Grade Six Sample Test Item—Reading
Achievement Level: Standard Nearly Met

Read the text and answer the questions. (Note: This text will be used for the next two questions.)

Sweet Licorice, Sour Lemons

Every time you put something in your mouth, your taste buds start working to sort out the flavor of the food you're eating, whether it is sweet, salty, sour, or bitter. But taste buds are much more complicated than you might think. How do they work?

First of all, your tongue is covered with little bumps called papillae. The papillae are very small on the tongue's tip, but in the middle and back of the tongue and in the throat, they are much larger and rougher. Yet it's not the papillae that help you taste. It's the groups of buds on the papillae—altogether nearly 10,000 buds. In turn, each bud is made of many taste cells, which are so tiny, you'd need a microscope to see them.

Taste is different from some of the other senses. Seeing and hearing, for example, are senses that tell you about things that happen away from your body. But taste, like the sense of touch, tells only about things that come into direct contact with your body—your tongue in this case.

And taste is often called a chemical sense, because you actually taste the dissolved chemicals in food. When these chemicals touch the taste cells in your taste buds, nerves send messages to the brain, and you can taste what you eat. It sounds as though this process would take a long time, but it only takes a few seconds for you to recognize many flavors. Taste is, however, much slower than the other senses.

Sometimes it seems as though your sense of taste doesn't work at all. You may notice that you can't taste food when you have a cold and a stuffy nose. That's because you also use your sense of smell to help you taste. Just as you have taste receptors in your mouth, you have smell receptors in the nasal cavity behind your nose. As you chew food, some microscopic particles of the food float up your throat into the nasal cavity.

Taste also depends on the sense of touch. The tongue has touch receptors that tell you about the texture of food, whether it is crunchy or mushy, smooth or grainy. There are also

Grade Six Sample Test Item—Reading
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receptors that tell you if something is peppery hot or minty cool. The temperature of certain foods can affect the way your taste buds respond. Sweet foods taste sweeter when warm, and bitter foods taste more bitter when cold. So eating food isn't simply a matter of tasting it in your mouth—you smell and touch it, too.

Since there are thousands of different tastes, you'd think there would be thousands of different types of taste buds. But there are actually only four basic types of tastes and taste buds: sweet, salty, sour, and bitter. All other tastes you sense are combinations of these.

The four types of taste buds are located on certain parts of the tongue. Sweet buds are on the tip of your tongue, the first to get touched. Farther back on the sides of the tongue are the salty and sour buds. Buds that taste bitter food are near the back and are the last to get a taste of anything. This is why you quickly taste sugar, but often you can't taste bitter food until you've swallowed it.

As you grow up, your taste for foods changes. Most babies like mild, bland food because they have many more taste buds than adults and are very sensitive to flavors. Babies even have buds on their cheeks. Your parents may enjoy heartier, spicier foods than you do, and your grandparents may prefer even stronger flavors, because the sense of taste weakens with age.

In prehistoric times, people needed a strong sense of taste to warn them if something was unsafe to eat. We don't need our taste buds for survival anymore, but taste can be a protector. Many insects and animals use it to test their food. Birds won't eat a monarch butterfly, for example, because it has such a bitter taste.

Insects and animals have different ways of tasting, too. Fish have taste cells on several parts of their bodies, and butterflies have them on their feet!

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Grade Six Sample Test Item—Reading
Achievement Level: Standard Nearly Met (continued)

Read the sentence from the text.

Every time you put something in your mouth, your taste buds start working to sort out the flavor of the food you're eating, whether it is sweet, salty, sour, or bitter.

What does the phrase "to sort out" suggest about the author's point of view in the text?

A. The author believes that taste is an involved process.

B. The author believes that taste is the most important of our senses.

C. The author believes that tasting different flavors is a problem for many people.

D. The author believes it's difficult to tell the difference between the four main flavors.

Area	**Reading** Demonstrating understanding of literary and nonfiction texts
Standard(s)	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
Answer	A