. AI can improve workplace safety by taking over dangerous or physically demanding jobs.

___ 5. The text says that AI will never replace human workers.

___ 6. The text suggests that AI always makes better decisions than humans.

___ 7. Over-reliance on AI may cause workers to lose important skills over time.

___ 8. The future of work described in the text emphasizes cooperation between humans and AI, rather than replacement.

___ 9. Some workers may lose their jobs because AI can do certain tasks faster.

___ 10. AI systems can repeat human **biases** if they are trained on **biased** data.

___ 11. The text argues that careful planning, **ethical** use, and retraining are essential for successfully integrating AI into the workplace.

Ex. D: Reflect on the ideas presented in the article. Then discuss these questions.

1. The text mentions that AI allows humans to focus on tasks requiring "human judgment." What human jobs are **vulnerable** to being **eliminated** by AI? What human tasks do you believe AI will never be able to replicate?
2. Do you believe that AI is likely to cause “social and economic instability”? If so, what is the responsibility of governments and corporations to **address** the **harm** caused by AI? Free retraining programs? Mandatory (required) retraining programs? Universal basic income? Other?
3. The example of **biased** hiring practices is a serious concern. Who should be held legally and **ethically** responsible when an AI makes a discriminatory decision—the developers, the company using the tool, or the AI itself?
4. The text suggests that AI chatbots are "**acceptable**" to customers if they are clear. At what point does an automated service become frustrating rather than helpful?
5. The title describes AI as a "**dilemma**." Why is it a **dilemma**? What is your view?
6. Is AI more of a tool for empowerment or a **potential** threat to workers? Both? Other?
7. What **ethical dilemmas** does AI create?

8. Are there important points that the text did not **address**?

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2.7: Vocabulary Review 2

Question	A
1. What is **acceptable** in a classroom?	talking politely with your group
2. Which situation is more **controversial**?	using robots to deliver medicine in hospita
3. What phrase has a similar meaning to ***at first glance***?	after a quick look
4. You have a **dilemma**. What should you do?	finish the easiest task first
5. Which task is more **straightforward**?	making dinner for your children
6. If I follow the rules **blindly**, I ___ .	ask questions before taking action
7. Under difficult **circumstances**, what is better?	staying calm and thinking
8. What is an example of an **ethical principle**?	lying to your friend when it is convenient for you
9. Which announcement by a teacher is more **explicit**?	The vocabulary on page 10 is very important.
10. Readers **infer** when ___ .	they guess the meaning of words from context
11. **Outcomes** are ___ .	the results of a decision
12. A **potential** problem ___ .	already exists

13. If you **pretend** to be asleep, you ___	try to fall asleep quickly

Ex. B: Use the words in the boxes to complete the sentences. Change the word forms if necessary.

straightforward pretend violate unintended dilemma mundane innocuous

1. She always tries to follow the rules rather than _____ them.
2. Sometimes an accident can cause _____ consequences (= consequences that nobody expected).
3. He faced a _____ : should he tell the truth and hurt his friend's feelings, or stay silent?
4. The doctor explained that the pills are _____ and won't cause serious side effects.
5. The teacher gave us a task that looked difficult, but it was actually quite _____ .
6. The boy wanted to _____ he was sick so he wouldn't have to go to school.
7. The job may sound boring, but even the most _____ tasks can be important.

at first glance obvious inferences blindly eliminate controversial vulnerable

9. Children are _____, so we need to protect them.
10. The doctor told me to _____ sugar from my diet because I am pre-diabetic.
11. Some believe the new law is _____ because it challenges traditional values.
12. He made a quick judgment _____, without reading the full report.
13. When making an important decision, it's better to think critically than to follow instructions _____.
14. The evidence was not _____, so the police couldn't be sure.
15. Students are asked to make _____ based on the information provided.

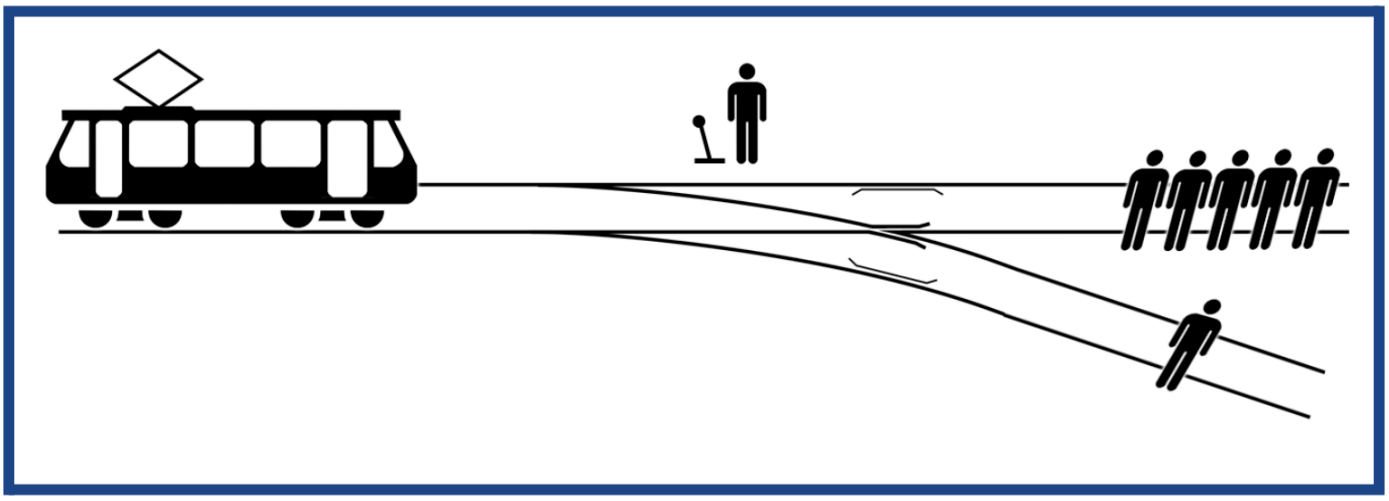
outcomes lead to inevitable range relatively harm ethical

17. Pollution from the factory caused serious _____ to the river and nearby farms.
18. Smoking may _____ serious health problems over time.
19. Although the solution was _____ cheap, it worked surprisingly well.
20. Deciding what is right or wrong often involves making choices based on _____ principles.
21. The possible _____ of the project include both success and failure.
22. Even though they tried to prevent it, mistakes were _____.
23. The report showed a wide _____ of opinions, from strongly negative to very positive.

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2.8: Critical Thinking- The Trolley Problem

Ex. A: We are going to discuss “the trolley problem.” Think about the image. What is the problem?



(Image: McGeddon, CC: BY-SA)

Ex. B: Now, watch this short video. After you watch the video, discuss the questions below with your group.

Scenarios

1. There is a trolley (train) that is moving fast and out of control. Ahead on the tracks, there are five people tied up and unable to move. The trolley is headed straight for them. You are standing next to a lever. If you pull this lever, the trolley will switch to a different set of tracks and avoid the five people. However, you notice that there is one worker on the second track. He can’t hear you or see the trolley coming, so he won’t be able to move out of the way. You have two options:
   a. Do nothing and allow the trolley to kill the five people on the main track.
   b. Pull the lever, sending the trolley onto the second track where it will kill one person.

   Which is the more ethical option? Or, more simply: What is the right thing to do?

2. OK, what if the person on the second track is someone you know? Does that change your decision?
3. OK, what if as before, a trolley is racing down a track towards the five people. This time, however, you are on a bridge over the track. There is a very, very large man next to you on the bridge. If you push the man off the bridge onto the track, you can stop the trolley and save the five people. However, the large man will die. Should you do it?
4. OK, what if the very, very large man is a very, very evil person. Perhaps he is a murderer or some other kind of serious criminal. Does that change your decision?

Reflection

5. Would you be more comfortable having a human make this decision or an AI? Why?
6. How are hypothetical scenarios like this useful in real situations that involve robots or technology like automatic self-driving cars?

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2.9: Writing- Personal Response Paragraphs

Ex. A: Read an introduction to personal response paragraphs.

Writing a Personal Response

In college, teachers expect students to be able to write about information they have read and learned in class. One common assignment is a **personal response paragraph**. In a personal response, you show that you understand the reading and that you can connect it to your own opinions or experiences.

- **Topic sentence** - Begin your paragraph with a topic sentence that answers the teacher's question or states the main idea that you have chosen for yourself.
- **Supporting details** - Next, explain your ideas and add supporting details. Supporting details may include information from the reading, reasons, examples, or personal experiences. Make sure that your details are **relevant** and **specific**. Do not simply repeat general ideas from the reading. Choose details that show what you actually learned and how it connects to your life.
- **Conclusion** - Write a conclusion that sums up your ideas.

Finally, check your paragraph. Ask yourself: **Did I answer the question? Is my main idea clear? Do my supporting details show what I learned? Are my details specific and relevant?** A strong reading response does more than state a general opinion. It uses specific information from the reading to explain, support, or develop the writer's ideas.

Ex. B: Here are 2 short response paragraphs. Which one is better? Why?

Question: *How does the article about AI in education connect to your own experience as a student?*

Paragraph 1	**Paragraph 2**
The article made me reflect on my use of AI when I have difficulty with an assignment. Sometimes I use an AI tool to explain a difficult idea in simpler language, and this can help me understand the material before I return to my textbook. However, the article's discussion of over-reliance on AI also applies to me. The article explained that learning requires mental effort. When AI does all the work, students don't engage in the task enough to actually learn from it. This helped me realize that if I ask AI to solve every problem instead of trying to solve it myself, I may finish my homework faster, but without actually learning the skill. For example, when I am writing, I think it might be more useful to ask AI for feedback on my ideas than to ask it to write the entire paragraph for me. The article helped me understand that how I use AI is just as important as whether I use it.	The article about AI in education connects to my experience because I use technology for school. I use AI sometimes when I need help with my classes. Technology is a part of education today, and it is becoming more common all the time. There are many different ways that students can use technology. AI can be useful in different situations, depending on what students need. It can help students understand difficult things. However, AI can also cause problems if students use it too much. It is important to use technology in a good way. I think students should use AI carefully and make good decisions. In my opinion, AI is a useful tool for students, but students should still do their own work. There are both positive and negative sides to using AI in education. Overall, I think AI can be helpful when students use it in the right way and not in the wrong way.

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2.10: Writing- Summary-Response Essays

Ex. A: Read an introduction to summary-response essays.

A **personal response paragraph** (or paragraphs) is a common assignment in reading classes. Sometimes, a personal response is combined with a summary to create a **summary-response essay**. This type of essay starts with a summary of the reading and then follows with a response. Sometimes the response is a personal reflection, but it can also be a less personal analysis or evaluation of the reading.

In this section, you can see a list of vocabulary expressions that are useful when you write about things you read. Then you can read an example of a summary-response essay.

Ex. B: Read this explanation about useful vocabulary in summary/response essays.

When we summarize a text or use ideas from a text in our own writing, we must **acknowledge** where the idea came from. To do that, we can use **reporting verbs**. Here are some examples:

Verbs that indicate a neutral meaning	**Verbs that indicate the author's position**
• state (that) • point out (that) • mention (that) • add (that)	• believe (that) • recommend (that) • suggest (that) • propose (that) • argue (that) • warn (that)
Verbs that indicate that the author is trying to show something	**Verbs to show how we, as readers, feel is trying to show something about the ideas of a text**
• demonstrate (that) • show (that) • emphasize (that) • explain (that) • indicate (that)	• agree • (strongly) disagree • The author implies (that) • The author claims (that)
A neutral expression to acknowledge a source	
• according to	

Note

If you use **according to...,** don't add a reporting verb. For example:

According to the author, chatbots can provide inaccurate or misleading information.

OR

The author **points out that** chatbots can provide inaccurate or misleading information.

Ex. C: Read this summary/response. Underline words/phrases that indicate a summary or a response.

Summary / Response of “I Hacked ChatGPT and Google’s AI and It Took Only 20 Minutes”

1. Research shows that artificial intelligence (AI) chatbots can sometimes provide **inaccurate** or misleading information. According to the article "I hacked ChatGPT and Google's AI and it took only 20 minutes," by Thomas Germain, published by the BBC (2026), it is **relatively** easy for people to influence AI responses by publishing false or **biased** information online. The text shows that **at first glance**, this may seem like an **innocuous** problem. However, experts warn that the **potential outcomes** could affect people’s decisions about health, finances, and other important topics.
2. The article explains that AI chatbots, including tools created by Google and OpenAI, use large language models and also search the internet to answer questions. When AI systems find information online, they may treat it as reliable, even when it is false. In the experiment described in the article, the author created a blog post with false claims. He **pretended** that competitive hot-dog eating was common among technology journalists and said that he had won a prize in a hot-dog eating competition. This claim was not true, and the event he described did not exist. However, within 24 hours, several AI tools repeated this information. This example shows how anyone can influence AI responses.
3. As the author indicates, this case may seem **harmless**, but it **demonstrates** a serious weakness. AI systems may use limited or poor-quality sources and make **inferences** based on incomplete information. As a result, AI tools may provide information that is not true, even when there is no strong evidence. According to experts, people and companies can use these methods to promote products, improve their **reputation**, or spread misinformation across **a wide range of** topics.
4. Another important concern pointed out in the article is that users often trust AI answers without verifying the sources. In the past, people needed to visit websites and evaluate information themselves. Now, AI tools provide information, and users may **blindly** follow or believe it. This makes misinformation more difficult to detect. The author highlights that, under these **circumstances**, users may not realize that AI is relying on only one source or unreliable data.
5. The author claims that technology companies are working to improve their systems and reduce **manipulation**. However, experts suggest that some level of error may be **inevitable** because AI depends on information created by humans. This creates **ethical** questions about how AI should present information and how users should evaluate it **ethically** and responsibly.
6. I entirely agree with the author when they state that AI chatbots can be useful tools, but the information it provides is not always fully reliable. Users need to understand the **potential** risks and think **critically** about AI responses. It is important to check multiple sources, evaluate the evidence, and avoid relying only on AI for important decisions. This **approach** can help avoid **unintended outcomes** and support more informed and responsible use of AI.

Reference

Reference: Germain, T. (2026). I hacked ChatGPT and Google’s AI and it only took 20 minutes. BBC Future.

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3: IDENTIFYING THE MAIN IDEA AND SUPPORTING DETAILS

Topic: Sleep

3.1: Unit Vocabulary

3.2: Topic Preview

3.3: Reading Skills- Main Ideas

3.4: Reading 1- Why Do We Yawn?

3.5: Reading Skills- Supporting Details

3.6: Reading 2- The Four Stages of Sleep

3.7: Vocabulary Review 1

3.8: Vocabulary Skills- Prefixes and Suffixes

3.9: Reading 3- Understanding Your Sleep Needs

3.10: Critical Thinking- What Do You Know about Sleep?

