

UNIT A: Reading and Research Strategies

Many of the questions on the VA SOL 11 test are multiple-choice questions that are designed to find out how well you understand the reading selections on the test. Some of the questions will refer to literature—stories and poems—that you are given to read. Other questions may be based on a variety of print materials, from critical essays to resource materials to selections on subject-matter areas other than English: science, history, or even informational brochures.

Reading is the act of getting meaning from text—the written word. In this part of The Coach, you will review some basic reading and research strategies that apply to all forms of reading. The Coach will give you tips on how to make the most sense of what you read. The skills you practice in this Unit will also prove valuable when you work with the literature selections in Unit B, “Analyzing Fiction,” and Unit C, “Understanding Poetry.”

1 Identifying Main Idea and Details

All informational text is built around a **main idea**. The main idea is the most important idea that you are supposed to get from reading the text. Single paragraphs, sections of text, and entire informational articles will all have a main idea.

Each main idea is supported by **details**. Details are additional information that help to explain, clarify, or elaborate on the main idea, but they are not the main idea itself.

Example

Oxygen is vital to all animal life. Without it, fish could not swim, birds could not fly, and humans could not walk or run or think. For this reason, all animals have some method of taking oxygen from the environment and returning carbon dioxide to the environment. This process of exchange is known as respiration.

- 1 **What is the main idea of this paragraph?**
- A All animals need oxygen.
 - B Fish need oxygen to swim.
 - C Humans need oxygen to think.
 - D Animals return carbon dioxide to the environment.

Choice **A** is correct. The **main idea** of this passage is contained in the first sentence: *Oxygen is vital to all animal life*. The other sentences are supporting details. Answer B is wrong because plants are not mentioned in the passage. Answers C and D are details that explain why humans need oxygen and how the respiratory system works. They are not the main idea.

STRATEGIES AND TIPS FOR IDENTIFYING MAIN IDEA AND DETAILS

- 1 You can often find one sentence in a paragraph that states the main idea. This sentence is called the **topic sentence**.
 - The topic sentence can appear anywhere in the paragraph.
 - The most usual place for a topic sentence is the first sentence of the paragraph.
 - If the topic sentence is used to sum up the contents of a paragraph, it may be placed last in the paragraph.
 - Occasionally, the first sentence (or sentences) of the paragraph serves as an introduction, and the topic sentence follows it.
- 2 In a passage with many paragraphs, the main idea may be stated in an introductory paragraph. In a short passage, the first sentence may contain the main idea.
- 3 The main idea may also be found in a **heading** or even in a **title**.
- 4 When a question asks for a main idea, students sometimes choose a detail from the passage instead. This usually happens because the detail is right there in the passage, and the student thinks it looks right. Don't make this mistake! Be sure to distinguish between the main idea and a detail that supports the main idea!

SELECTIONS FOR PRACTICE

Read the following selections and answer the questions.

Selection 1

Let us look at how the human respiratory system works. When we breathe, we contract a muscle called the *diaphragm*, which increases the size of the chest cavity, which in turn causes the air pressure in the lungs to drop. In response to that drop in pressure, air moves in from the outside. We take in this air through the nose, where it is warmed up before moving farther into the body. The nose also filters dust out of the air.

- 1** **What is the main idea of this passage?**
- A Contracting the diaphragm makes the chest cavity larger.
 - B Here is how the respiratory system works.
 - C Lungs are paired organs that are designed to filter oxygen out of the air.
 - D In addition to being a sense organ, the nose plays a role in breathing.

Selection 2

During exercise, the cells of the body use up more oxygen and call out for increased oxygen in the bloodstream. The body's response is to breathe more quickly. In light exercise, the same muscles that usually push air out of the lungs simply work a little harder than when the body is at rest. When exercise becomes vigorous, however, stomach and chest muscles that do not ordinarily participate in respiration come into play. They contract to force carbon dioxide out of the lungs so more oxygen-rich air can flow in.

