

READ THE PASSAGE Think about the different types of pitches detailed in the passage.

A Pitcher's Secret Weapons

Fastballs, breaking balls, and changeups—these are the three types of pitches that good pitchers throw during baseball games. Pitchers know that the key to pitching a good game is being unpredictable. By learning a variety of pitches, pitchers can keep batters guessing—and missing!

Fastballs The fastball is the most common type of pitch in baseball. Pitchers throw fastballs with backspin, which means the ball spins backward while it moves forward through the air. Backspin helps the ball travel faster through the air because the seams on the baseball whip the air as the ball spins, moving it out of the way. Pitchers use fastballs in order to make the balls simply too fast for batters to hit. Fastballs are also easier on a pitcher's arm than some other types of pitches.

Breaking Balls You may have heard of curveballs or sliders, two types of breaking ball pitches. Breaking balls “break,” or move left, right, up, or down, as they travel. The direction that a breaking ball moves depends on how the pitcher holds the ball and how the pitcher uses his or her arm, shoulder, and wrist. Pitchers like breaking balls because they are difficult for batters to follow, but they are hard on a pitcher's arm and can cause serious injury if the pitch is thrown poorly.

Changeups Changeups are sometimes called “slow balls” because they travel more slowly than most other pitches. A changeup is thrown just like a fastball, which usually makes the batter think a fast pitch is coming. But the ball is held in the pitcher's hand differently, which is why it travels more slowly than a fastball would. Pitchers use changeups to throw a batter's timing off. Batters often swing early at changeups.

SKILL PRACTICE Read each question. Fill in the bubble next to the correct answer.

- Pitchers like to throw breaking balls because they _____.
 - are too fast for batters to hit
 - confuse a batter's timing
 - are hard for batters to track
 - are easy to throw
- One reason pitchers might throw more fastballs than breaking balls is because _____.
 - fastballs are harder for batters to hit
 - throwing breaking balls is harder on a pitcher's arm
 - batters are not used to swinging at fastballs
 - breaking balls are the most common type of pitch thrown
- What is the main reason pitchers learn to throw many kinds of pitches?
 - to keep batters confused during the game
 - to show off their athletic abilities
 - to keep fans interested in the game
 - to prevent their throwing arm from getting tired
- A changeup travels more slowly than a fastball because of _____.
 - the direction that the ball spins
 - how the ball slides left or right
 - how the batter swings at the ball
 - how the pitcher holds the ball

STRATEGY PRACTICE Write one question you thought of while reading the passage.

READ THE PASSAGE Think about why some people include insects in their diet.

Bugs for Dinner

How is this for a menu: an appetizer of beetle larvae followed by fried caterpillars and then chocolate-covered grasshoppers for dessert. In many countries around the world, insects are part of the everyday diet. In fact, many people who are concerned about nutrition and future supplies of food think people should take a second look at eating insects.

Around 2,000 different species of insects are edible. Insects often contain more protein, fat, and carbohydrates than fish or beef. They can provide more energy than other sources of protein. Many also have high levels of vitamins and minerals necessary for good health. In addition, insects are easy to raise and use fewer resources, so they are a cheaper and more sustainable food source than processed foods. Valuing insects as food could eventually lead to the protection of the wild habitats where they live. Raising insects for food can create new jobs and income in places where there is great poverty and low employment.

The main problem in promoting insects as food is known as the "ick factor," the squeamishness that many people feel when they consider eating bugs. But opinions about food, like many things, are determined by the culture. For example, shrimp is a beloved food in the United States, but in some parts of Africa, people think shrimp is disgusting compared to a juicy and delicious red ant.

SKILL PRACTICE Read each question. Fill in the bubble next to the correct answer.

- Which of these is determined by culture?
 - the cost of insects
 - insects' nutritional value
 - the popularity of a food
 - job creation
- How might eating more insects lead to protection of the habitats where insects live?
 - If people value the insects, they will want to protect areas where the insects live.
 - If people value insects, the government will make it illegal to gather them in the wild.
 - People will decide to move closer to areas with the most insects, which will lead to protection.
 - People will need protection because the habitats might become dangerous.
- People in some parts of Africa eat red ants because they _____.
 - like the taste of red ants
 - have nothing else to eat
 - cannot get shrimp
 - want to create more jobs
- According to the passage, eating insects might be better than eating beef because _____.
 - insects taste better than beef
 - most insects are edible
 - people can get jobs raising insects
 - insects have more nutrients than beef

STRATEGY PRACTICE Think of a food you eat that is not eaten in another culture or population. Why do you think this difference in diet exists?

READ THE PASSAGE Look for clues in the passage that can help you make predictions about the future of Tasmanian devils.

The Plight of the Tasmanian Devil

You may have seen cartoons featuring the Tasmanian devil—a crazed, snarling beast that spins in a furious circle when it is angry. Real Tasmanian devils do have rather nasty personalities. They will bare their sharp teeth and growl when defending themselves. Tasmanian devils are in terrible trouble, though, and despite their bad reputation, these animals need help.

In 1996, scientists began noticing large tumors on the faces of Tasmanian devils. The tumors are caused by a cancer that, unlike other cancers, is spread through bites. Only Tasmanian devils get the disease, which is known as devil facial tumor disease, or DFTD.

The facial tumors caused by DFTD make it nearly impossible for the animals to eat. If a Tasmanian devil does not die from DFTD, it will instead starve to death. Sightings of these creatures in their natural habitats have declined by as much as 70%, and the Tasmanian devil was added to the endangered species list in 2009.