3.11: Vocabulary Review 2

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3.1: Unit Vocabulary

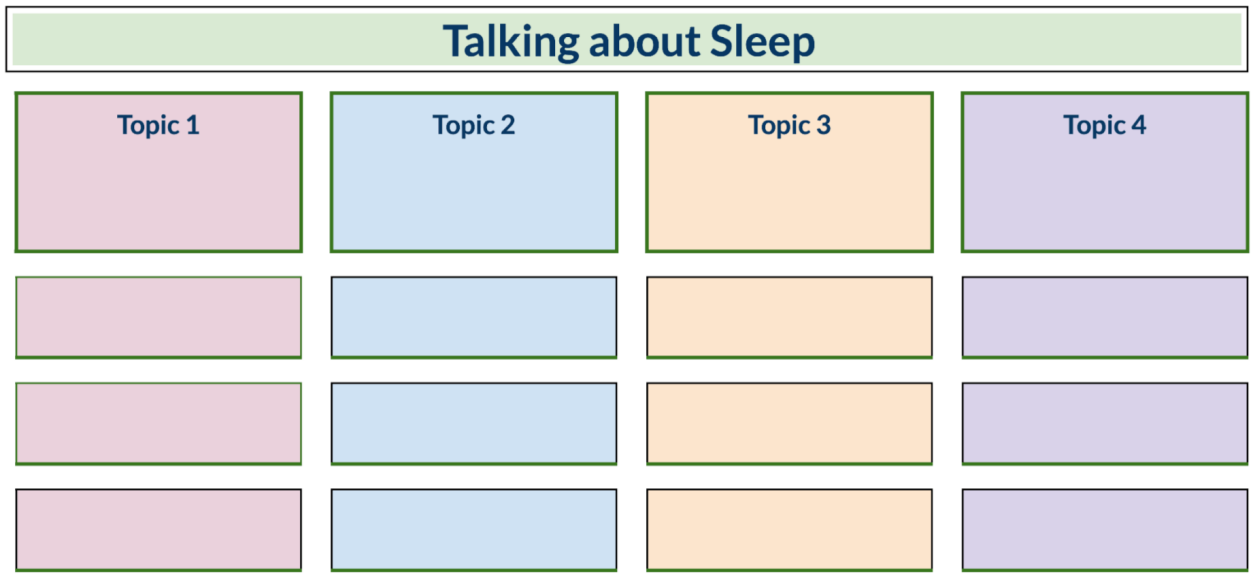
chronic	circumstances	cognitive	consistent	contagious	determine
gradually	be likely (to)	overwork	prior	repeatedly	reverse
similarly	slightly	suitable	traits	trigger	(be) unaware

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3.2: Topic Preview

Ex. A: Sort these headings and idioms about sleep into the graphic organizer below. (Online practice)

Sleep like a log	Get some shut eye	Take a nap	SLEEP WELL
Sleep like a baby	Not sleep a wink	Nod off	Be up all night
GOING TO SLEEP	NOT SLEEP WELL	Doze off	Get some sleep
Toss and turn	Turn in	Sleep tight	PHRASAL VERBS



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3.3: Reading Skills- Main Ideas

Ex. A: Read the text about identifying main ideas.

Identifying the Main Idea

What is the main idea?

The main idea is the author's primary message. It has two parts. The main idea includes both:

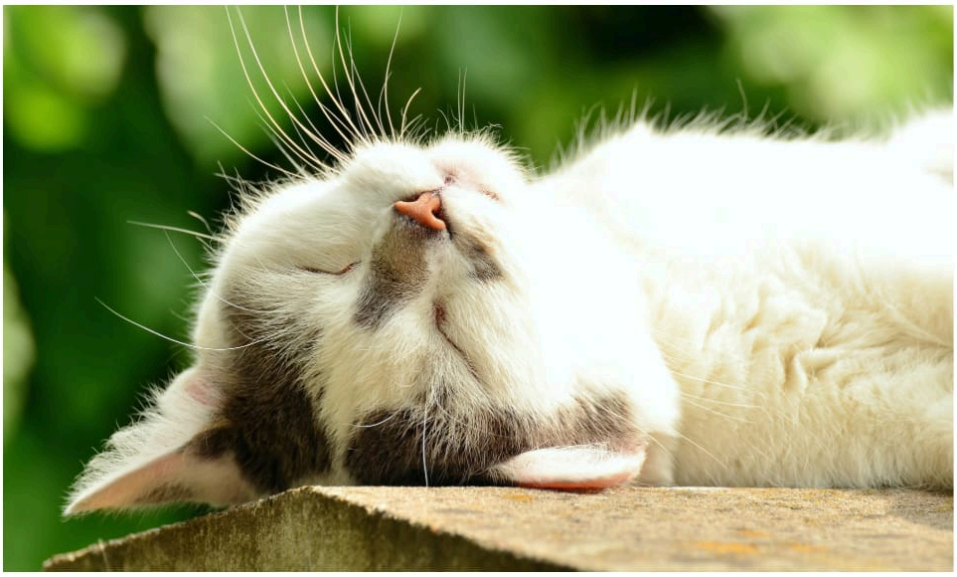
- **topic** (general subject of the text)
- **claim** (what the author wants to say about the topic)

Example

You may read an article about sleep. That's the topic. But what does the author want to say about sleep?

- *Short naps may help you stay alert, but they do not help you study.*
- *Everyone needs 8 hours of sleep for good physical health.*
- *Sleep is important to be able to think more clearly.*

All three of these examples share one topic: sleep. But they make very different claims.



How do you identify the main idea?

Authors often state the main idea plainly in a thesis statement near the beginning of the text — but not always. It depends on the type of text that you are reading. Some authors might save their main idea for a dramatic conclusion. Others might only imply the main idea (in other words, they do not state it directly).

1. Identify the topic. **Who or what is the focus of the text?** Look for repeated words. Look for general ideas, not specific details.
2. Identify the claim. **What is the most important thing the author wants to say about the "who" or "what" from question**

#1? Look at these parts of the text:

a. title of the text
b. first paragraph of the text
c. last paragraph of the text
d. last paragraph of the introduction

Remember that sometimes the author does not state the claim directly. In this case, you have to think of a single statement that connects all parts of the text.

3. Test your work. **Do all (or most) parts of the text explain or support the main idea (topic+claim)?** Make sure that none of the text contradicts what you think is the main idea. If not everything works well together, then you may need to try again.

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3.4: Reading 1- Why Do We Yawn?

Ex. A: Read the article below and answer the questions in the column on the right.

Adapted from "What is it about yawning?" by Christine Calder

Why Do We Yawn?

1. Everybody yawns, and sometimes it is impossible to resist the feeling. Yawning is a reflex that involves opening the mouth wide and taking a long, deep breath. Humans and many animals yawn, including dogs, cats, monkeys, and even birds. Yawning is commonly associated with tiredness, stress, overwork, and boredom. Scientists have studied yawning for many years, but they still debate its exact purpose.
2. One common theory is that yawning helps cool the brain. When we yawn, we take in a large amount of air and stretch the muscles in the face and jaw. This movement may increase blood flow and help lower the temperature of the brain slightly. A cooler brain may work more efficiently and help us stay alert, which can help us when we feel bored or tired. Some scientists also think yawning helps bring more oxygen into the body and remove carbon dioxide from the blood, although this explanation is debated.
3. Another reason that could explain why we yawn is that, at least in humans, yawning is often a reaction to seeing someone else yawn. Even reading about yawning or looking at a picture of someone yawning can trigger a person to yawn. In fact, some research studies say that about 42%–55% of adults will yawn during or after watching a video of another person repeatedly yawning. This reaction is called contagious yawning because it spreads from one person to another, almost like a small social signal. Psychologist Gordon Gallup explains that contagious yawning is an action connected to empathy. Seeing someone yawn activates parts of the brain related to imitation, empathy, and social behavior. Special nerve cells in the brain called neurons may help people copy actions they see others perform. These neurons allow people to feel what another person might be experiencing and encourage them to repeat the same action, even if they were not tired before. Researchers have also noticed that young children usually do not experience contagious yawning until around four or five years old, which is the same age when their ability to understand other people's feelings begins to develop.
4. Although the exact purpose of yawning is still a mystery, one thing is clear: yawning can be contagious. In fact, simply reading about yawning may be enough to trigger a yawn in some people.

Exercise

1. What topic do you see repeated throughout the article?

   _____

2. What does the author want to explain about that topic?

   _____

3. Where does the author give the main idea? Underline it.
4. Review the topic of each paragraph. Do they explain or support the main idea?

   Par. 1: Everybody yawns.

   yes no

   Par. 2: We often yawn when we see others yawn.

   yes no

   Par. 3: Contagious yawning helps us connect with others.

   yes no

Par. 4: The purpose may be unknown, but contagious yawning happens even after reading about yawning.

yes no



(Photo by Sander Sammy, Unsplash)

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3.5: Reading Skills- Supporting Details

Adapted from Palm Beach State

Ex. A: Read the text about identifying supporting details.

Identifying Supporting Details

What are supporting details?

Supporting details explain the main idea. They help you to understand the author's claim about the topic. Supporting details can include:

- reasons
- examples
- definitions
- descriptions
- steps
- facts
- statistics

There are two types of supporting details:

- **major details** explain the main idea
- **minor details** explain a major detail

How to identify supporting details

Look for specific individual ideas, not general ideas or ideas that are repeated. Often you will notice keywords like these that signal supporting details:

- for example, for instance
- in addition
- another
- furthermore
- in fact
- moreover
- first, second, next, then, last, finally

Example

Dreams are what a person sees and hears in their mind when they are sleeping. They are often similar to real life in some ways, but can also be very strange. Two special types of dreams are interesting to study. First, a lucid dream is when a person realizes during a dream that they are dreaming, but keeps having the dream. Although these types of dreams are not very common, most people have experienced a lucid dream at some time in their lives, and between 19% and 37% of the population report lucid dreaming more than once a month. Another type of dream is nightmares, which are very common. In fact, as many as 85% of adults say they have an occasional nightmare, though they become less frequent with age. They are usually caused by anxiety and stress. Another reason for nightmares might be unresolved conflict with others when they are awake.

Topic: *Dreams*

Main idea: *Two special types of dreams are interesting to study.*

Major detail: *lucid dreams*

Minor detail: *you think you are awake*

Minor detail: *19-37% >1 per month*

Major detail: *nightmares*

Minor detail: *85% occasionally*

Minor detail: *less frequent with age*

Minor detail: *caused by anxiety, stress, etc.*

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3.6: Reading 2- The Four Stages of Sleep

Text adapted from *Lucid Dreaming*. [CC BY-SA]

Ex. A: Read the article below and complete the outline on the right.

The Four Stages of Sleep

Each night, you spend about 1.5 to 2 hours dreaming. You dream about once every 90 minutes of sleep. The time you spend in dreams becomes longer throughout the night, from about 10 minutes to around 45 minutes or **slightly** longer. But what else happens when you sleep?

Sleep cycles last about 90 minutes. In each sleep cycle, there are four stages of sleep: one stage of REM (Rapid Eye Movement) sleep and three stages of NREM (Non-REM) sleep. The clearest and most remembered dreams occur during REM sleep. Research has shown that a person being woken from REM sleep will report having just been in a dream roughly 80% of the time.

The first three parts of the sleep cycle are non-REM stages. As you get into bed and relax, hypnagogic imagery occurs. Hypnagogia refers to the images, sounds and strange bodily feelings that you feel as you fall asleep. This usually lasts only minutes. Then, during stages 1 and 2, your body **gradually** shuts down and brain waves become longer. Stage 3 is often called “deep sleep.” Your heart beats the slowest, and there is the least brain activity.

After stage 3, the NREM stages reverse and move back to stage 1, and then into REM sleep. During REM sleep, some parts of the brain are nearly as active as while awake. In this stage, your eyes move rapidly. Most of your body, however, is paralyzed, preventing you from acting out your dreams. After the REM state, you sometimes wake briefly. This is usually forgotten by the time you wake up in the morning. If you don't wake up, you go back to stage 2.



(Photo by Slaapwijsheid.nl on Unsplash)

Exercise

Topic: Sleep

Main idea: _____

_____

I. **Background information**
   - _____ hrs. dreaming every night
   - One dream every _____ minutes of sleep
   - Dreams last _____ to _____ minutes

II. **Sleep cycles**
   - _____ stages of sleep
   - _____ stage of _____
     (_____)
   - _____ stage of _____
     (_____)

III. **Non-REM sleep**
   - Stages _____ to _____
     - Before Stage 1 _____ : images, sounds and feelings as you fall asleep (_____ minutes)
     - Stages 1-2:
       - Body: _____
       - Brain waves: _____
     - Stage 3: *deep sleep*
       - Heart beats: _____
       - Brain activity: _____ _____

IV. **REM sleep**
   - Stage _____
     - Brain nearly as _____ as while _____
     - Eyes move _____
     - Body is _____
   - Afterward, you sometimes wake up, but it is usually _____ by morning

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3.7: Vocabulary Review 1

Ex. A: Use the words in the boxes to complete each group of sentences.

chronic circumstances cognitive consistent contagious

1. Under difficult _____, people sometimes make decisions they later regret.
2. The flu is highly _____, so you should stay home to avoid spreading it.
3. It's important to be _____ in your study habits if you want to see improvement. For example, you can study 1 hour before bed every night.
4. Doctors warn that _____ stress can damage both physical and mental health.
5. Lack of sleep affects _____ performance, making it harder to concentrate.

determine gradually likely prior repeatedly reverse

1. If a mistake is made _____, it usually becomes a bad habit.
2. With the right treatment, doctors can sometimes _____ the effects of the disease, and patients can be healthy again.
3. We should consider _____ experiences when preparing for future challenges. Our past experiences can help us avoid making mistakes.
4. Careful research can help scientists _____ the cause of a disease.
5. The effects of healthy exercise usually appear _____, not overnight.
6. People who eat too much junk food are more _____ to develop health problems.

slightly suitable traits trigger unaware

1. She was completely _____ of the fact that her phone had been stolen.
2. This dress is not _____ for a formal dinner; it's too casual.
3. The two exam scores were _____ different; one was 89 and the other was 91.
4. Loud noises may _____ anxiety in people who are sensitive to sound.
5. Some personality _____, like optimism, can help people handle stress better.

Ex. B: Discuss the following questions in your groups.

1. What is an example of a **chronic** health problem, and how can it affect daily life?
2. Under what **circumstances** would you decide to move to another city?
3. What kinds of activities do you think improve **cognitive** skills?
4. Do you think it's easy or difficult to be **consistent** with studying English every day?
5. How do you **determine** whether someone is a good friend?
6. What should you do **prior** to taking an important exam?
7. What is a **suitable** job for someone who likes working with children?
8. What things can **trigger** stress for students?

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3.8: Vocabulary Skills- Prefixes and Suffixes

Adapted from *Writing for Success* by University of Minnesota [CC BY-NC] and English Language Centres.

- A **prefix** is a word part added to the beginning of a word that changes the word's meaning.
- A **suffix** is a word part added to the end of a word that changes the part of speech.

Common Prefixes

Prefix	Meaning	Example
dis-	not, opposite of	dissatisfied
mis-	wrongly	misidentified
un-	not	unacceptable
re-	again	reelected
inter-	between	interaction
pre-	before	prepay
non-	not	nonsense
super-	above	superscript
sub-	under	submerge
anti-	against, opposing	antibacterial

Suffix
-ity
-ment
-ness
-ship
-tion
-ize
-able, -ible
-ful
-ous
-ly, -ally

Ex. A: Underline the words with prefixes or suffixes and try to guess what their meanings are.

> Do you know what your dreams mean? Many people believe their dreams are irrelevant and unrelated to their lives, but that may be a misconception. If you replay your dreams carefully and thoughtfully in your mind, you might uncover how they are connected with your life. For example, dreams about money might signal a prosperous life ahead, while dreams about doors closing might mean that a relationship is in trouble because of a disagreement. Most of our dreams actually come from our

unconscious mind, not from our reality. Therefore, it is not unimaginable that they are often non-linear — that is, the events in the dream do not always happen in a logical sequence from beginning to end. But are your dreams a preview of what will happen? Perhaps we should just be thankful for the entertainment that they give us.



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3.9: Reading 3- Understanding Your Sleep Needs

Ex. A: Read the article below and answer the questions on the right.

Understanding Your Sleep Needs

1. Sleep is more than just a time when our bodies rest. While we sleep, our brains continue to work on important tasks. Good sleep supports **cognitive** functions such as memory, attention, learning, decision-making, and emotional control. However, people do not all need exactly the same amount of sleep. Sleep needs can **vary slightly** from person to person because of age, genetics, daily activities, and other personal **traits**. People also have different **sleep patterns**. Some people are **night-owls**, which means they are more **likely to** feel more awake in the evening and prefer to go to bed late. Others are **early birds** who are **more likely** to feel more energetic in the morning and prefer to go to bed earlier. These differences are normal. However, our natural sleep preferences do not always fit our work, school, or family schedules.

When Life Interferes with Sleep

2. Getting **consistent** sleep is important for both the brain and the body. A **chronic** lack of sleep means that a person is not getting enough sleep regularly over a long period of time. This can **trigger** or contribute to a variety of health and **performance** problems. People who are **overworked**, stressed, or busy may regularly sleep less than what is **suitable** for them. They may have difficulty concentrating, remembering information, controlling their emotions, or responding quickly during the day.