2 **The main idea of this paragraph is—**

- F When you exercise, the cells of your body use up more oxygen
- G When people breathe hard, they use stomach muscles
- H The body employs different breathing strategies for light and heavy exercise
- J The lungs are always working

Here is a longer passage. Read it and answer the questions.

Selection 3

1 Air, which contains oxygen, is drawn into the human body through the nostrils. From there it moves down the *trachea*, the breathing tubes that lead from the head to the chest. At its base, the trachea divides into two branches called *bronchi*, each of which leads to a lung. The bronchi divide and redivide into smaller and smaller branches, called *bronchioles*. At the end of the bronchioles are *alveolar ducts*, each of which ends with an *alveolar sac*. Each alveolar sac contains many tiny structures called *alveoli*, which is where gas exchange actually takes place.

2 The walls of the alveoli are extremely thin, having only one layer of cells. Around this layer lies a network of tiny capillaries, the smallest blood vessels. They, too, have very thin walls. Oxygen (and carbon dioxide) can pass across these two thin layers of cells. Oxygen from the air passes from the alveoli into the capillaries, which eventually connect to arteries that carry it to the rest of the body. At the same time, carbon dioxide from the de-oxygenated blood carried by the veins crosses into the lungs, from which it is excreted when we exhale.

3A **A good heading for paragraph 1 would be—**

- A Gas Exchange in the Alveoli
- B From the Nose into the Lungs
- C Tiny Structures in the Body
- D What Are Bronchioles?

2 Making Inferences and Drawing Conclusions

When you read, you must often **make inferences** or **draw conclusions**. When you apply this skill, you use your own reasoning to supply missing information.

For example, suppose a story opens this way:

Melissa fought to keep her umbrella under control as she hurried across the wet street.

Since the street is wet and Melissa is carrying an umbrella, you could **infer** that it was raining.

Similarly, if you read about someone who gives millions of dollars to a college, you might **conclude** that the person was both wealthy and concerned about education and young people.

When you draw a conclusion or make an inference, look carefully at the passage and think logically about it. Be careful not to “jump to conclusions.” For example, if you read that the streets are wet and people are carrying umbrellas, don’t infer that there is a hurricane in process or that the people live in a wet climate where it rains every day.

Example

Not all attempts at communication are equally successful. Many times an unspoken message cancels out the spoken one. “Oh, thank you—it’s just what I wanted,” says Jill as she eyes the purple sweater. She is smiling, but her eyes are not. She closes the box and lays it aside.

- 1 **From the passage, you can conclude that—**
- A It is Jill’s birthday
 - B Jill has been longing for a purple sweater
 - C Jill does not really care for the gift
 - D Jill is not a nice person

The answer is **C**. Jill does not care for the gift. The other conclusions are not supported by the details in the passage, or are contradicted by the passage.

STRATEGIES AND TIPS FOR MAKING INFERENCES AND DRAWING CONCLUSIONS

- 1 Be sure that your conclusion can be drawn logically from details in the selection.
- 2 Do not draw inferences that are too broad or too general.

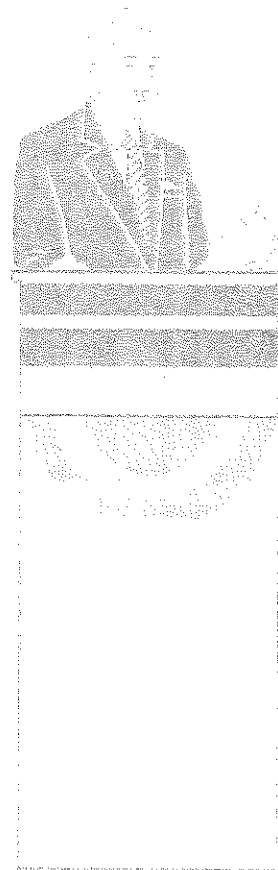
SELECTIONS FOR PRACTICE

Read the following selections and answer the questions.