The Save the Tasmanian Devil Program (STTDP) has been working with zoos to capture the animals and isolate healthy ones in outdoor, free-range enclosures. Zoos are also breeding Tasmanian devils and are slowly increasing healthy populations. Despite these efforts, DFTD continues to spread in the wilds of Tasmania, and scientists have been unable to find a treatment or a cure.

SKILL PRACTICE Read each question. Fill in the bubble next to the correct answer.

- What would probably happen if a Tasmanian devil was threatened by another animal?
(A) It would bare its teeth and growl.
(B) It would die of starvation.
(C) It would contract DFTD.
(D) It would run to safety.
- Which of these would probably happen if an infected Tasmanian devil bit another Tasmanian devil?
(A) The first animal would survive.
(B) The second animal would get DFTD.
(C) The second animal would kill the first.
(D) Both animals would die in the fight.
- If a Tasmanian devil with DFTD were able to eat, it would probably _____.
(A) survive with its tumors
(B) die of the disease
(C) starve to death
(D) become cured
- In the future, Tasmanian devils will probably _____.
(A) become extinct
(B) learn how to survive DFTD
(C) live and thrive only in zoos
(D) double their population numbers

STRATEGY PRACTICE Write a question that can be answered with information from the passage. Then have a partner answer the question.

READ THE PASSAGE Use information from the passage to make predictions about Africanized honeybees.

March of the Killer Bees

The African killer bee sounds like a pretty scary insect, but its real name—Africanized honeybee—is not quite as frightening. In the 1950s, African honeybees and European honeybees were bred together in Brazil, and the so-called killer bees were created.

Bee breeders were attempting to develop a honeybee that was better suited to warm climates. Unfortunately, some colonies of these new bees escaped, and the bees have since moved northward at a rate of 100 to 300 miles per year. Once the bees left Brazil, they moved quickly into the lower regions of the United States. They have currently spread through the southern parts of California, Nevada, Arizona, New Mexico, Utah, Texas, Oklahoma, Louisiana, and Florida. Recently, however, their movement has decreased. Some scientists believe Africanized honeybees will do well only in warm climates.

Africanized honeybees do not actively seek out victims. They are easily disturbed, however, especially by the vibration of motors. They are also more likely to attack than other bee species. Once disturbed, swarms of Africanized honeybees may chase an intruder for a quarter of a mile and are 10 times more likely than other bees to sting when provoked.

Like all honeybees, Africanized honeybees can sting only once before they die. Their swarming tendencies, however, have caused the United States government to issue this warning to those attacked: "RUN away quickly! Do not stop to help others. Continue to RUN!"

SKILL PRACTICE Read each question. Fill in the bubble next to the correct answer.

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| <p>1. What would probably happen if a person drove a tractor near a hive of Africanized honeybees?</p> <p>(A) The bees would ignore the tractor.</p> <p>(B) The driver would not notice the bees.</p> <p>(C) The bees would move their hive to a new place.</p> <p>(D) The bees would become upset and attack.</p> | <p>3. What is probably the best way to keep from being stung by Africanized honeybees?</p> <p>(A) chase them away by running motors</p> <p>(B) stay inside on warm days</p> <p>(C) move to another state</p> <p>(D) avoid bothering them</p> |
| <p>2. If you tried to help someone who was being attacked by Africanized honeybees, you would probably _____.</p> <p>(A) also be attacked</p> <p>(B) escape unharmed</p> <p>(C) hurt the person involved</p> <p>(D) destroy the bee colony</p> | <p>4. If the climate in the United States becomes much warmer, Africanized honeybees will most likely _____.</p> <p>(A) move back south</p> <p>(B) die off</p> <p>(C) move farther north</p> <p>(D) stop their movement</p> |

STRATEGY PRACTICE How do you feel about honeybees? Why?

READ THE PASSAGE Think about how phones have changed and how they could change in the future.

The Super Computer in Your Pocket

In 2000, very few cellphones could connect to the Internet, and most could only make phone calls or send basic text messages from black and white screens. People who bought phones at that time were mostly concerned about the phone's size, not what it could do. In about a decade, however, cellphones were transformed into much different tools.

By 2012, the majority of cellphones could connect to the Internet, and most ran "apps," or applications, such as games, social networking tools, or programs with the ability to create and share creative projects. For example, a new phone in 2012 allowed users to shoot videos, edit the videos into movies, add sound effects, and publish the final product on video-sharing sites. People who bought phones in 2012 worried about how fast their phones were and how quickly they could perform tasks. People were no longer concerned with just making phone calls.

So what will phones be like in 2024? No one knows for sure, but you can make some good guesses. Even though phones change, their improvements are based on similar goals. For example, most companies want to make phones that are easier to use. Early phones had number buttons you had to push, later phones had touch screens, and even later phones had voice commands—no touching required. Phone companies also try to make phones that can do things older phones could never do. Over the years, cellphones went from having no cameras to being able to record high-definition videos.

Phone companies are always looking for people with exciting new ideas. If you can think of a better way to make phones, you might be able to help invent the next superphone!

SKILL PRACTICE Read each question. Fill in the bubble next to the correct answer.

- Which of these will most likely be true in 2024?
 - Phones will no longer make calls.
 - Phones will have even more features.
 - People will not use phones as much.
 - Companies will sell the same number of phones.
- By 2012, people were worried about phone speed because _____.
 - people spoke more quickly
 - people wanted their phones to do complex tasks
 - slow phones were easier to use
 - fast phones played videos too quickly
- Which of these will likely disappear from phones in the future?
 - number buttons
 - voice commands
 - cameras
 - video-making programs
- Many people in 2000 did not choose a phone based on its features because most phones _____.
 - were connected to the Internet
 - were too large to carry
 - had the same limited features
 - had unlimited apps

STRATEGY PRACTICE Write a question you thought of while reading the passage. What is the answer?