Signs That You May Need More Sleep

3. Missing a little sleep once in a while is usually different from having a **chronic** lack of sleep. When someone regularly gets less sleep than is **suitable** for their body, the effects can build over time. Chronic sleep loss can **trigger** or contribute to health problems and can affect a person's ability to function during the day.
4. For example, someone who does not sleep enough may have difficulty paying attention in class, remembering information, or completing tasks at work. Poor sleep can also affect mood and make it more difficult to respond calmly to everyday problems. These changes may happen **gradually**, so people are sometimes **unaware** of how much their sleep habits are affecting their daily **performance**. A person may become less focused at work or school, make more mistakes, or feel tired without realizing that poor sleep is one possible reason.



Exercise

1. Read the title again. Then look at the first paragraph for the answer. Underline it. As you read, consider if this is the main idea of the whole article.
2. Are you a “night owl” or an “early bird”?
3. How many hours do you usually sleep? What factors make you sleep more or less?
4. Which recommendation do you think is the most effective for you? Why?

Improving Your Sleep Habits

5. Small changes can sometimes improve sleep. One important goal is to develop a **consistent** routine. Going to bed and getting up at approximately the same time each day can help the body develop a regular **pattern**. A relaxing bedtime routine can also prepare the body and mind for sleep. Thinking about what we do **prior** to bedtime can help us understand why we sometimes have difficulty sleeping.
6. People can experiment with different habits to find what works best for them. For example, they might reduce screen time before bed, avoid caffeine later in the day, spend more time outside during the day, exercise regularly, or make their bedroom darker and quieter. They can also pay attention to how they feel during the day and look for connections between their activities and their sleep. For example, difficulty concentrating in class may **indicate** that students may need more sleep.
7. Some sleep difficulties can be **reversed** when people identify a problem and make changes to their routines. However, improving sleep does not mean that everyone should follow exactly the same schedule. There is no perfect sleep schedule that works for everyone. The goal is to learn what works well for your own body and lifestyle. Paying attention to your energy, concentration, mood, and daily performance can help you recognize patterns, and it is an important part of taking care of yourself. Good sleep does not solve every problem, but it can **lead to** better health, clearer thinking, and more energy for everyday activities.



Exercise

5. What is the conclusion? Do we know exactly how many hours of sleep everyone needs?

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3.10: Critical Thinking- What Do You Know about Sleep?

Adapted from the WebMD articles *Quiz: What's Wrecking Your Sleep?* (Reviewed by Carol DerSarkissian, MD), and *Sleep Quiz: Why You Need Your ZZZs* reviewed by Jennifer Robinson, MD.

Ex. A: Take this quiz about sleep.

Do you have trouble getting to sleep? If so, knowing more about good sleep habits — and some of the problems people commonly face — can help you get the rest you need. Answer each question True or False. Then compare your answers with those of experts on the next page.

___ 1. If you wake up during the night and can't go back to sleep, then you probably don't need that much shut-eye (“shut-eye” is slang for sleep).

___ 2. If you can’t sleep, you should go to another room and read.

___ 3. A couple glasses of wine will help you sleep better.

___ 4. Exercising in the afternoon interrupts your sleep.

___ 5. Turning on a fan or a TV can help you sleep.

___ 6. Preschoolers need up to 13 hours of sleep per night.

___ 7. Not getting enough sleep can lead to weight gain.



"Let sleeping dogs lie" is an English proverb which, according to Wiktionary, means leave things as they are; especially, to avoid restarting or rekindling an old argument; to leave disagreements in the past.



Ex. B: Do you agree or disagree?

Compare your answers with advice from experts ...	**... and then di**
1. If you wake up during the night and can't go back to sleep, then you probably don't need that much shut-eye. **False**. There's usually a reason you're tossing and turning. Illness, heartburn, hot flashes, and what you eat and drink can keep you up, and so can anxiety, stress, and depression.	What do you d
2. If you can't sleep, you should go to another room and read. **True**. If you wake up and can't get back to sleep in 15 to 20 minutes, the worst thing you can do is stay in bed and watch the clock. Get up and go to another room. Read, take a bath, have a light snack, or do something quiet. When you feel sleepy, get back into bed.	Why do the exp
3. A couple glasses of wine will help you sleep better. **False**. While alcohol can make you sleepy, it won't help you get a good night's rest. You're more likely to wake up when its effects wear off.	Do you think th about coffee w
4. Exercising in the afternoon interrupts your sleep. **False**. Get active if you want to sleep better. People who exercise say they sleep better than those who don't. Try to work out at least 30 minutes a day on most days of the week. For most people, it's not a problem to do it any time — even near bedtime.	In your opinion sleep?

5. Turning on a fan or a TV can help you sleep. **True and False**. A fan will help, but a TV will not. Soft, steady background noise in your bedroom can help you tune out outside distractions, such as barking dogs and loud cars. Try not to watch TV or use a computer before bedtime. Some studies suggest the light from those devices can lower your levels of melatonin, the hormone that brings on sleep.	If you don't ha
6. Preschoolers need up to 13 hours of sleep per night. **True**. Sleep needs vary from person to person, and they change throughout a person's lifecycle. Children in preschool need 11 to 13 hours of sleep per night. Newborns sleep up to 18 hours a day, and school-aged children (up to age 12) need 10 to 11 hours. Adolescents need about 9 hours of sleep a night, and most adults need 7 to 9 hours of sleep.	Use context cl does it mean? In your opinio older people?
7. Not getting enough sleep can lead to weight gain. **True**. Several studies have shown that not getting enough sleep can affect appetite controls and lead to overeating.	So does this m weight? Why o

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3.11: Vocabulary Review 2

Ex. A: Read this short story. Then do the exercises which follow.

> Alex has been feeling tired for a long time. He studies late every night and works on weekends. Recently, he has been getting sick again and again. His teacher noticed a change in his behavior. However, Alex didn't realize it.

Ex. B: What do you think is happening? Why is Alex tired? Use the information from the story and rewrite the sentences below using some of our vocabulary words.

chronic • circumstances • cognitive • consistent • contagious • determine

gradually • (be) likely (to) • overwork • prior • repeatedly • reverse

similarly • slightly • suitable • traits • trigger • (be) unaware

1. Alex has been feeling tired for a long time.
2. He studies late every night and works on weekends.
3. Recently, he has been getting sick again and again.
4. His teacher noticed a change in his behavior.
5. However, Alex didn't realize it.

Ex. C: Now answer these questions. Use some of the vocabulary words in your answer.

1. What is Alex's problem? Summarize it.
2. Alex went to see a doctor. How did the doctor help him?
3. What solutions did the doctor suggest?

Ex. D: Choose the correct words to complete the sentences.

chronic • circumstances • cognitive • consistent • contagious • determine

gradually • (be) likely (to) • overwork • prior • repeatedly • reverse

similarly • slightly • suitable • traits • trigger • (be) unaware

1. Alex feels _____ better after sleeping.
2. Stress can _____ headaches and illness.
3. His illness might be _____ , so he should stay home.
4. _____ to this semester, Alex was healthy and energetic.
5. Alex tends to _____ himself and never takes breaks.
6. The doctor will _____ if Alex has a serious problem.
7. Being hardworking is one of Alex's good _____ .
8. Because of his difficult _____ , Alex has to work after school.
9. Alex was _____ of how serious his condition was.
10. His health is getting worse _____ , not all at once.
11. He has been getting sick _____ , almost every week.
12. It is not _____ for Alex to work so many hours.
13. Alex is not _____ with his sleep schedule.
14. His _____ skills are getting worse because he is so tired.
15. The doctor hopes to _____ the problem before it gets worse.
16. Alex has had a _____ problem with sleep for several months.
17. If he continues like this, he is _____ get even sicker.
18. Alex's friend works long hours; _____ , she sometimes feels stressed and exhausted.

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4: INTERPRETING DATA

Topic: American Households

4.1: Unit Vocabulary

4.2: Topic Preview

4.3: Reading Skills- Working with Numbers

4.4: Reading Skills- Describing Graphs

4.5: Vocabulary Review 1

4.6: Reading Skills- Reading Graphs

4.7: Reading Graphs 1- 2024 U.S. Population

4.8: Reading Graphs 2- Who Does More?

4.9: Reading Skills- Evaluating Graphs

4.10: Vocabulary Review 2

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4.1: Unit Vocabulary

decline	decrease	distort	dramatically	drop
fluctuate	hit a low	increase	intentional	manipulate
mislead	plummet	reach a peak	remain stable	rise
scale	slightly	somewhat	stabilize	upward trend

Ex. A: Decide if the following sentences are true (T) or false (F).

1. ___ If your energy level **plummets** during the day, you probably become very tired suddenly.
2. ___ A person's mood can **fluctuate** depending on sleep, work, or relationships.
3. ___ If your expenses remain **stable** each month, they frequently change a lot.
4. ___ If the number of hours you sleep **declines**, you may feel more tired.
5. ___ If your confidence **hits a low**, you feel very positive about yourself.
6. ___ A **slight increase** in free time could allow you to relax more.
7. ___ If your workload **stabilizes**, it may become easier to manage.
8. ___ An increase in gas prices typically creates an **upward trend** in electric vehicle sales.
9. ___ If your motivation **drops somewhat**, you may not work as hard as usual.
10. ___ If grocery prices rise **dramatically**, many families may worry about money.
11. ___ If the speaker on your phone **distorts** the sound, it's easier to understand what people say.
12. ___ If someone **intentionally misleads** you, they know that they are giving you bad information.
13. ___ When you prepare your income taxes, it's ok to **slightly manipulate** the numbers.
14. ___ Celsius thermometers and Fahrenheith thermometers use different **scales**.
15. ___ Social media apps try to **manipulate** users to spend more time on their app.

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4.2: Topic Preview

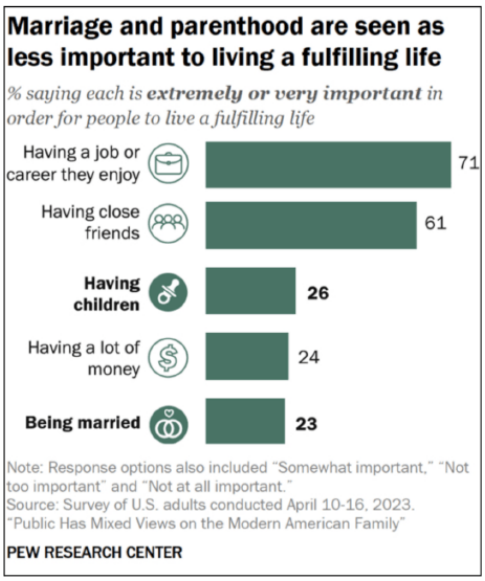
Ex. A: Take this survey and compare your answers with a classmate.

How important are these things to you?	Not at all important	Not too important	Somewhat important	Very important	Extremely important
1. Having a job or career that you enjoy	⚪	⚪	⚪	⚪	⚪
2. Having close friends	⚪	⚪	⚪	⚪	⚪
3. Having children	⚪	⚪	⚪	⚪	⚪
4. Having a lot of money	⚪	⚪	⚪	⚪	⚪
5. Being married	⚪	⚪	⚪	⚪	⚪

Ex. B: Now use the graph to answer these questions.

From "Public Has Mixed Views on the Modern American Family." Pew Research Center, Washington, D.C. (September 14, 2023)

1. People in this survey said that the most important thing for a good life is ____ .
   a. kids
   b. work
   c. marriage
   d. money
2. What do the numbers represent?
   a. number of people who answered the question
   b. percent of single people who answered the question
   c. percent of people who said extremely or very important
   d. percent of people who said an item is #1 or most important



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4.3: Reading Skills- Working with Numbers

Ex. A: Read the text about pronouncing numbers in English.

Writers often share data using numbers. It is important that you can recognize these numbers, but it is also important to be able to say them as words. For example:

0.15	zero point one five / point one five / fifteen hundredths
0	zero (often “oh” in mixed numbers, such as 1.05 = one point oh)
1.5	one point five / one and one half / one and a half
1.58	one point five eight / one and fifty-eight hundredths
15%	fifteen percent
150	one hundred (and) fifty / a hundred (and) fifty
1,000 / 1k	one thousand / a thousand
1,500 / 1.5k	one thousand, five hundred / a thousand five hundred / fifteen hundred
1,580	one thousand, five hundred (and) eighty / a thousand, five hundred eighty
15,000 / 15k	fifteen thousand
15,808	fifteen thousand, eight hundred (and) eight
150,000	one hundred (and) fifty thousand / a hundred (and) fifty thousand
1,000,000 / 1m	one million / a million
1,500,000 / 1.5m	one million, five hundred thousand / one and a half million
15,000,000 / 15m	fifteen million
15,666,660	fifteen million, six hundred sixty-six thousand, six hundred (and) sixty
1,000,000,000 / 1b	one billion / a billion

Ex. B: Now practice saying these numbers.

- The population in Oregon in 2023 was 4.23 million.
  - **say**: *two thousand twenty-three (*or: *twenty twenty-three*) *was four point two three million*
- Approximately 50% of Oregon’s 4.23 million residents live in the Portland metropolitan area.
  - **say**: *fifty percent* (or: *half*) *of Oregon’s four point two three million*
- The homeless population in Oregon increased by 52.87%, from 13,176 in 2015 to 20,142 in 2023.
  - **say**: *fifty-two point eight seven percent; from thirteen thousand one hundred (and) seventy six in twenty fifteen (*or: *two thousand fifteen) to twenty thousand one hundred (and) forty two in twenty twenty-three (*or: *two thousand twenty-three)*



(Photo from Wikimedia Commons)

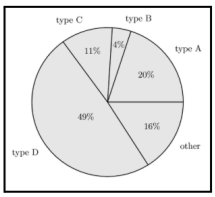
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4.4: Reading Skills- Describing Graphs

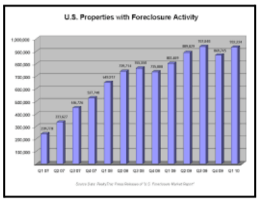
Ex. A: Read this information about types of graphs and how to describe them.

Graphs present numerical information in a visual format. Being able to describe graphs is an important academic skill. Here are some common ways that numerical data is represented.