Selection 1

When you make a speech to an audience, notice how they “talk back” to you. Body language is your audience’s way of talking back. A good way to tell whether your message is being well received is to observe the people you are speaking to. Are they focused on you? Do they seem alert? Or are their eyes wandering and their expressions glum? Are they yawning, fidgeting, and looking around the room? Once you have become a careful observer of other people’s body language, you can begin to use their reactions to modify your own actions toward them.

- 1 **The writer implies that listeners with wandering eyes and glum expressions are—**
- A careful listeners
 - B boring people
 - C bored by the speaker
 - D not worth bothering with



Selection 2

Sometimes the message that we send through nonverbal signals is not at all the one we intend. Marah thinks of herself as a friendly person, but she is also shy. She doesn't like the feeling of being looked at, being the center of attention. So when she walks into a room full of people, she looks straight ahead, avoiding eye contact. Her smile, if she remembers to smile, is fixed and impersonal. Marah often spends the entire time wishing someone would talk to her, and she doesn't understand why that rarely happens. She has no idea of what message she is sending or why she does not get the response she hopes for.

2 What conclusion can be drawn about the message Marah sends?

- F Marah uses nonverbal signals to show what she really means.
- G Marah seems unfriendly to others.
- H Marah is not really a friendly person.
- J If people knew what Marah was really like, they would like her better.

3 Finding Cause and Effect

When you read, it is important to notice why things happen. A **cause** is why something happens. An **effect** is what happened as a result of that cause. Cause-and-effect relationships are often signaled by certain words and phrases, such as *because*, *since*, *as a result*, *so*, *therefore*, *consequently*, or *due to*.

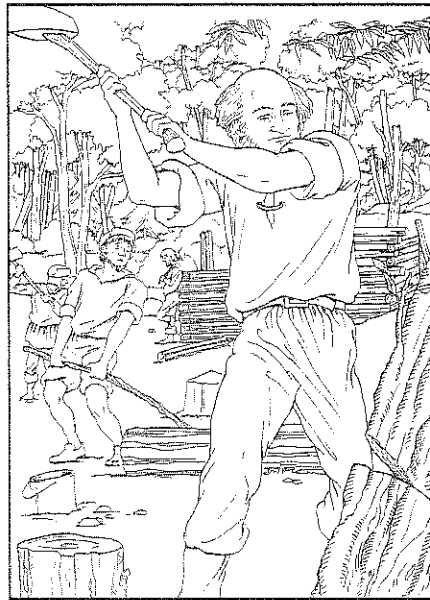
Sometimes causes and effects happen in a chain. The effect of one cause becomes the cause of the next.

CAUSE → EFFECT = CAUSE → EFFECT = CAUSE → EFFECT

Read the following passage and answer the question.

Example

In 1584, Sir Walter Raleigh obtained a charter from Queen Elizabeth authorizing him to set up a colony in the New World. His explorers selected Roanoke Island, which lies off the coast of what is now North Carolina. In 1585, an expedition with seven ships and 108 men landed there and began the task of setting up a colony. Their major interest, however, was in finding gold and riches, as the Spanish had in Mexico and Peru. When the ships returned to England for supplies, the colonists were left on their own. They had not expected to have to clear land, build houses, and do the other backbreaking but necessary work of establishing themselves in the wilderness. In addition, their demanding ways soon caused friction with the Native Americans. Worse, they did not find the gold-laden cities they had expected. Within a few months, disappointment set in. When the fleet of Sir Francis Drake appeared, the would-be colonists persuaded him to take them home.



- 1 **What was the main cause for the failure to colonize Roanoke Island?**
- A The land was not suitable for colonizing.
 - B The men were ill prepared for the task before them.
 - C The Native Americans were hostile from the start.
 - D Sir Francis Drake made the colonists return to England.

The correct answer is **B**. The men were not prepared to do the necessary work. Answers A and C are not supported by the passage. Answer D is a misreading of what the passage says.

