

11 Discovered by Accident

What was discovered by accident? The answer is penicillin. It kills germs. By killing germs, it saves lives. Suppose you are sick. You go to a doctor. She examines you. She says you have a "staph" infection. She gives you some pills. You take them. The pills knock out the staph. Soon you are well. Before penicillin, this would not happen. Staph was almost sure death.

Everyone wanted a cure. Labs worked day and night. They grew the staph in small dishes. Then they tried to kill it. Nothing worked.

The lab dishes had covers on them. These kept things from falling into a dish. Molds were a big worry. They are always floating in the air. You can't see them. They're too small. There are thousands of different molds. Molds can ruin an experiment. That's why dishes are covered.

Dr. Alexander Fleming was working to kill the staph germ. He worked for years. One day he took a cover off a dish. He looked inside. There was a thick growth of staph germ. There was also some mold. Then he saw something strange. Where the mold was, there was no growth of staph. This is what Fleming probably thought. "By accident, I found a mold to kill the dreaded staph."

This is how penicillin was found. But here's the real miracle. There are thousands of types of molds. But only one type can kill staph. The mold must have fallen into the dish a few days before. The cover was probably off only a few seconds. In those few seconds the right mold fell into the right dish. Another man might have thrown the dish away. What a loss this would have been. The human race was lucky. Fleming was very smart. He understood what the mold did.

Main Idea

1

	Answer	Score
Mark the <i>main idea</i>	<input checked="" type="checkbox"/> M	<u>15</u>
Mark the statement that is <i>too broad</i>	<input type="checkbox"/> B	<u>5</u>
Mark the statement that is <i>too narrow</i>	<input type="checkbox"/> N	<u>5</u>

- Dr. Fleming knew the mold growing in the staph germ dish was different.
- Accidents can be helpful if the right person understands what they mean.
- Without Dr. Fleming's insight the discovery of penicillin would have been lost.

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Score 15 points for each correct answer.

Score

- Subject Matter** 2 This passage is mainly about
- ☐ a. discovering penicillin.
 - ☐ b. helpful accidents.
 - ☐ c. Dr. Fleming's research.
 - ☐ d. a cure for infections.
- Supporting Details** 3 To find a cure for staph infections
- ☐ a. staph was dropped into many solutions.
 - ☐ b. mold was kept in small dishes.
 - ☐ c. staph was grown in small dishes.
 - ☐ d. covers were put over test tubes.
- Conclusion** 4 The last paragraph suggests that
- ☐ a. accidents happen to everyone.
 - ☐ b. luck is needed when doing scientific experiments.
 - ☐ c. the unprepared person will miss valuable opportunities.
 - ☐ d. the prepared person does not have accidents.
- Clarifying Devices** 5 Most of the passage is devoted to
- ☐ a. a strong argument.
 - ☐ b. advice.
 - ☐ c. a strange story.
 - ☐ d. the results of several experiments.
- Vocabulary in Context** 6 As used in this passage, dreaded is closest in meaning to
- ☐ a. well-known.
 - ☐ b. feared.
 - ☐ c. diseased.
 - ☐ d. misunderstood.

Add your scores for questions 1–6. Enter the total here and on the graph on page 211.

Total
Score

12 The Pony Express

Would you want this job? The ad was in a newspaper. "Expert riders wanted. Young, light, lean, and wiry men. Orphans are preferred." What was the job? A Pony Express rider! It may sound scary. But the pay was high for those times. It was \$100 to \$150 a month. Buffalo Bill went for a job. He fibbed. He was only 14. He got the job. His father was dead. He had a mother and family. He had to support them.

The Pony Express carried U.S. mail. The route started in Missouri. It ended in California. It covered 1,966 miles. Service began April 3, 1860. The first trip took ten days. Later trips took eight to nine days. Speed was prime. The Express had to beat the stagecoach. The coach carried mail too. But it took over 20 days.

Why was the Express so fast? The riders rode top speed. They dashed from one station to the next. Stations were 10 to 15 miles apart. A fresh horse was always ready. Riders only stopped for two minutes. Each one rode about 75 miles. They rode night and day. They went out in all kinds of weather.

The Pony Express owned 400 horses. Buyers first went through the route. They bought horses from the Native Americans. They took only the fastest. This was the secret of success.

The Express ended on October 24, 1861. It lasted only 18 months. Here is why. The telegraph was now coast to coast. News could travel even faster. But riders had gone over 650,000 miles. And the mail was lost only once. It is a great record.