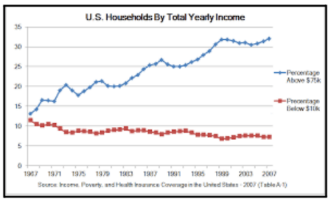
Here are four common ways that numerical data is represented:



pie chart



bar graph



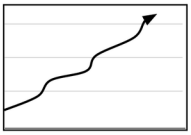
line graph

time	n.risk	n.event	survival	std.err	lower 95% CI
5	23	2	0.913	0.0588	0.8049
8	21	2	0.8261	0.079	0.6848
9	19	1	0.7826	0.086	0.631
12	18	1	0.7391	0.0916	0.5798
13	17	1	0.6957	0.0959	0.5309
18	14	1	0.646	0.1011	0.4753
23	13	2	0.5466	0.1073	0.3721
27	11	1	0.4969	0.1084	0.324
30	9	1	0.4417	0.1095	0.2717

table

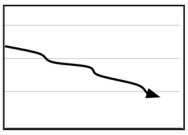
Writers often describe changes over time. Here is some useful language to describe these changes:

1



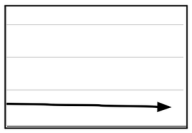
increase
climb
rise
shoot up
an upward trend

2



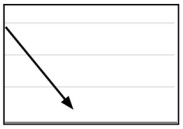
decrease
decline
fall
go down
plummet

3



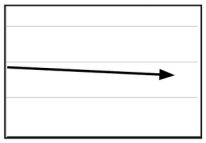
stay the same
remain flat / stable
maintain
stabilize

4



sharply
dramatically
significantly
rapidly

5



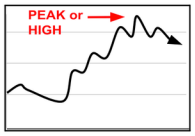
slightly
somewhat

6



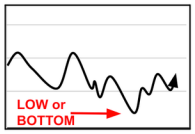
fluctuate

7

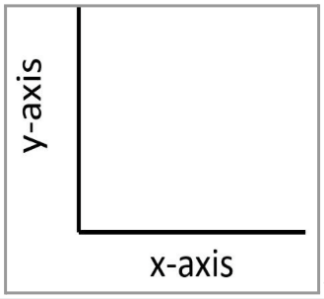


reach a high
reach a peak

8



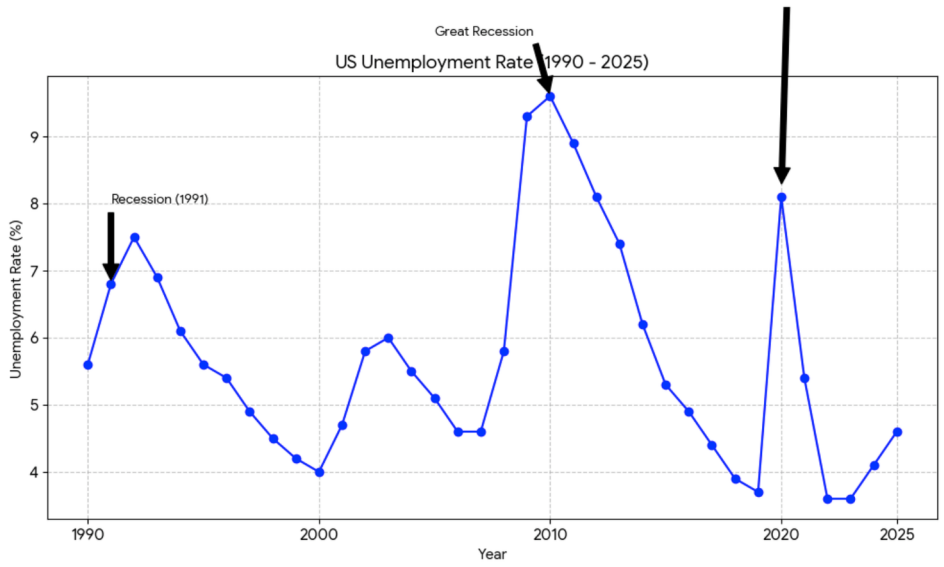
hit a lot
bottom out



To understand bar graphs and line graphs, it's important to identify the type of information being presented on the **X-axis** (the horizontal line) and on the **Y-axis** (the vertical line).

Ex. B: Look at the following graph. Decide what type of graph is being used. Then read the article and underline the words / expressions in the article that describe the changes in the graph.

The Unemployment Rate



1. This line graph illustrates the fluctuations in the United States unemployment rate over thirty-five years. These changes happened because of different events in history. In the early 1990s, the rate saw a slight increase because of a small recession and a rise in oil prices. However, it soon began to decrease during the "dot-com boom," when many new internet companies started. By the year 2000, the rate hit a low point of 4.0% because the economy was very strong.
2. During the 2000s, the rate was somewhat stable until the "Great Recession" began in late 2007. This was a major financial crisis where many people lost their homes and banks had big problems. Because of this, the unemployment rate rose significantly until it reached a peak of nearly 10% in 2010. After this peak, the 2010s showed a gradual decrease. This happened because the economy slowly recovered and companies began hiring workers again.
3. The 2020s brought the biggest changes on the graph. In early 2020, the unemployment rate suddenly shot up because of the COVID-19 pandemic. Many businesses, like restaurants and hotels, had to close. Fortunately, this was followed by a sharp fall in unemployment as the country reopened and people went back to work. Finally, leading into 2025, the graph shows a slight drop followed by a gradual increase as the government raised interest rates to control prices, making the job market return to a more normal level.

Ex. B: Based on the article, decide if the following statements are true or false.

___ 1. The Great Recession began in the late 1990s.

___ 2. During the “dot-com boom,” unemployment **increased** quickly.

___ 3. The unemployment rate **hit a low** point of 4.0% in the year 2000.

___ 4. The unemployment rate **reached a peak** of nearly 10% in 2010.

___ 5. After 2010, unemployment continued to **rise** steadily for the rest of the decade.

___ 6. The COVID-19 pandemic caused unemployment to suddenly **increase** in 2020.

___ 7. The government raised interest rates to make unemployment **rise** as high as possible.

___ 8. The unemployment rate **remained** perfectly **stable** during the entire 2000s.

___ 9. The unemployment rate was **somewhat** lower in 2025 than in 2000.

___ 10. Overall, unemployment tends to **rise sharply** during times of major economic problems.

Ex. C: Discuss these questions about the article with your classmates.

1. Find one example in the article of an **upward trend**. Explain what caused it.
2. Find one example of a **decline** in unemployment. What caused the decline?
3. Which event causes unemployment to **plummet**?
4. Find a sentence that describes unemployment becoming more **stable**. What helped you understand this?
5. Which period in the article shows the biggest **fluctuation** in unemployment? Explain your answer.
6. The unemployment rate “rose significantly until it reached a peak.” What does this sentence tell you about the graph?

Ex. D: Discuss these questions.

1. Do you think unemployment affects everyone equally? Why or why not?
2. Which event in the reading do you think had the biggest effect on unemployment? Why?
3. The article describes both “sharp” and “gradual” changes. Why is it important to understand the difference between these words when reading graphs?
4. Which period in the article would you least want to live through: the Great Recession or the COVID-19 pandemic? Why?

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4.5: Vocabulary Review 1

Ex. A: Choose the best answer for each question.

1. Which word means “to fall very quickly and dramatically”?

   a. stabilize b. fluctuate c. plummet d. rise

2. Which phrase means “to stay mostly the same”?

   a. reach a peak b. remain stable c. hit a low d. decline

3. If prices “fluctuate,” they:

   a. change slightly b. drop suddenly c. go up and down d. increase rapidly

4. Which word describes a small amount of change?

   a. dramatically b. slightly c. sharply d. extremely

5. If something “reaches a peak,” it:

   a. hits its highest point b. becomes stable c. drops suddenly d. changes direction

6. Which word is most similar to “decrease”?

   a. rise b. stabilize c. decline d. peak

7. Which phrase describes reaching the lowest point?

   a. stabilize b. hit a low c. upward trend d. market share

8. Which sentence sounds most positive?

   a. Sales plummeted. b. Prices fluctuated wildly. c. Profits showed an upward trend.

Ex. B: Discuss these questions.

1. What prices have **increased significantly** in recent years?
2. What industries may **decline** in the future?
3. What trends **fluctuate** the most?
4. What products once **reached a peak** in popularity but later **declined**?
5. What do you think will remain **stable** over the next five years?
6. What has shown **an upward trend** in your country recently?
7. Why do stock prices sometimes **plummet**?
8. What factors can help an economy **stabilize**?
9. What are some ways that advertisers **manipulate** consumers’ opinions of their products?
10. Do movies and television **distort** the reality of life in the U.S.? If yes, how?

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4.6: Reading Skills- Reading Graphs

Ex. A: Read this information about strategies for reading graphs.

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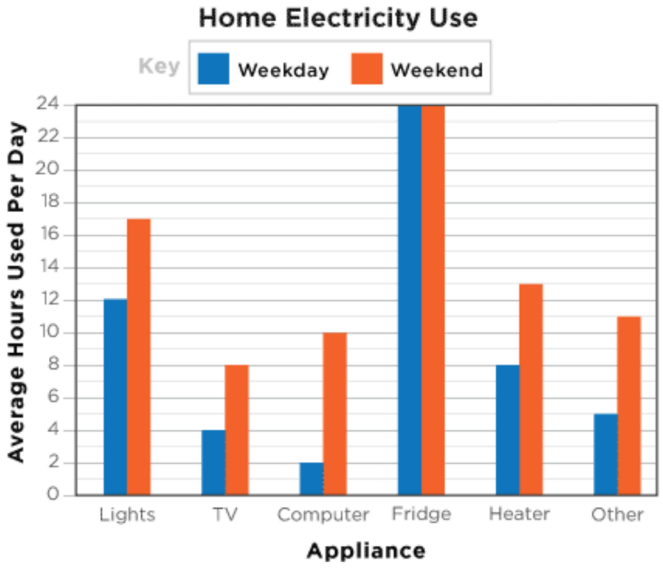
Graphs are used to visually communicate numerical data more efficiently. A good graph can also reveal patterns and trends that might be less immediately obvious in a written text. Although a graph presents information visually, it still needs to be "read." Here is a 5-step approach to reading visual data.

Ask yourself these questions when you need to read a graph or other types of visual information.

1. **What is the topic?**
   - Look for the title. Can you understand it? Can you reword it or explain it to another person?
   - What kind of information do you expect to learn from this graph?
2. **What is being measured?**
   - Is there a label, heading, or description of the data that is being described? What information does it give you?
   - If you are reading a graph with an **X-axis** (the horizontal line) and a **Y-axis** (the vertical line), read the labels for each axis. What information do they give you?
3. **How is the data being measured?**
   - What are the units of measurement? What **scale** is being used?
   - Ask yourself if the units make sense with what you know about the topic and the graph so far.
4. **Does the graph use colors, and if so, how?**
   - Colors are often used to add additional information to a graph without taking up extra space. Even black and white graphs often use shading to add information.
   - If colors (or shading) are being used to add information, check for a key that explains what the colors represent.
5. **Do you understand the information being presented?**
   - What is the key information that the graph's creator is presenting?
   - Can you see any patterns or trends? Is there any information that stands out to you?
   - What kind of graph did the creator use? Is this a good format for presenting this information?

Ex. B: Look at the following graph. Use the 5-step approach to read it and answer the questions.

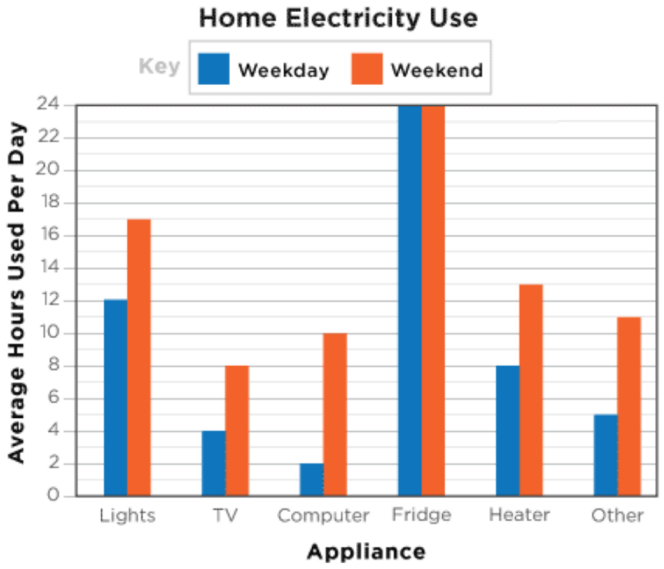
Adapted from Education Development Center, Inc. aka TV411. [CC BY-NC-SA]



1. What is the topic?
    - What is the title of this graph?
    - What kind of information do you expect to learn from this graph?
2. ***What*** is being measured?
    - Read the labels on the **X-axis** (the horizontal line) and the **Y-axis** (the vertical line). What is being measured?
    - Is there any information or data that was not included that would help you understand better?
3. ***How*** is the data being measured?
    - Look again at the X-axis and the Y-axis. What are the units of measurement?
    - Does these seem like a logical and correct way to present the data?
4. Does the graph use color (or shading)?
    - This graph uses blue and red colors. Where can you find the meaning of these colors?
    - What does the blue color represent?
    - What does the red color represent?
5. Do you understand the information being presented?
    - What is the key information that the graph's creator is presenting?
    - Can you see any interesting trends? Is there any information that stands out to you?
    - What kind of graph did the creator use? Is this a good format for presenting this information? Can you think of another way to present this information?

Ex. C: Now look at the graph again and answer these comprehension questions.

Adapted from Education Development Center, Inc. aka TV411. [CC BY-NC-SA]



1. Look at the bar graph above. Can you tell what the bar graph measures?
    A. Kilowatts used by appliances
    B. Hours appliance used per day
    C. Total electricity per year
    D. Hours appliance used monthly
2. What do the numbers in the Y-axis the (vertical line_ of this graph represent?
    A. Hours in a day
    B. Days of the week
    C. Types of appliances
    D. Amount of electricity used
3. Now look at the X-axis (the horizontal line) labeled **Appliance**. Each appliance has two bars. What is measured by the left bar?
    A. Amount of electricity used
    B. Weekday hours of use
    C. Number of appliances used
    D. Weekend hours of use

4. Which appliance has the most total usage?
   A. Fridge
   B. Heater
   C. Lights
   D. Television
5. On average, how many hours is the computer used on a weekday?
   A. 8
   B. 16
   C. 2
   D. 10
6. How many hours a day on average is the heater used on weekends?
   A. 5
   B. 8
   C. 13
   D. 14
7. Which appliance is used twice as many hours on the weekends as it is on weekdays?
   A. Lights
   B. Computer
   C. Refrigerator
   D. Television
8. Which appliance is used for more hours on weekdays than on weekends?
   A. Lights
   B. Computer
   C. Refrigerator
   D. None of the above

Ex. D: Discuss these questions.

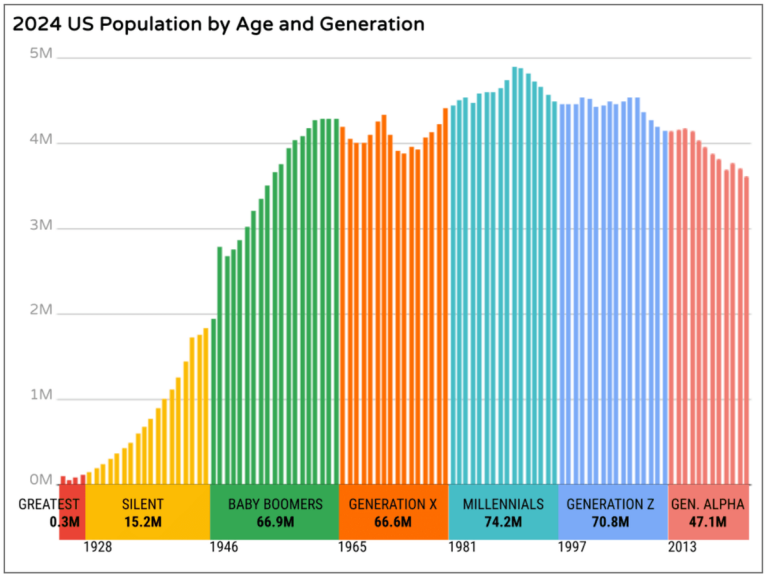
1. Using the information in the graph, what generalizations can you make about home electricity use?
2. There is no date on this graph. Why is this a problem? How do you think the data about computer use might be different if it was before the Covid-19 pandemic versus during or after the pandemic?

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4.7: Reading Graphs 1- 2024 U.S. Population

Ex. A: Read this graph. Use the 5-step approach. Then answer the questions.

Graph from Meador Manor blog of July 10, 2025,



Data Source (Note: data for most of the Greatest Generation was in 5-year cohorts)

Ex. B: Discuss these questions with your group.

1. What type of graph is this?
2. What is a **generation**? What types of information does this graph give you about generations?
3. What is the source of the data shown in this graph? Is it a reliable source of data?
4. Where does the graph itself come from? What is the source?
5. What information is shown on the Y axis (vertical)? On the X axis (horizontal)?
6. How long are generations–more or less?
7. Which generation is the largest? Which generation is the smallest? Why?
8. Why do you think the Gen. Alpha generation is smaller than the other recent generations?
9. What trend can you observe when you look at the Baby Boomers? Gen. Alpha?
10. Which generation do you or your family members belong to?
11. Do you have the same kind of generation names in the country you came from?

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4.8: Reading Graphs 2- Who Does More?

Ex. A: First, answer the questions on the left. Then compare your answers with the graph on the right.