TIP FROM THE COACH

Remember that the cause is why something happens. The effect is what happens because of it.

Read the following selections and answer the questions.

Selection 1

After the failure of the Roanoke colony, the English waited almost twenty years before trying again. In 1606, however, they formed what was called a "joint stock" company to establish a colony in Virginia. Under its charter, people bought shares in the company, and the money they invested would go toward establishing and running the colony. If the colony made money, the shareholders would share in the profits. The colonists were people hired by the company, which owned all the land and made all the important decisions. In 1607, the first colonists landed in Jamestown, a spot named after King James I.

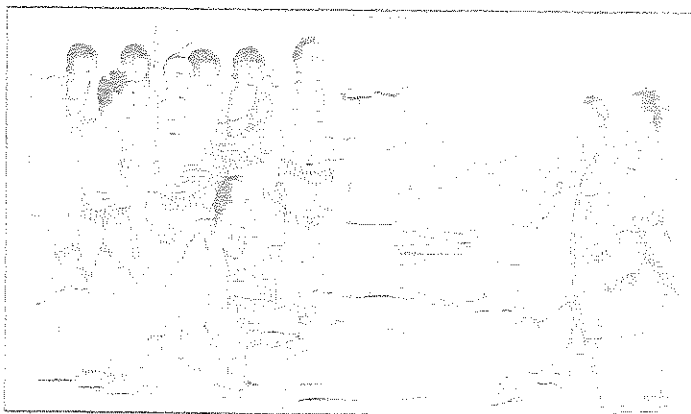
1A Why did England wait until 1607 to establish a colony?

- A It took nearly 20 years to establish a joint stock company.
- B The company had a hard time hiring people to go to America.
- C The failure of the Roanoke Colony discouraged another attempt.
- D Not enough people bought shares.

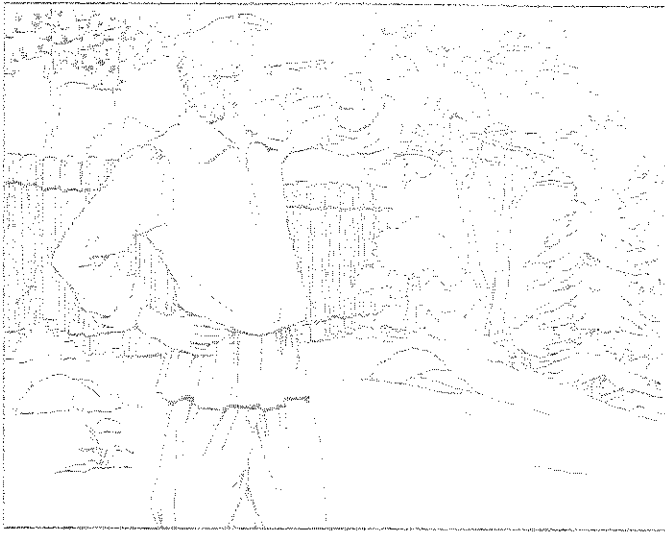
1B Why did people buy shares in the joint stock company?

- A They wanted to go to Virginia.
- B They wanted to run the colony and make all the decisions.
- C They wanted a job with the company.
- D They wanted to share in the profits if the colony made money.

Selection 2



1 In its early days, the Jamestown colony was in disarray. Because the settlement was near a swamp that bred mosquitoes and disease, many colonists died. Those who survived were still driven by their dreams of finding gold and were not interested in carrying out the heavy labor necessary to build a colony. Moreover, their relationship with the local Algonkian tribe, in whose territory Jamestown lay, was poor.



2 The Algonkians, under Powhatan, their chief, wanted to keep their land. They did everything they could to drive the settlers out. Eventually, the resistance of Captain John Smith won Powhatan's admiration, and Powhatan made Smith a chief. With peace at hand, the colony elected Smith its leader, and he was finally able to apply the same stubborn determination to the colony that had won over the Algonkians. Under his leadership, discipline improved. He goaded the lazy into farming by announcing simply, "He who does not work, does not eat."