Main Idea

1

	Answer	Score
Mark the <i>main idea</i>	<input checked="" type="checkbox"/> M	15
Mark the statement that is <i>too broad</i>	<input type="checkbox"/> B	5
Mark the statement that is <i>too narrow</i>	<input type="checkbox"/> N	5

- Mail was delivered by Pony Express in the middle 1800s.
- Pony Express riders rode through the day and night.
- The brave riders of the Pony Express delivered the mail fast and accurately.

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Score 15 points for each correct answer.

Score

- Subject Matter** 2 This passage is primarily about
☐ a. Buffalo Bill.
☐ b. the dangers of the Pony Express.
☐ c. delivering mail in the 1860s.
☐ d. the speed of the Pony Express.
- Supporting Details** 3 Pony Express horses came from
☐ a. farms.
☐ b. wild country.
☐ c. Native Americans.
☐ d. stagecoaches.
- Conclusion** 4 We can assume that the telegraph replaced the Pony Express because
☐ a. it was less dangerous.
☐ b. riders were not needed.
☐ c. it was electronic.
☐ d. messages could be sent faster and further.
- Clarifying Devices** 5 The author uses an old advertisement in the first paragraph to give an idea of
☐ a. the dangers of the Pony Express.
☐ b. what life was like in the 1800s.
☐ c. the difference between past and present job advertisements.
☐ d. how the Pony Express found men.
- Vocabulary in Context** 6 The word fibbed means
☐ a. worked.
☐ b. tried.
☐ c. failed.
☐ d. lied.

Add your scores for questions 1–6. Enter the total here and on the graph on page 211.

Total Score

13 The Personality of a Cat

Cats are very smart. They are one of the smartest of all tame animals. The brain of a cat is large. It is highly developed. This may be why cats have good memories. Cats remember kindness and cruelty. It is a good idea to treat a cat well. Cats can "speak" too. They meow for attention. Often they stand by a door. Then they meow. Then they look over their shoulders. They want to see if you are coming. Cats make other noises also. They purr when they are happy. They hiss when they are angry.

Cats have a lot of pride. They usually will not do silly tricks. They seem to know what is beneath them. Almost all cats want to have their own way. They are mostly true to only one person—if to anyone. They don't switch loyalty easily. Cats were free in the wild. They want to stay that way. They like to be their own masters. When a cat is left alone, it can go back to caring for itself. It can live in the wild again. This is different from dogs. Dogs will switch their loyalty. At one time dogs were loyal to the leaders of packs. Now, they will transfer allegiance to their owner. They do not like to be alone.

With kindness, a cat can be trained. Cats can learn to do many things. Some cats can learn to open doors. Some can ring doorbells. Some can even turn on water. Then they take a drink. Cats are very smart, though. Here is what they do before drinking. They put a paw in the water. They test whether the water is hot or cold.

Main Idea	1	Answer	Score
Mark the <i>main idea</i>		<input checked="" type="checkbox"/> M	15
Mark the statement that is <i>too broad</i>		<input type="checkbox"/> B	5
Mark the statement that is <i>too narrow</i>		<input type="checkbox"/> N	5
a. Cats have some interesting qualities.		<input type="checkbox"/>	—
b. Cats are smart but independent animals.		<input type="checkbox"/>	—
c. Cats can be trained to do many things.		<input type="checkbox"/>	—

Score 15 points for each correct answer.

Score

- | | | | |
|------------------------------|----------|--|-------|
| Subject Matter | 2 | This passage is mainly concerned with
<input type="checkbox"/> a. beliefs about cats.
<input type="checkbox"/> b. sayings about cats.
<input type="checkbox"/> c. the cat.
<input type="checkbox"/> d. differences between cats and dogs. | _____ |
| Supporting Details | 3 | Cats are interesting to have around because
<input type="checkbox"/> a. they are always loyal to their owners.
<input type="checkbox"/> b. they like to do tricks.
<input type="checkbox"/> c. when they need attention they will scratch.
<input type="checkbox"/> d. they are smart and have good memories. | _____ |
| Conclusion | 4 | Many cats like to be outside because they
<input type="checkbox"/> a. have claws and sharp teeth.
<input type="checkbox"/> b. like independence and freedom.
<input type="checkbox"/> c. can outsmart a dog.
<input type="checkbox"/> d. like fresh air. | _____ |
| Clarifying Devices | 5 | The statement about cats that some tricks are "beneath them" means that
<input type="checkbox"/> a. cats think they are too good to do the tricks.
<input type="checkbox"/> b. cats cannot easily crawl into low places.
<input type="checkbox"/> c. cats only like to do tricks in which they can stand up.
<input type="checkbox"/> d. cats have a very humble attitude. | _____ |
| Vocabulary in Context | 6 | The word <u>allegiance</u> is used to mean
<input type="checkbox"/> a. pride.
<input type="checkbox"/> b. beliefs.
<input type="checkbox"/> c. loyalty.
<input type="checkbox"/> d. compassion. | _____ |

Add your scores for questions 1–6. Enter the total here and on the graph on page 211.