From "Parenting in America Today." Pew Research Center, Washington, D.C. (January 24, 2023)

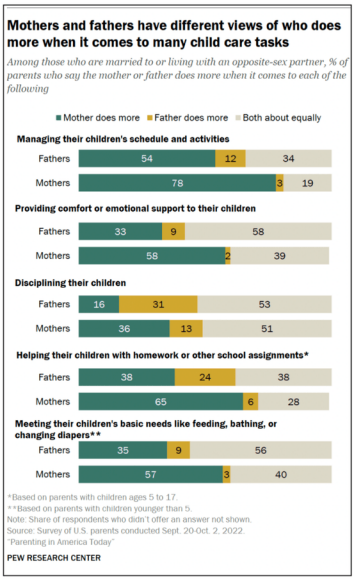
First, think about a family with a father, mother, and children. For each question, choose one answer:

a. **Father does this more**
b. **Mother does this more**
c. **Both do this equally**

1. ___ Who takes the kids to school and soccer games?
2. ___ Who helps their child feel better when something bad happens?
3. ___ Who punishes a child when they do something wrong?
4. ___ Who helps their child understand their math assignment from school?
5. ___ Who takes care of the child (feeding, cleaning, bathing, etc.) when they are a baby?

Next, compare your answers with data from a national survey in the graph at right. How does your opinion compare with others?

6. Where do fathers and mothers agree the most?
7. Where do fathers and mothers disagree the most?



Ex. B: Discuss these questions with your classmates.

1. In your opinion, why do fathers and mothers have different views of who does more when it comes to these child care tasks?
2. When was this data collected? Do you think opinions have changed since then? Why or why not?
3. What information do the asterisks (*) give you? Why is this significant?

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4.9: Reading Skills- Evaluating Graphs

Ex. A: Read this article about the ways in which graphs can distort information or mislead.

Numbers Don't Lie. Or Do They?

Well-designed graphs help readers understand complex information. However, poorly designed graphs can **distort** information and **mislead** readers. Even worse, sometimes graphs are **intentionally manipulated** to persuade people. Here are some common issues to be aware of.

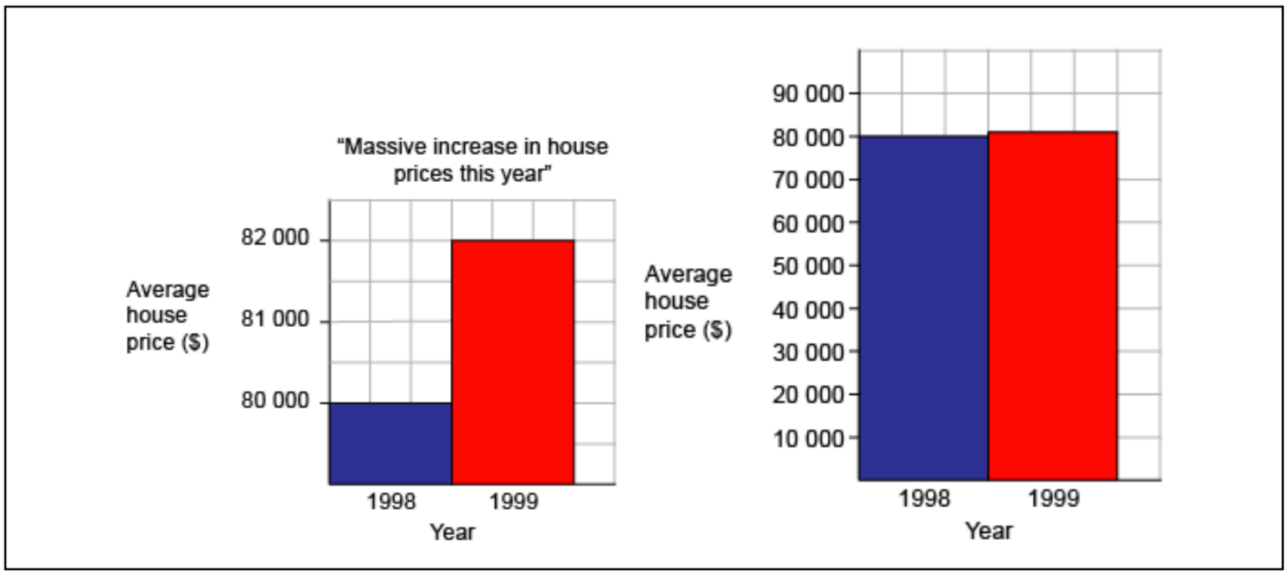
Vague or missing information

Context is needed in order to accurately interpret a graph. For example, suppose a graph shows that crime **decreased** by 20% during one year. At first glance, this seems like excellent news. However, several important questions remain unanswered. For example, what years are being compared? Was crime unusually high before the **decline**? Which types of crime were measured? Did the population **increase** during the same period?

Similarly, if the labels on a graph are vague, readers may draw incorrect conclusions. For example, imagine a graph labeled "Average Salary." Does it represent all workers? Full-time workers only? One company? One country? Before or after taxes?

A Non-Zero Baseline

One of the most common ways to **distort** data is by truncating (shortening) the vertical axis. Instead of beginning at zero, the graph starts at a much higher number. This technique is called using a **non-zero baseline**. This technique does not change the data, but it changes how people perceive the difference. It can make a small change look **dramatic**. Look at these two examples which both present the same data. Notice how different the information looks in the graph on the right where the Y-axis starts at 0.



(Image - Top Drawer Teachers - Misleading Scales: House Prices)

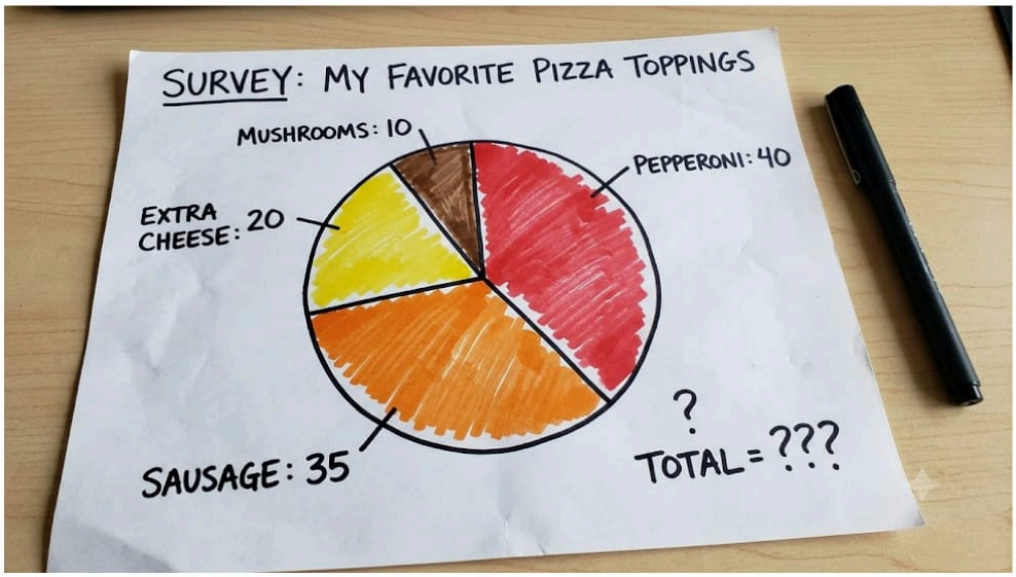
Inconsistent Scales

A graph should use a consistent measuring system (**scale**) with equal intervals or spacing. When the intervals are inconsistent, the data can be **distorted**. For example, one section of the horizontal axis might represent one year while another section represents

five years. This can hide trends in the data. In the example below, the graph on the right reveals a significant **fluctuation** in Sue's tomato harvest when all of the years are included on the X-axis.

Misleading Pie Charts

Pie charts should show how a whole is divided into parts. Therefore all the slices of the pie should add up to 100%.



(Image - AI generated)

Source Reliability

When you read a graph, look for the source of the data. Reliable sources usually explain where the data came from and when and how it was collected. Government agencies, universities, and established research organizations often provide detailed information that allow other researchers to verify the results. If a graph appears on social media without a source, or if important information is missing, readers should be cautious.

Becoming a Critical Reader

Graphs are valuable tools because they can quickly reveal important patterns. However, graphs are not always reliable simply because they contain numbers. Whether the **distortion** is **intentional** or **unintentional**, readers should always examine the **scale**, the labels, the completeness of the information, and the original source. By asking thoughtful questions instead of accepting every graph at face value, you can become a more informed reader and a better decision-maker.

Ex. B: Discuss these questions.

1. Based on the article, think of at least three questions readers should ask before trusting a graph.
2. What is a **non-zero baseline**, and how can it **distort** readers' perception of the information?
3. Why is it important for the intervals on a graph's axis to be consistent?
4. Explain why a graph showing crime decreasing by 20% does not provide enough information by itself.
5. The article says that some **misleading** graphs are **intentional** while others are **unintentional**. Explain the difference between these two situations. Give one possible example of each.
6. Imagine you see a graph on social media showing that housing prices have increased **dramatically** over the past year. Based on the article, what information would you look for before deciding whether the graph is trustworthy?
7. Why do you think people are often persuaded by graphs more easily than by tables of numbers?
8. Do you think companies, politicians, or news organizations sometimes **intentionally manipulate** graphs? Why or why not? Can you think of examples?

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4.10: Vocabulary Review 2

Ex. A: Give an **example** for each of these question.

Give an example of...

1. ...something that frequently **fluctuates**.
2. ...something that can **distort** your vision.
3. ...a business or product that **reaches a peak** at certain times of the year.
4. ...an **upward trend** that is generally positive.
5. ...an **upward trend** that is generally negative.
6. ...something that **plummets** in the winter.
7. ...something that has **increased dramatically** in recent years.
8. ...a way that food packaging that can **mislead** shoppers.
9. ...a **scale** used in daily life to measure things around the house.
10. ...something that might require an **intentional** plan in order to be successful.

Ex. B: For each situation, look at the vocabulary box. Find **2 or 3 words** that describe, connect to, or explain what is happening in the story. Be ready to say why you chose those words.

an upward trend	decline	decrease	distort	dramatically
drop	fluctuate	hit a low	increase	intentional
manipulate	mislead	plummet	reach a peak	remain stable
rise	scale	slightly	somewhat	stabilize

Scenario 1: Electric Bills The Garcia family opened their July utility bill and were shocked to see their power usage had doubled during the summer heatwave. However, when fall arrived, their energy consumption dropped back to normal. Later, in January, outside temperatures dropped sharply, and their power usage went up again.	_____ _____ _____
Scenario 2: A Social Media Living Room Sara edited a photo of her small living room with wide-angle lenses and heavy filters to make it look spacious and bright online. When her friend visited in person, she was surprised by how cramped the apartment actually felt. Sara claims she just wanted a nice photo, but her friend feels the picture gave a completely false impression.	_____ _____ _____

Scenario 3: Setting the Thermostat Mark bought a smart thermostat for his house so that he could automatically lower the temperature at night to save money on heating. However, his teenage daughter learned how to change the settings from her phone so her room would stay warm. Mark noticed the heat running all night. His daughter admitted she had deliberately changed the settings, so Mark created a new password and reset the system so their energy costs would be predictable again.	_____ _____ _____
Scenario 4: Family Streaming Accounts A family of four originally shared a basic streaming plan on one TV, but soon everyone was watching shows on separate devices at the same time. To keep up with demand, the parents upgraded to a multi-device plan, which caused their monthly bill to jump. They realized their digital subscription costs had been growing steadily every year.	_____ _____ _____

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5: READING ABOUT SCIENCE

Topic: The Natural World

5.1: Unit Vocabulary

5.2: Reading Skills- Reading Science Texts

5.3: Reading 1- How Sound Travels

5.4: Vocabulary Review 1

5.5: Reading 2- The Phases of the Moon

5.6: Vocabulary Review 2

5.7: Reading 3- Symbiosis

5.8: Vocabulary Review 3

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5.1: Unit Vocabulary

back and forth	collide	countless	densely	enable	encounter
illustrate	muffled	noticeable	originate	oscillating	pattern
phenomenon	predictable	primarily	recognizable	role	shrink
source	unless	vacuum	vibration	visible	wonder

Ex. A: Are these sentences true or false for you? Discuss them in your group.

1. I have a long commute. I spend more than an hour every day traveling **back and forth** between my home and my school or workplace.
2. I prefer living in a **densely** populated city rather than a quiet, empty countryside.
3. I believe that learning English will **enable** me to get a much better job in the future.
4. I often **encounter** people from different countries at PCC.
5. I have watched my favorite movie **countless** times.
6. Sometimes, I find it hard to understand people when their voices are **muffled** by a face mask.
7. On weekends, I **primarily** spend my time sleeping or resting.
8. My parents are my main **source** of advice when I have a difficult problem to solve.
9. I often **wonder** what my life will be like in 10 years.



(Photo by Gayatri Malhota on Unsplash.com)

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5.2: Reading Skills- Reading Science Texts

Ex. A: Read the text about useful strategies when reading science texts.

Reading Science Texts

Science texts may contain a lot of complex information, and it can be challenging to read and comprehend. For this reason, in addition to the reading strategies you learned in unit 1, here are some other strategies that can help you:

1. **Focus on key vocabulary and definitions**
2. **Read in small sections**
3. **Look for patterns in explanations**
   a. cause and effect: lead to, as a result, due to
   b. process steps: first, second, then, after, next, finally
   c. comparison: on the other hand, unlike, similarly
4. **Use graphic organizers to help you understand how the text is organized**
5. **Pay attention to examples**
6. **Reread difficult parts**

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5.3: Reading 1- How Sound Travels

Ex. A: Discuss the following questions in your groups.

1. What kinds of sounds do you hear every day? Which ones do you like or dislike?
2. How do you think sound moves from one place to another?
3. Have you ever noticed that sound is different underwater? What was the experience like?
4. What do you think happens to sound in outer space?



(Photo from: www.publicdomainpictures.net)

Ex. B: Read the article below. Answer the questions on the right. Also, underline definitions and note important information that might be on a test.

Listen to the text: https://tinyurl.com/ch2reading7

How Sound Travels

1. Sound is a natural **phenomenon** that is part of our everyday lives. We hear music, voices, car horns, birds singing, and **countless** other noises. But have you ever **wondered** how sound actually reaches our ears? To understand this process, we need to think carefully about **vibrations**, the **role** of a **medium**, and what happens in a **vacuum**. By exploring these concepts, we can also practice making a prediction about when sound can or cannot be heard.

Vibrations: The Source of Sound

2. Every sound **originates** with a vibration. A vibration is a rapid **back-and-forth** movement. When an object vibrates, it transfers energy into the air, water, or solid material around it. This energy creates waves, and those waves move outward until they reach our ears.
3. For example, when you strike a drum, the drumhead vibrates. These vibrations disturb the air particles nearby, which then **collide** with other particles, creating a wave. Eventually, these movements reach your ears, and your brain **interprets** them as sound.
4. We **encounter** vibrations in many everyday contexts. When you pluck a guitar string, you can see the string **oscillating** quickly. If you place your hand gently on your throat while speaking, you can feel the vibrations produced by your vocal cords. Another example is a small bell that produces sound because its metal surface vibrates when shaken.

Exercise

1. Read the first paragraph. What will the text be about? What is the organization? What kind of graphic organizer could you use to take notes?
2. Where does every sound begin? How does the process work? Try to make a drawing to represent it the best you can.
3. Think of another example to illustrate vibrations in everyday contexts.
4. What is a medium? What are the three main types of media for sound? How could you include this information in a graphic organizer?

The Medium: The Path for Sound

5. Vibrations require a medium to travel through. A medium is any material that can carry sound from one location to another. There are three major categories of media: gases, liquids, and solids.
    1. **Air (gas medium):**
    2. **Water (liquid medium):**
    3. **Solids (solid medium):**

The Special Case of a Vacuum

6. What happens when there is no medium? Outer space provides an excellent example. Space is essentially a vacuum, meaning it contains no air or other particles. With no particles to transmit energy, sound cannot travel. This is why astronauts cannot hear one another outside their spacecraft **unless** they use radios or other communication devices.
7. In conclusion, sound is a fascinating subject of study within physics and acoustics. It always begins with a vibration, and it requires a medium — whether air, water, or a solid substance — to travel. In a vacuum, sound cannot move at all, because there are no particles to transmit the energy. Using our knowledge, we can make a prediction about how sound will behave under different conditions.