2 **What was the result of Smith's leadership of the colony?**

- F Relations with the Native Americans got even worse.
- G Discipline improved.
- H People grew to enjoy farming.
- J Powhatan made Smith a chief.

4 Identifying Comparison and Contrast

Explanatory text often clarifies or explains by showing how things are alike or different. **Comparison** shows how two things are alike. **Contrast** shows how they are different.

Comparison and contrast are often signaled by words and phrases, such as *like*, *unlike*, *similarly*, *instead*, *in the same way*, *on the other hand*, *both*, *however*, and *on the contrary*. Single paragraphs, longer passages, and whole texts may be organized by comparison and contrast.

Watch for comparison and contrast when you read. They will help you understand the text.

Read the following passage and answer the question.

Example

On the surface, sailplanes and ordinary airplanes look very much alike. Both have a sleek body, wings, and a tail. Both are built to fly. Like an airplane, a sailplane is steered by means of a rudder and wing flaps called ailerons that the pilot operates with pedals and a control stick. However, there is one important difference between the two machines. Unlike an airplane, a sailplane does not have an engine. It cannot take off by itself. It must be launched from a high cliff or mountain top, or, more commonly, towed into the air by an airplane and set free. Once aloft, the sailplane depends on gravity, the shape of its wings, and air currents rather than a propeller for its forward motion.

- 1 **In what way is a sailplane most different from an airplane?**
- A It does not have a rudder.
 - B It steers with the help of ailerons.
 - C It does not have an engine.
 - D It is affected by gravity.

The correct answer is **C**. Choice A is untrue, and choices B and D are true of both sailplanes and ordinary airplanes.

STRATEGIES AND TIPS FOR IDENTIFYING COMPARISON AND CONTRAST

- 1 When looking for **similarities** between two things, eliminate answer choices that are true of only one or that are true of neither.
- 2 When looking for **differences** between two things, eliminate answer choices that are true of both or that are true of neither.

SELECTIONS FOR PRACTICE

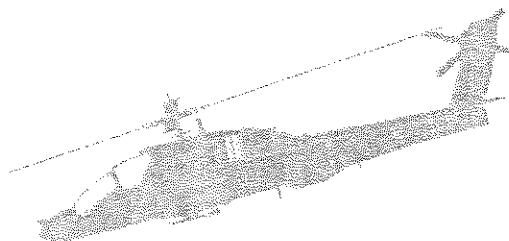
Read the following selections and answer the questions.

Selection 1

- 1 Helicopters and fixed-wing airplanes are both aircraft, but they differ in certain important ways. A helicopter has rotating blades that turn on a vertical axis. Thus, a helicopter can hover above the ground or climb and descend vertically—that is, straight up and down—as well as moving horizontally.

By contrast, an airplane's wings are fixed in relation to its body. It can only become airborne by getting up enough speed so that the air flowing around the wing lifts the plane off the ground.

- 2 Both airplanes and helicopters have many uses in business and industry as well as in the military. Because helicopters can land and take off in small spaces, they are important in rescue and military operations where materials and people must be moved to and from places where there are no runways or airports. However, what the helicopter gains by being able to maneuver in small spaces, it loses in stability and speed. There, the fixed wing airplane is vastly superior.



- 1 What is a drawback of a helicopter in comparison to an airplane?**
- A The position of its rotating blades.
 - B Its importance in military operations.
 - C Its lack of speed.
 - D Its need of space to take off.

Selection 2

- 1 Modern aircraft depend on different types of propulsion systems. A turbojet engine draws air in, compresses it, and heats it with a fuel source. The heated gases expand to power a turbine—an engine constructed something like a super fan—which both drives the compressor and forces the air out of the rear of the engine. As the air jets backward, the plane moves forward.
- 2 In contrast, the ramjet lacks both a turbine and a compressor. When the plane is moving fast enough, the force of the air entering the ramjet engine is enough to compress it, eliminating the need for either of the other two mechanisms. The explosion of fuel in the engine is enough to provide propulsion. The ramjet is thus lighter and more efficient than the turbojet. However, because the ramjet only operates at high speeds, it cannot operate alone. A second power source is needed for takeoff. Often a ramjet is combined with the turbojet for an engine that provides the advantages of both.

- 2 What is the major difference between the turbojet and the ramjet?**
- F The ramjet relies on compression.
 - G The turbojet is often combined with the ramjet.
 - H The ramjet does not contain a turbine or a compressor.
 - J The turbojet is not used on modern aircraft.

5 Understanding Vocabulary 1: Using Context Clues

When you read, you may come across words that are unfamiliar. Often, you can figure out the meaning of the word from **context clues**, that is, hints in the surrounding text. Frequently, the words just before or after the unfamiliar word give its meaning.

How fast you burn calories depends on your *metabolism*, the process by which your body uses its fuel.

The process by which your body uses its fuel, your *metabolism*, determines how quickly you burn calories.

Sometimes context clues appear in a separate sentence.

Phonology is not the study of the telephone. It is, rather, the study of the sound patterns found in human language.

You may also find unfamiliar words that are not defined at all, but the context will still give you a clue to their meaning. For example:

If animals vocally imitate human *utterances*, that does not mean they possess language. Language does not depend on spoken words alone. It is a system in which sounds—or gestures, as in sign language—are related to meaning.

The context as a whole gives you the clue that *utterances* means “spoken words.” When you come to an unfamiliar word that is not immediately defined, read the entire paragraph. It may help you figure out the meaning of a word.

Read the passage on the following page and answer the question.

Example 1

Knowing the sounds and sound patterns of one's language is only part of our *linguistic* knowledge. The most important part of knowing a language is knowing that certain sounds or groups of sounds represent different meanings. To know a language is to understand the system that relates sound and meaning.

1 What is the meaning of *linguistic* in the passage?

- A related to language
- B of the senses
- C inborn
- D incredible

The correct answer is **A**, "related to language." Did you notice that the whole passage was about knowing a language? That is the clue to the word's meaning. Answer B does not make sense in the passage. The other answers, although they might make sense in the sentence, do not make sense in the whole paragraph.

Here's another example.

Example 2

How did language begin? Humans and language are so closely related that people cannot help asking that question. And the answers to that question range from theories based on the sounds that people make while they do heavy work to the need for communication when groups are hunting to the sounds that parents and children make to each other. But how can we test these theories? What evidence is there? The difficulty *inherent* in coming up with an answer is enormous. The oldest written records go back less than six thousand years, whereas some kinds of humans probably have walked the earth for more than two and a half million years. Therefore, we cannot know for certain whether the earliest humans used language at all.

- 2 What is the meaning of *inherent* in the passage?
- A inherited
 - B deeply characteristic
 - C unpredictable
 - D beyond imagining

The correct answer is **B**, “deeply characteristic.” The passage says that the question cannot be answered certainly because there is so little evidence. The difficulty of coming up with one is built into the question, or inherent.

STRATEGIES AND TIPS FOR USING CONTEXT CLUES

- 1 Look for **context clues**—either in the sentence in which an unfamiliar word appears, or in the sentences before or after it.
- 2 Use the substitution method. Substitute each answer choice for the italicized (or underlined) word in the passage. Choose the substitution that makes the most sense.
- 3 Sometimes a word is not defined by its context, but a closely related word is. For example, if the context tells you that *linguistic knowledge* is knowledge about language, you should be able to figure out what kind of scientist a *linguist* is when you see the word later in the selection.
- 4 When you answer vocabulary questions, be sure you are not fooled by a “false friend” word that looks like the vocabulary word, but is unrelated to it. In Example 2, above, *inherent* is not the same as *inherited*.