Exercise

5. Did you notice that the word **medium** has an irregular plural: medium (sing.) / media (plur.)
6. Why does sound travel faster in solids than in air?
7. What happens to sound in a vacuum?
8. Which example from the text did you find most interesting, and why?



(Photo by Melody P on Unsplash.com)

Lightning causes the air to heat rapidly, producing intense vibrations. These vibrations travel through the atmosphere, and we hear them as thunder. Because light moves faster than sound, we often see lightning before we hear thunder.

When we listen to music, the speaker works by vibrating back and forth, pushing the air particles around it. These vibrations travel to your ears, allowing you to perceive the music. If you touch the speaker while it is playing, you can feel the acoustic energy directly.

Ex. B: Choose the correct answer for each question.

1. What is the source of all sound?

   a) light b) vibrations c) particles d) energy from the sun

2. What is a medium?

   a) an astronaut b) a material that carries sound c) a type of energy d) a small particle

3. Which medium is most common for sound in daily life?

   a) air b) water c) solids d) vacuum

4. Which of the following is **TRUE** about sound in water?

   a) It cannot travel through water. b) It travels faster in water than in air.
   c) It is always louder in water than in air. d) Dolphins cannot hear sound in water.

5. Why does sound travel faster in solids than in liquids or gases?

   a) Solids are lighter. b) Solids are transparent.
   c) Particles in solids are tightly packed. d) Vibrations are weaker in solids.

6. Why can't sound travel in a vacuum?

   a) because there are no particles to move the vibrations b) because sound is too weak
   c) because vacuums absorb sound waves d) because sound waves are too fast

7. In space, how do astronauts communicate?

a) by shouting b) by using radios c) by vibrations through their helmets d) by frowning

8. Which statement summarizes the main idea of the text?

a) Sound can travel through anything. b) Sound only travels through air.
c) Sound is created by vibrations and needs a medium. d) Sound travels best in a vacuum.

Ex. C: True or False?

___ 1. Every sound begins with a vibration.

___ 2. Vibrations cannot be felt, only heard.

___ 3. A bell makes a sound because its metal surface vibrates.

___ 4. Sound travels faster in air than in solids.

___ 5. A vacuum has no particles, so sound cannot move through it.

___ 6. Outer space is full of air that carries sound.

___ 7. The text says that sound can sometimes travel without a medium.

___ 8. Two astronauts floating in space can hear each other's voices if they speak loudly.

___ 9. If you strike a metal pipe with a hammer and place your ear on the pipe, you will hear the sound more clearly than if you just stand nearby.

___ 10. If a phone rings in a room with no air, no one will hear it, even though the phone is vibrating.

___ 11. If a spaceship explodes in outer space, we will hear a loud noise because of the explosion.

___ 12. If you are inside a swimming pool, you can hear the voice of someone speaking.

Ex. D: Review the text. Create a graphic organizer of the text.

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5.4: Vocabulary Review 1

Ex. A: Replace the word(s) in bold with one of the words from the following list. You may need to make some changes to the sentence.

back and forth	collided	countless	enable	encounter	muffled	vibrating
originate	phenomenon	primarily	role	source	unless	wonder

role

1. The ~~**function**~~ of the manager is to guide the employees.

2. The two cars **crashed into each other** at the intersection.

3. This new software will **make it possible for** students to learn faster.

4. The music sounded **very quiet and unclear** through the wall.

5. Lightning is a natural **event that can be observed and studied**.

6. The sun is the main **origin of** light and heat for Earth.

7. The phone was on silent, but I still felt it **shaking**.

8. There are **so many** stars in the galaxy.

9. To truly understand the meaning of a word, we need to **see/meet** it several times in different contexts.

10. Many rivers **begin** in the mountains.

11. This machine is used **mainly** for medical purposes.

12. You won't understand the lesson **if** you **don't** pay attention.

13. I **feel curious and have many questions about** how the universe works.

14. The signal goes **from one place to another and back again**.

Ex. B: Complete the sentences using your own ideas.

1. I often **wonder whether** _____.
2. I won't travel next week **unless** _____.
3. My mood **oscillates** between excited and stressed when _____.
4. Getting a college degree **enables** many people to _____.
5. An example of a **muffled** sound is when _____.
6. An example of something that moves **back and forth** is _____.
7. An example of a device that **vibrates** is _____.
8. When I was a kid, my mom told me **countless** times that _____.
9. A person who plays a very important **role** in my life is _____.
10. To avoid **collisions**, drivers need to _____.
11. Milk is an excellent **source** of _____.
12. On the weekends, I **primarily** _____.

13. When I **encounter** a difficult problem, I tend to _____.
14. _____ is an interesting **phenomenon**.

Ex. C: Complete each dialog with the words ***if***, ***even if*** or ***unless***.

Dialog 1:

Kai: Look at those dark clouds. I think a storm is coming.

Leo: It doesn't matter. We are going to the beach _____ it rains. We've been waiting all week to surf!

Dialog 2:

Sara: Do you still want to go to the coast this afternoon?

Maya: We will go to the beach _____ it rains. If the weather stays clear, we're on, but I'm not sitting in the sand in a thunderstorm.

Dialog 3:

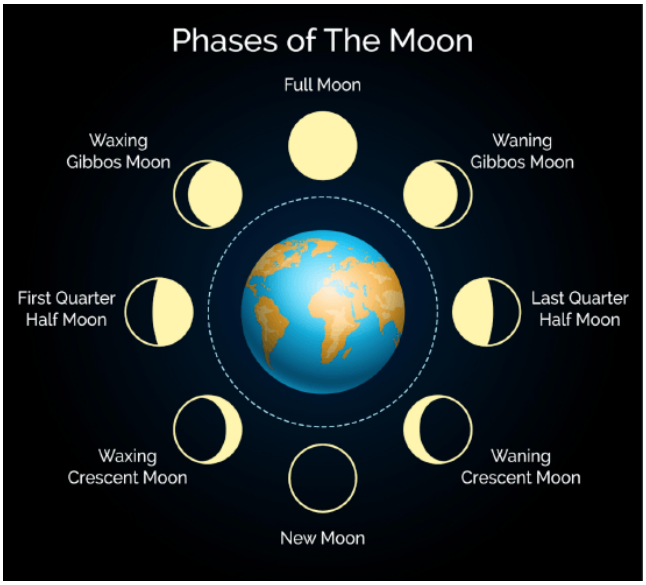
Peter: Do you still want to go to the coast this afternoon?

Maria: I will go _____ you come with me. I don't want to go by myself.

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5.5: Reading 2- The Phases of the Moon

Ex. A: Look at the image. What do you see? Describe it in your groups.



Ex. B: Now read the article. Use the reading strategies you have learned to read and understand this text.

The Phases of the Moon

1. The Moon has fascinated humans for thousands of years. Ancient civilizations used it to measure time, guide navigation, and create myths. Today, scientists explain the Moon's changing shape in the sky as a natural cycle called the lunar phases. This cycle lasts about 29.5 days and is caused by the relationship between the Earth, the Moon, and the Sun.
2. The Moon does not produce its own light. Instead, it reflects the light of the Sun. As the Moon orbits the Earth, different portions of its surface become illuminated, creating the phases that we observe. Although the Moon itself does not change form, its appearance varies according to the angle of sunlight.
3. The cycle begins with the new moon. During this phase, the Moon is positioned between the Earth and the Sun, and the side facing Earth is completely dark. After the new moon, the illuminated part slowly grows, or waxes. The first **noticeable** stage is the waxing crescent, a thin slice of light on the right side of the Moon.
4. Next comes the first quarter. At this point, half of the Moon is visible. The term "quarter" refers to the fact that the Moon is one-quarter of the way through its orbit. Afterward, the lighted area continues to expand, leading to the waxing gibbous phase, where more than half but not all of the Moon is illuminated.
5. The full moon is perhaps the most **recognizable** phase. In this phase, the Earth is between the Sun and the Moon, and the entire face of the Moon reflects sunlight. This stage has been associated with cultural rituals, agricultural calendars, and even superstitions.
6. After the full moon, the illuminated portion begins to decrease, or "wane." The waning gibbous moon shows a **shrinking** bright surface, followed by the last quarter, when half of the Moon is **visible** again, but this time on the opposite side compared to the first quarter. Finally, the waning crescent appears as a thin curve of light before returning to the new moon phase.
7. The study of the Moon's phases **illustrate**s important concepts in astronomy. It demonstrates how motion and perspective influence what we see from Earth. It also shows the interdependence of celestial bodies. Understanding lunar phases has practical applications, such as calendars, religious traditions, and even modern science experiments which rely on this predictable **pattern**.
8. In summary, the phases of the Moon are not mysterious transformations of the Moon itself, but **predictable** results of its orbit around Earth. By observing these phases, humans connect daily life with the larger rhythms of the universe.

Ex. C: Choose the best answer.

1. How long does one full cycle of lunar phases take?

   a) 24 hours b) 7 days c) About 29.5 days d) 365 days

2. Why does the Moon appear to change shape?

   a) The Moon produces its own light. b) The Moon changes its size.

   c) Different portions of the Moon are illuminated by the Sun. d) The Sun changes position.

3. Which phase occurs when the Earth is directly between the Sun and the Moon?

   a) new moon b) full moon c) first quarter d) waxing crescent

Ex. D: True or false?

___ 1. The Moon produces its own light.

___ 2. The first quarter and the last quarter both show half of the Moon illuminated.

___ 3. The waxing phases happen after the full moon.

Ex. E: Discuss these questions with your classmates.

1. What is the difference between waxing and waning?
2. Why is the “first quarter” called by that name?
3. Name two practical applications of understanding the Moon’s phases.
4. Why do you think ancient civilizations paid close attention to the Moon? Give at least two reasons based on the text and your own ideas.
5. In modern times, are there situations in which people still rely on the phases of the Moon?
6. Make a graphic organizer. Share it with a classmate. Do they look similar?

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5.6: Vocabulary Review 2

Ex. A: Discuss these questions with your classmates.

1. If someone visits your hometown, what is the most **recognizable** landmark or building they will see?
2. When you are feeling stressed or tired, is it **visible** on your face, or are you good at hiding your emotions from others?
3. Why do some clothes **shrink** after washing? Have you ever ruined any favorite clothing this way?
4. If you look at the weather in your country, is there a specific **noticeable pattern** that repeats every year, or is it always changing?
5. When you shop for expensive items, do you make your decision **primarily** based on online reviews and data, or do you rely **primarily** on recommendations from people you know?
6. Do you prefer to live a **predictable** life where you know what will happen next, or do you enjoy surprises and spontaneity?

Ex. B: Choose the best form of the word to complete each sentence.

1. The scientists made a ___ that the bird population would increase next year. Based on the information they have, the pattern is ___ .

   A. predict B. prediction C. predictable

2. The mountain was clearly __ from the airplane window. It was sunny, so the ___ was great.

   A. visible B. visibility

3. The teacher asked the students to ___ the pattern in the numbers. The patterns were ___ .

   A. notice B. notification C. noticeable

4. Her voice was immediately ___ to her friends. They were able to ___ it easily.

   A. recognize B. recognition C. recognizable D. unrecognizable

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5.7: Reading 3- Symbiosis

Ex. A: Read the article below. Underline definitions and note important information that might be on a test.

Symbiosis

1. Symbiosis is a close, long-term physical relationship between two different **species**. In this type of relationship, the two species are usually in physical contact, and at least one of them benefits from the relationship. There are three main types of symbiosis: parasitism, commensalism, and mutualism.

Parasitism

2. **Parasitism** is a relationship in which one organism, called the parasite, lives in or on another organism, called the host, which is usually much bigger than the parasite. The parasite primarily uses the host as a source of food. This relationship enables the parasite to survive and reproduce. The host is harmed by the parasite, but it is not usually killed immediately. Some hosts can live for a long time and are only slightly affected. However, some parasites are more harmful than others.
3. When a parasite and host have lived together for a long time, they often evolve together. The parasite does not benefit from killing its host, because it would then lose its source of food. At the same time, the host develops defenses that reduce the harm caused by the parasite. Over time, the relationship may become less damaging.
4. Parasites that live on the outside of their hosts are called ectoparasites. Examples include fleas, lice, and some molds and mildews, and they can be found in abundance in many animals. On the other hand, parasites that live inside the body are called endoparasites. These include tapeworms, malaria parasites, many bacteria, and some fungi. A tapeworm lives in the intestines of its host. It is not digested and uses the nutrients from the host consistently even though the host may struggle to survive and stay healthy.
5. Surprisingly, plants can also be parasites! Mistletoe, for example, is a flowering plant that lives on trees. Birds carry the seeds to trees, where the plant begins to grow. The mistletoe grows into the tree's tissues and takes water and minerals from the tree to support its own growth.



(Photo of mistletoe by Wolfgang Hasselmann on Unsplash.com)

Commensalism

6. **Commensalism** is a relationship in which one organism benefits and the other is not affected. Some parasitic relationships may slowly evolve into commensal ones. Over time, the parasite may cause less harm, and the host may become better at protecting itself. Eventually, the host may not be harmed at all. An example of commensalism is orchids growing on trees.

The orchid uses the tree as a surface to grow on. The tree is not helped or harmed, but the orchid benefits by getting more sunlight and rain. Mosses, ferns, and many vines also grow on trees in this way.

7. Another example is the relationship between sharks and remoras. Remoras are small fish that attach themselves to sharks using a suction disk on their heads. They travel with the shark and eat small pieces of food that the shark leaves behind. The shark does not seem to be affected by the remora.

Mutualism

8. **Mutualism** is a symbiotic relationship in which both species benefit.In some cases, the relationship is obligatory, meaning the species cannot survive without each other. In other cases, they can live separately but do better together.An example of mutualism involves acacia trees and ants. Acacia trees produce sugary food that ants eat. The ants live in the tree and protect it by attacking animals that try to eat it. The ants get food and shelter, and the tree gets protection. Another example involves plants and nitrogen-fixing bacteria. Nitrogen is an important nutrient for plant growth. Some plants, such as beans, clover, and alder trees, have bacteria living in small nodules on their roots. These bacteria change nitrogen from the soil into a form the plants can use. The plants give the bacteria food and a place to live, and the bacteria provide nitrogen for the plants. Both organisms benefit.



(Acacia tree by Gary M Stolz on Pixnio)

Ex. B: Choose the best answer.

1. What is the main purpose of the passage?
   A. to explain how dangerous symbiotic relationships are
   B. to compare plants and animals in nature
   C. to describe different types of relationships between species
   D. to argue that mutualism is the most common relationship
2. According to the passage, which of the following best describes symbiosis?
   A. a short-term relationship between similar species
   B. a relationship in which both species are always helped
   C. a long-term physical relationship between different species
   D. a relationship that usually results in the death of one species
3. Which of the following is an example of an ectoparasite?
   A. tapeworms in the intestines
   B. fleas on animals
   C. malaria parasites
   D. nitrogen-fixing bacteria
4. Why does the passage say that parasites usually do not kill their hosts?
   A. because hosts are stronger than parasites
   B. because parasites need the host to survive

C. because parasites cannot harm large organisms
D. because hosts quickly develop immunity

5. According to the passage, how do ants help acacia trees?
   A. By providing nitrogen
   B. By carrying seeds
   C. By protecting them from animals
   D. By giving them water
6. In the sentence:

   “They travel with the shark and eat small pieces of food that the shark leaves behind.”

   The word “**They**” refers to:

   A. sharks
   B. ants
   C. orchids
   D. remoras
7. In the sentence:

   “Parasitism is a relationship in which one organism, called the parasite, lives in or on another organism, called the host, **which** is usually much bigger than the parasite.”

   The second “**which**” refers to:

   A. parasite
   B. relationship
   C. parasitism
   D. host
8. Which of the following is true about commensalism, according to the passage?
   A. Both organisms benefit equally
   B. Both organisms are harmed slightly
   C. One organism benefits and the other is not affected
   D. One organism is harmed and the other benefits
9. What can be inferred about relationships that evolve from parasitism to commensalism?
   A. The parasite becomes larger over time
   B. The host becomes dependent on the parasite
   C. The parasite eventually disappears
   D. The harmful effects decrease over time
10. Why are nitrogen-fixing bacteria important for plants?
    A. They change nitrogen into a usable form
    B. They protect plants from parasites
    C. They help plants absorb sunlight
    D. They reduce competition with other plants

Ex. C: Label the relationship - parasitism (**P**), commensalism (**C**), or mutualism (**M**)

___ 1. A tick lives on a dog and feeds on its blood.

___ 2. Bees collect nectar from flowers, and the flowers are pollinated.

___ 3. A small bird builds a nest in a tree. The tree is not affected.

___ 4. A tapeworm lives in the human intestine and takes nutrients.

___ 5. Clownfish live among sea anemones where they are protected from predators. The anemones get food scraps.

___ 6. Barnacles attach to a whale and travel with it to find more food. The whale is not harmed.

___ 7 Mosquitoes bite humans to get blood.

___ 8 Bacteria in the human gut help digest food, and humans provide a place to live.

Ex. D: Can you think of an answer for this question?

Question: Can you think of a relationship between humans and another species that could be considered symbiotic? Which type is it?

Ex. E: Make a graphic organizer for the reading about symbiosis.

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5.8: Vocabulary Review 3

Ex. A: Answer the questions below. Include one of the phrases from the box in your answer.

play a key role • originate from • a predictable pattern

highly visible • muffled sound • back and forth

1. Why do people wear bright yellow jackets with reflective strips when they ride a bicycle at night?

   Example: They wear bright yellow jackets because they want to be **highly visible**.

2. Where does the water in a river come from?
3. How are scientists able to determine what time the sun will rise on any given day?
4. How is the heart important to the human body?
5. If two people try to speak while they are underwater in a swimming pool, what will be the result?

highly visible • densely populated • encounter a problem

noticeable change • muffled sound • back and forth • countless numbers

6. Why is it so difficult to drive or find parking in the middle of a major city like New York or Tokyo?
7. What is the pattern of the ball during a long match between two tennis players?
8. What happens to the trees and leaves when the seasons change from summer to fall?
9. How many people around the world study English?

Ex. B: Choose the best word to complete each sentence. For more help, look at the definitions below.

back-and-forth	collide	countless	densely	enable	encounter
illustrate	muffled	noticeable	originate	oscillating	pattern
phenomenon	predictable	primarily	recognizable	role	shrink
source	unless	vacuum	vibration	visible	wonder

Note: Use the definitions at the bottom to help you.

Sound communication in animals is a fascinating (1) _____ . Sound waves can (2) _____ from many places, such as the throat of a frog or the wings of a bee. These sounds are created by (3) _____ that move (4) _____ through the air in a (5) _____ (6) _____ . The air particles move in an oscillating motion and sometimes (7) _____ with each other as the wave travels. Although the particles themselves are not visible, the effects can be noticeable when animals react to the sound. In forests where trees grow (8) _____ , sounds may become (9) _____ because the waves encounter many obstacles. Animals use the sounds in many different ways. For example, frogs primarily use sound to attract mates, and this behavior plays an important (10) _____ in reproduction. Even though there are (11) _____ animal sounds, many species produce calls that are (12) _____ to others of the same kind. When animals hear certain sounds, their bodies may react by preparing to move closer, hide, or shrink back in fear.

Definitions

1. an event or situation that can be observed or studied
2. to start or come from a particular place
3. a fast movement back and forth
4. moving first in one direction and then in the opposite direction
5. something that happens in a way that can be expected
6. a regular or repeated way in which something happens or is arranged
7. to hit something or someone by accident
8. closely packed together with little space between
9. quieter and less clear because something blocks the sound
10. the function or job something has in a system or process
11. a very large number
12. easy to identify because it looks or sounds familiar

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6: READING ABOUT ECONOMICS

Topic: Macroeconomics

6.1: Unit Vocabulary

6.2: Topic Preview

6.3: Reading 1- Real GDP

6.4: Vocabulary Review 1

6.5: Reading 2- Supply and Demand

6.6: Vocabulary Review 2

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6.1: Unit Vocabulary

average	contribute	decrease	demand	fluctuation	equity
estimate	expansion	inclusive	inequality	inflation	intervention
prioritize	produce	recession	recovery	shrink	simultaneous
stability	standard	strengthen	tend	trend	vulnerable

Ex. A: Look at the vocabulary words. Can you find a word (or words) to match each situation?

1. A grocery store suddenly raises the price of eggs from $3 to $8.
2. A student works two jobs to help pay family bills.
3. A company hires many new workers and opens more stores.
4. A school adds wheelchair ramps and multilingual signs.
5. Many people buy umbrellas during heavy rain.
6. Two friends speak at the same time.
7. A teacher decides homework is more important than decorations.
8. A student guesses the number of people at a concert.
9. A sports team becomes stronger after practicing together.
10. A manager creates rules so workers know what quality is expected.

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6.2: Topic Preview

Ex. A: Discuss the following questions with a partner.

1. What are some things you or your family buy regularly (e.g., food, clothing, services)?
2. Does the amount of money people spend tell us something about the economy? Why or why not?
3. How can you tell if a country's economy is doing well?
4. What are some signs that a country might be in an economic crisis?
5. Have you noticed the price of anything go up over the past few years? Did that affect your decisions?
6. Have you or someone you know ever lost a job due to the economy?

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6.3: Reading 1- Real GDP

Ex. A: Read the article.

Real GDP

1. Real GDP is a very important idea in economics. It helps us understand how much a country produces and how the economy is doing. In this text, we will explain what real GDP means, how it helps measure **economic growth**, and how it relates to **economic fluctuations** and **business cycles**. We will also use examples from different countries and include helpful terms like **recession**, **real GDP per capita**, **expansion**, and more.
2. **GDP** stands for **Gross Domestic Product**. It is the total value of all goods and services made in a country in one year. For example, if people buy food, clothes, cars, or if a company builds houses or offers services, all of that is part of the GDP. When GDP is high, it usually means the economy is strong. However, prices can change over time, and that can **impact** how we see economic growth. That's why we use **real GDP** to get a clearer picture.
3. There are two kinds of GDP:
   - **Nominal GDP** measures goods and services using current prices. It includes inflation.
   - **Real GDP** removes inflation and uses prices from a past year (called the base year). This shows the real value of what was produced.
4. Real GDP is more useful when comparing years or countries, because it shows real changes in production, not just price changes. For example, if a country's GDP rises from $300 billion to $350 billion, it looks like growth. But if prices also went up significantly, the **real GDP** might only show a small **increase**. Real GDP helps us see what actually changed.

Real GDP and Economic Growth

5. When **real GDP increases**, we call this **economic growth**. This means the country is producing more and the economy is getting stronger. Governments want to **maintain** economic growth so people have jobs, businesses grow, and incomes rise. If growth is **ongoing** over many years, it shows a positive trend. Many countries have shown strong growth trends in recent years as their economies have **expanded**.

Real GDP Per Capita

6. To understand how people in a country are doing, we use **real GDP per capita**. This means real GDP divided by the number of people in the country.

   Real GDP per capita = Real GDP ÷ population

   This number helps us see how much, on average, each person is contributing to or receiving from the economy. It is also useful for comparing different countries.

7. **For example,** Norway has a high real GDP per capita. This means that, on average, people in Norway enjoy a high standard of living. Even if a larger country like India has more total GDP, the average income in Norway is higher. Countries with growing economies **tend to** see improvements in real GDP per capita over time.

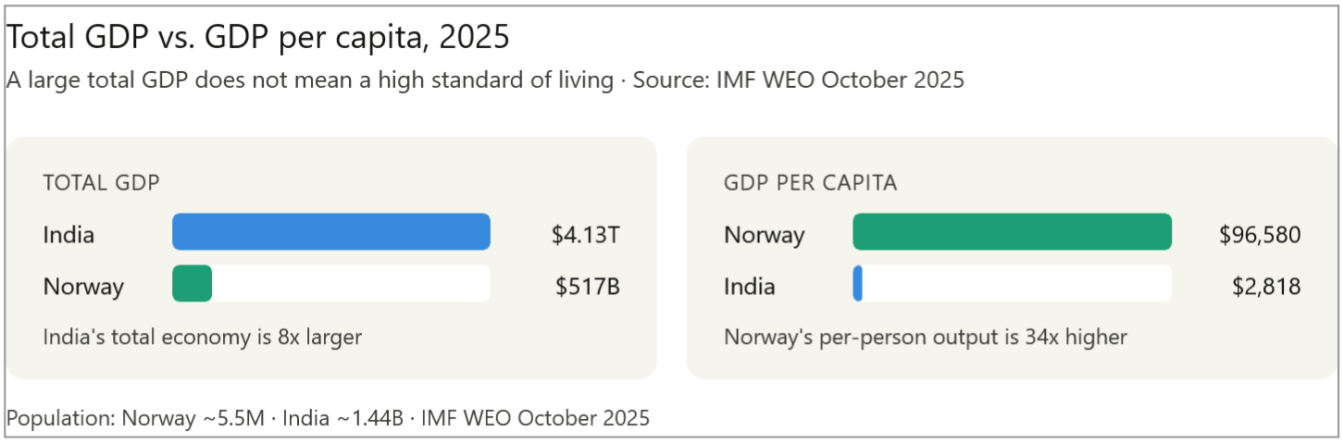


Fig.1 - Your caption text goes here

Economic Fluctuations and Business Cycles

8. Economies are not always **stable**. They go through ups and downs called **economic fluctuations**. These changes happen as part of the **business cycle.** There are several stages:
    1. **Expansion** – The economy is growing. Real GDP is rising.
    2. **Peak** – The economy reaches its highest point.
    3. **Recession** – Real GDP **decreases** for at least six months. Unemployment increases, and spending drops.
    4. **Trough** – The economy reaches its lowest point.
    5. **Recovery** – The economy begins to grow again after the downturn (decline).



9. These stages don't always happen at the same time in every country, but sometimes countries face **simultaneous** recessions or recoveries, especially during global crises. For example, in 2020, many countries experienced a **simultaneous** recession because of COVID-19. Travel stopped, businesses closed, and real GDP **decreased** around the world. The **impact** was very strong. In 2021 and 2022, many countries entered the **recovery** stage as economies opened again.

Why Real GDP Is Important

10. Real GDP helps us understand how a country's economy is doing. Economists, governments, and businesses use it to make decisions. It tells us:
    - Is the economy growing or shrinking?
    - Is the **trend** going up or down?
    - Are people better off than before?

It also helps countries compare themselves with others. If a country wants to **maintain** good living standards, it needs to focus on increasing real GDP in a way that is **stable** and long-lasting. Growth should not be **random** or short-lived, but steady and planned.

Real GDP and Recession

11. A **recession** is when the real GDP goes down for two quarters (six months) or more. During a recession:
    - Businesses may close.
    - People may lose their jobs.
    - Spending and investment go down.
12. Governments often respond by spending more money to help the economy or by lowering taxes. For example, Greece had a long recession starting in 2008. Real GDP fell sharply, and the **impact** on jobs and incomes was serious. It took many years for the country to **recover** and become more **stable** again.
13. Understanding real GDP helps you follow the news, study economics, and see how economic decisions affect your life. It's a key tool for keeping economies **stable** and helping countries **expand** and improve over time.

Ex. B: Answer the questions below.

1. What is the difference between **nominal** and **real** GDP?
2. How do economists find real GDP **per capita**? Do you think it is an accurate way to discover the average wealth of each person in that economy? Why or why not?
3. What words are used for the lowest and highest points of a business cycle?
4. Explain how economists define the word **recession**.

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6.4: Vocabulary Review 1

Ex. A: Decide if the following sentences are true (T) or false (F).

1. ___ If prices increase because of **inflation**, things usually become more expensive.
2. ___ A **recession** is usually a period when the economy becomes stronger.
3. ___ If a company has an **expansion**, it becomes smaller and employs fewer workers.
4. ___ A **vulnerable** person may need extra protection or support.
5. ___ If your clothes **shrink**, they become larger over time.
6. ___ An **inclusive** classroom welcomes students from different backgrounds.
7. ___ If people **prioritize** exercise, they consider it very important.
8. ___ A **fluctuation** means something stays exactly the same for a long time.
9. ___ During **recovery**, an economy may improve after a difficult period.
10. ___ If two events happen **simultaneously**, they happen at the same time.

Ex. B: Choose the best answer for each question.

1. Which word means “a general direction of change over time”?

   a. equity b. trend c. demand d. stability

2. If prices decrease they:

   a. go down b. stay equal c. fluctuate d. increase rapidly

3. Which word means “fairness and equal treatment”?

   a. recession b. estimate c. equity d. intervention

4. Which word describes a situation when the economy becomes weaker?

   a. recovery b. recession c. expansion d. stability

5. If a company wants to “strengthen” its business, it wants to:

   a. weaken it b. close it c. improve or support it d. ignore it

6. If a demand for a product increases, people:

   a. stop buying it completely b. want more of it c. produce less of it d. make it illegal

7. Which word means a “guess based on information”?

   a. fluctuation b. estimate c. trend d. standard

8. Which sentence sounds most positive?

   a. Inequality increased. c. Inflation made food cost more.

   b. We experienced economic recovery. d. The economy entered a downturn.

Ex. C: Discuss these questions.

1. What do you think is an **average** amount of homework for students each week?
2. What helps you feel **stability** in your daily life?
3. How can students **contribute** to a positive classroom environment?
4. What **standards** should teachers have for student behavior?
5. What **trends** are popular among young people today?

6. When is **intervention** helpful and when can it make a situation worse?
7. Why does **inequality** exist in some countries more than others?
8. What kind of food or products are **produced** in your hometown or region?

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6.5: Reading 2- Supply and Demand

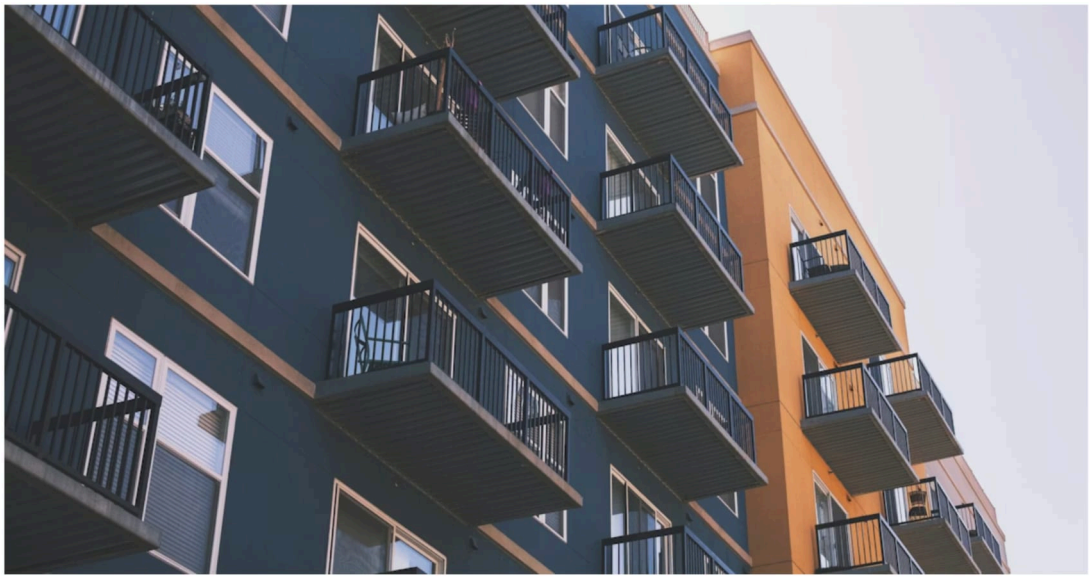
Ex. A: Read the article.

Supply and Demand

1. **Supply and demand** is another important concept in economics. It helps explain how prices are determined, how resources are distributed, and how individuals and businesses make economic decisions. This principle plays a central role in shaping both local and global economies.
2. **Supply** refers to the quantity of a product or service that is available in the market. **Demand** refers to the level of desire or need that consumers have for that product or service. When demand increases but supply remains limited, prices typically rise. In contrast, when supply increases and demand is low, prices tend to decrease. This relationship creates what we call a **market equilibrium**, where supply and demand are balanced.
3. For example, if a city has a limited number of apartments but many people are looking for housing, rent prices will increase. However, if there are many vacant apartments and few people want to rent, prices will likely decrease.
4. The law of supply and demand provides a framework for understanding how economies function. It influences **consumer behavior**, **business strategy**, and even **public policy**. For producers, it offers a way to decide what to produce and how to set prices. For consumers, it helps guide decisions about when and what to purchase.
5. Some economists argue that market efficiency is the most important goal and that **government intervention** should be limited. They may believe that the government should not set price limits on goods, because the market will naturally adjust based on supply and demand. However, others believe markets should also be fair and inclusive. In certain circumstances, it is necessary for governments to regulate prices, provide public services, or offer financial support. For instance, government programs should provide affordable housing or healthcare, so that everyone can participate in the economy, and not just those who can afford high prices.These policies help protect people from unfair economic outcomes and reduce inequality.
6. In some situations, the free market can lead to negative consequences, especially for people with low incomes. For instance, during a natural disaster, the demand for basic necessities such as food, water, and fuel increases sharply. Some sellers take advantage of this situation by raising prices excessively—a practice known as **price gouging**. This makes it difficult for vulnerable communities to access essential goods during emergencies.
7. Another example that supports government intervention is the high cost of prescription drugs. Even when the demand for a medication is high and the product is essential for survival, pharmaceutical companies may maintain high prices to increase **profit margins**. In these cases, the supply and demand system prioritizes profit over human well-being. This contributes to **economic inequality** and social injustice.
8. Understanding supply and demand is essential for studying economics and making informed decisions. But while this concept explains how prices and markets operate, it does not guarantee fairness. For this reason, economic systems should aim for both **efficiency** and **equity**. Sometimes, this requires thoughtful intervention to ensure that all members of society have access to the goods and services they need.

Ex. B: Answer the questions below.

1. In your own words, define the concept of **supply** and **demand**.
2. What does **equilibrium** mean? Give an example.
3. Rewrite the excerpt from the text below using the words: **supply** and **demand** in each example:
   “For example, if a city has a limited number of apartments but many people are looking for housing, rent prices will increase. However, if there are many vacant apartments and few people want to rent, prices will likely decrease.”
4. What are the examples in the text that support government intervention in the market? What are examples that don’t support government intervention in the market?
5. Do you think the government should intervene in the market? Why or why not?
6. What is the writer’s opinion? Where do you find this information? Do you agree?



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6.6: Vocabulary Review 2

Ex. A: Use the words in the boxes to complete each group of sentences.

average contribute recession vulnerable trend simultaneously produce expansion

1. The restaurant closed during the economic _____ because customers stopped spending money.
2. Children and elderly people are often more _____ during natural disasters.
3. Many young adults use social media every day, and this _____ is continuing to grow.
4. During group discussions, students should _____ ideas the conversation.
5. The two teams came onto the field _____ .
6. Factories _____ thousands of cars every year.

demand decrease prioritize estimate standards inflation shrink inclusive

1. The company had to _____ its budget after losing money.
2. The teacher asked students to _____ their most important assignments first.
3. Many people are finding it more difficult to afford food because _____ has increased prices.
4. The manager gave an _____ of how many customers would attend the event.
5. Hospitals must follow high medical _____ to protect patients.
6. Stores increase prices when customer _____ becomes very high.

equity fluctuation strengthen recovery tend inclusive intervention simultaneous

1. Good communication can _____ relationships between coworkers.
2. Most people _____ to feel tired after working long hours.
3. The government's quick _____ helped people after the flood.
4. Teachers should create an _____ classroom where everyone feels welcome.
5. After several difficult years, the country finally experienced economic _____ .
6. Gas prices showed a large _____ over the course of the summer.

Ex. B: Give examples for the following situations.

Give an example of...

1. ...a food item which tends to **fluctuate** in price over the course of the year.
2. ...something people should **prioritize** when they are very busy.
3. ...a product that is in **high demand** right before Valentine's Day.
4. ...something that people often do **simultaneously**.
5. ...something students can do to **contribute to** a good classroom environment.
6. ...something people often **produce** at home.
7. ...something that can **shrink** if people do not take care of it.
8. ...an activity that can **strengthen** friendships.
9. ...something a family might do less during a **recession**.
10. ...a safety **standard** that construction workers need to follow.

Ex. C: For each situation, look at the vocabulary box. Find **2 or 3 words** that describe, connect to, or explain what is happening in the story. Be ready to say why you chose those words.

average	contribute	decrease	demand	fluctuation	equity
estimate	expansion	inclusive	inequality	inflation	intervention

prioritize	produce	recession	recovery	shrink	simultaneous
stability	standard	strengthen	tend	trend	vulnerable

Scenario 1: Grocery Prices and Wages Last year, the price of food in grocery stores went up by 5%. At the same time, rent for apartments went up by 7%. However, the money that workers earned stayed exactly the same. Now, families who do not make a lot of money are having a very hard time paying for their basic needs.	_____ _____ _____
Scenario 2: A Company Changes Direction A large global company decides to grow by opening four big new offices in Latin America. They hire 1,200 new engineers to work there. To pay for this, the top managers decide to stop giving money to their older computer software department in the U.S. Because of this decision, that older department becomes much smaller and loses business.	_____ _____ _____
Scenario 3: Changing Gas Prices The price of gas changes a lot this week. On Monday, gas costs $2.90. On Wednesday morning, the price climbs quickly to $4.15 because of bad news in the world. By Friday evening, the price drops back down to $2.65. People who study the data say that gas prices usually change like this every winter.	_____ _____ _____
Scenario 4: City Transportation Planning The leaders of a city are making a new public transportation plan. They want to make sure that people in wheelchairs and people living in poor neighborhoods can easily use the buses and trains. The leaders decide to change the city budget: they take 40% of the money meant for fixing highways and use it to build free city buses and local health clinics instead.	_____ _____ _____
Scenario 5: The Economy Bounces Back For 6 months, the country's economy was doing very badly, businesses were closing, and many people lost their jobs. Finally, things are changing. People are feeling better about the future and are starting to spend money again. The number of jobs is growing every month, and business sales are returning to a normal level.	_____ _____ _____

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7: READING A SHORT STORY

7.1: Reading- Early Autumn

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7.1: Reading- Early Autumn

Reading: Early Autumn

Ex. A: Read this short story by Langston Hughes (1902-1967). This short story is freely available on the WikiSource website.

Early Autumn

When Bill was very young, they had been in love. Many nights they had spent walking, talking together. Then something not very important had come between them, and they didn't speak. Impulsively, she had married a man she thought she loved. Bill went away, bitter about women.

Yesterday, walking across Washington Square, she saw him for the first time in years.

"Bill Walker," she said.

He stopped. At first he did not recognize her, to him she looked so old.

"Mary! Where did you come from?"

Unconsciously, she lifted her face as though wanting a kiss, but he held out his hand. She took it.

"I live in New York now," she said.

"Oh" — smiling politely. Then a little frown came quickly between his eyes.

"Always wondered what happened to you, Bill."

"I'm a lawyer. Nice firm, way downtown."

"Married yet?"

"Sure. Two kids."

"Oh," she said.

A great many people went past them through the park. People they didn't know. It was late afternoon. Nearly sunset. Cold.

"And your husband?" he asked her.

"We have three children. I work in the bursar's office at Columbia."

"You're looking very . . ." (he wanted to say old) ". . . well," he said.

She understood. Under the trees in Washington Square, she found herself desperately reaching back into the past. She had been older than he was then in Ohio. Now she was not young at all. Bill was still young.

"We live on Central Park West," she said. "Come and see us sometime."

"Sure," he replied. "You and your husband must have dinner with my family some night. Any night. Lucille and I'd love to have you."

The leaves fell slowly from the trees in the Square. Fell without wind. Autumn dusk. She felt a little sick.

"We'd love it," she answered.

“You ought to see my kids.” He grinned.

Suddenly the lights came on up the whole length of Fifth Avenue, chains of misty brilliance in the blue air.

“There’s my bus,” she said.

He held out his hand. “Good-bye.”

“When . . .” she wanted to say, but the bus was ready to pull off. The lights on the avenue blurred, twinkled, blurred. And she was afraid to open her mouth as she entered the bus. Afraid it would be impossible to utter a word.

Suddenly she shrieked very loudly. “Good-bye!” But the bus door had closed.

The bus started. People came between them outside, people crossing the street, people they didn’t know. Space and people. She lost sight of Bill. Then she remembered she had forgotten to give him her address — or to ask him for his — or tell him that her youngest boy was named Bill too.

Ex. B: Discuss the following questions in your groups.

1. What **unintended** consequences did Mary’s impulsive marriage **lead to**?
2. What **previous** information from their relationship helps explain why Bill might feel **resentful**?
3. What details in the text **indicate** that Mary is older and self-conscious during the **encounter**?
4. What can you **infer** about Bill’s feelings when he **stares** at her and a **frown** appears between his eyes?
5. What does Mary’s **instinct** tell her when she unconsciously lifts her face for a kiss?
6. Which **aspects** of Mary’s reaction show that she still cares for him?
7. Does Bill’s behavior seem **deliberately** distant or simply uncomfortable?
8. Why does Mary **sigh** internally when he comments that she looks “well”?
9. Why might Mary **resent** the fact that Bill appears younger and happier in his life?
10. Why does Mary feel **slightly** sick in the Square?
11. The story describes the leaves falling “slowly” and “without wind.” How does this **indicate** the tone of the scene?
12. What did Mary **intend** to say before getting on the bus?
13. What does the ending **imply** about Mary’s emotional state?
14. What **dilemma** is Mary facing internally during the conversation?
15. Why does Mary suddenly shout “Good-bye!” even though the door is closed—what emotion does this **genuinely** reflect?
16. What might **eventually** happen if Mary or Bill try to contact each other—would it be **acceptable** or problematic?
17. What emotions do you **wonder** Mary will experience when she gets home?
18. If you **encountered** someone from your past like Mary did, what emotions do you think would be **triggered**, and how would you handle them?

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8: FINAL READING PROJECT

8.1: Final Reading Project
8.2: Appendix 1- Unit Vocabulary

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8.1: Final Reading Project

Name: _____

Before You Read

1. Scan the text. What are some key ideas the readings will talk about?
2. Find a few resources online that can help you understand some ideas before you read the texts. Maybe a Youtube video? Or an article from a website? Or images? Write down the source here and something you've learned.
3. Write down some vocabulary words/phrases you've found about the topic during this process. Write at least six key words:
4. Complete the chart (BEFORE YOU READ THE TEXT)

a. What do you know about the topic?	b. What would you like to find out?

While You Read

5. Read the text carefully and create an outline. The outline could be linear, or you could use a graphic organizer (or any other way you're used to doing outlines). Write down the main ideas. Think of questions that a teacher would potentially ask (You don't have to write the questions yet: just keep them in mind while you do the outline). The answers to these questions should be on the outline.

   Use a **separate** piece of paper.

After You Read

6. Write down AT LEAST 4 questions about the articles that a teacher would potentially ask on a quiz. Try to ask **thought-provoking questions** with examples, etc. Try not to ask questions that are about definitions.
7. Answer your own questions (from #6). Be careful! You need to use your own words. Paraphrase!
8. How can you connect the information from the article to something connected to your life experience? Write a paragraph with a reflection.

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8.2: Appendix 1- Unit Vocabulary

By Unit

Unit 1 - Academic Texts	Unit 2 - New Vocabulary	Unit 3 - Main Ideas
1. accurately 2. ambiguous 3. analyze 4. appropriate 5. aspects 6. bias 7. clarify 8. concept 9. critically 10. effective / effectively 11. efficient / efficiently 12. essential 13. familiar with 14. from scratch 15. highlight 16. highly 17. indicate 18. logic 19. overview 20. relevant 21. significantly 22. tool	1. acceptable 2. address (v) 3. at first glance 4. blindly 5. circumstances 6. controversial 7. delicate 8. dilemma 9. eliminate 10. ethically 11. explicit 12. harm 13. inevitable 14. inference 15. innocuous 16. lead to 17. mundane 18. obstacle 19. obvious 20. outcome 21. potential 22. pretend 23. range from...to 24. relatively 25. skeptical 26. somewhat 27. straightforward 28. unintended 29. violation 30. vulnerable	1. chronic 2. circumstances 3. cognitive 4. consistent 5. contagious 6. determine 7. gradually 8. (be) likely (to) 9. overwork 10. prior 11. repeatedly 12. reverse 13. similarly 14. slightly 15. suitable 16. traits 17. trigger 18. (be) unaware
Unit 4 - Interpreting Data	**Unit 5 - Science**	**Unit 6 - Economics**

1. decline 2. decrease 3. distort 4. dramatically 5. drop 6. fluctuate 7. hit a low 8. increase 9. intentional 10. manipulate 11. mislead 12. plummet 13. reach a peak 14. remain stable 15. rise 16. scale 17. slightly 18. somewhat 19. stabilize 20. upward trend	1. back-and-forth 2. collide 3. countless 4. densely 5. enable 6. encounter 7. illustrate 8. muffled 9. noticeable 10. originate 11. oscillating 12. pattern 13. phenomenon 14. predictable 15. primarily 16. recognizable 17. role 18. shrink 19. source 20. unless 21. vacuum 22. vibration 23. visible 24. wonder	1. average 2. contribute 3. decrease 4. demand 5. fluctuation 6. equity 7. estimate 8. expansion 9. inclusive 10. inequality 11. inflation 12. intervention 13. prioritize 14. produce 15. recession 16. recovery 17. shrink 18. simultaneous 19. stability 20. standard 21. strengthen 22. tend 23. trend 24. vulnerable

Alphabetically

acceptable U2	expansion U6	prioritize U6
accurately U1	explicit U2	produce U6
address (v) U2	familiar with U1	range from...to U2
ambiguous U1	fluctuate U4	reach a peak U4
analyze U1	fluctuation U6	recession U6
appropriate U1	from scratch U1	recognizable U5
aspects U1	gradually U3	recovery U6
at first glance U2	harm U2	relatively U2

average U6	highlight U1	relevant U1
back-and-forth U5	highly U1	remain stable U4
bias U1	hit a low U4	repeatedly U3
blindly U2	illustrate U5	reverse U3
chronic U3	inclusive U6	rise U4
circumstances U2/ U3	increase U4	role U5
clarify U1	indicate U1	scale (n) U4
cognitive U3	inequality U6	shrink U5/U6
collide U5	inevitable U2	significantly U1
concept U1	inference U2	similarly U3
consistent U3	inflation U6	simultaneous U6
contagious U3	innocuous U2	skeptical U2
contribute U6	intentional U4	slightly U3/U4
controversial U2	intervention U6	somewhat U2/U4
countless U5	lead to U2	source U5
critically U1	(be) likely (to) U3	stability U6
decline U4	logic U1	stabilize U4

decrease U4/U6	manipulate U4	standard U6
delicate U2	mislead U4	straightforward U2
demand U6	muffled U5	strengthen U6
densely U5	mundane U2	suitable U3
determine U3	noticeable U5	tend U6
dilemma U2	obstacle U2	tool U1
distort U4	obvious U2	traits U3
dramatically U4	originate U5	trend U6
drop U4	oscillating U5	trigger U3
effective U1	outcome U2	(be) unaware U3
effectively U1	overview U1	unintended U2
efficient U1	overwork U3	unless U5
efficiently U1	pattern U5	upward trend U4
eliminate U2	phenomenon U5	vacuum U5
enable U5	plummet U4	vibration U5
encounter U5	potential U2	violation U2
equity U6	predictable U5	visible U5

essential U1	pretend U2	vulnerable U2/U6
estimate U6	primarily U5	wonder U5
ethically U2	prior U3	

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