Total
Score

14 Cat Facts

Here are some interesting facts about cats. The first is about cats' vocal cords. Each cat has two sets. One cord is above the other. The lower cord produces the "meow." The upper cord produces purrs and growls. Another fact deals with cats' vision. In complete and total darkness, cats cannot see. But if there is even a glimmer from stars or the moon, they can see. A cat's iris can open very wide. It catches even small scraps of light.

The third fact is about cats' whiskers. Most cats have 25 to 30 whiskers. They grow in four rows from the side of the mouth. It is said that the whiskers are used for measuring. That is, a cat will not go through a hole if its whiskers touch the sides. This is not true. The whiskers are attached to nerves. They are delicate sense organs.

Cats are the cleanest of animals. You have, no doubt, watched them wash. The cat licks its paw first. Then with a wet paw it washes its face and head. Finally it cleans the rest of its body with its tongue. The tongue is special. It has a patch of sharp spines. The spines are near the tip of the tongue. These spines face backward. The tip of the tongue feels like a coarse file. So the cat grooms itself with its rasplike tongue. The tongue, like a comb, picks up loose hair. Cats often swallow these balls of hair. They can cause some stomach trouble. A vet is often needed.

All in all, a cat is smart, clean, and has lots of dignity. It will not transfer its trust to you simply because it is in your house. To get that trust, you have to earn it. The best way to do this, it seems, is with kindness.

Main Idea

1

Answer

Score

Mark the *main idea*

☒ M

15

Mark the statement that is *too broad*

☐ B

5

Mark the statement that is *too narrow*

☐ N

5

- There are many interesting facts about cats.
- A cat's tongue and paws keep it clean and groomed.
- Cats have interesting physical characteristics and habits.

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Score 15 points for each correct answer.

Score

- Subject Matter** 2 This selection centers on
- ☐ a. cats' behaviors.
 - ☐ b. cats' lives.
 - ☐ c. the cleanest animal.
 - ☐ d. facts about animals.
- Supporting Details** 3 The cat cleans most of its body with its
- ☐ a. whiskers.
 - ☐ b. tongue.
 - ☐ c. paws.
 - ☐ d. face.
- Conclusion** 4 From this passage, it appears that hair balls
- ☐ a. make most cat owners angry.
 - ☐ b. can make a cat seriously ill.
 - ☐ c. are caused by the cat's whiskers.
 - ☐ d. happen only with adult cats.
- Clarifying Devices** 5 The author compares the tip of the cat's tongue with a file in order to
- ☐ a. make you think of your nails.
 - ☐ b. help you visualize its shape.
 - ☐ c. show how pointy it looks.
 - ☐ d. show how rough it is.
- Vocabulary in Context** 6 In this passage glimmer means
- ☐ a. hint of light.
 - ☐ b. small shape.
 - ☐ c. bright shine.
 - ☐ d. glow.

Add your scores for questions 1–6. Enter the total here and on the graph on page 211.

Total
Score

15 The Cat and the Minister

Here is a strange true story about a cat. A minister made a call on an elderly lady. He entered her house. She quickly said, "Please do not try to pet the cat. She's nasty. She'll give you a bad scratch." The minister replied, "Thanks for telling me. I won't try to pet her."

In the meantime, the cat crawled out from under the stove. She stretched. She looked at the visitor. She circled his chair. Then she jumped into his lap. She curled up and went to sleep. The lady gasped. She blurted, "She's never done that before. Not ever. My goodness. What has gotten into her?"

The half-hour visit was over. The minister stirred to leave. The cat nimbly and quietly leaped from his lap. She went right to the door. She meowed once and looked up at the minister. The minister opened the door. The cat walked out. She stopped. She looked over her shoulder at the minister. She meowed. Then she started across the lawn. She kept looking over her shoulder. The minister saw that she wanted him to follow. So he did. The cat led him to the far side of the house. It was shady there. She stopped in front of a low overhanging shrub. The cat meowed. She looked directly under the shrub. The minister crouched and knelt. Sure enough. There in the dark underside of the shrub was a nest of dry grass. Five kittens nestled there.

The mother cat meowed proudly. She looked up at her new friend. She arched her back. She rubbed her body against his legs. The minister bent over and stroked her silky fur. How did this all happen? No doubt it was cat sense. From the beginning the cat knew she had found a friend!

Main Idea

1

	Answer	Score
Mark the <i>main idea</i>	<input type="checkbox"/> M	15
Mark the statement that is <i>too broad</i>	<input type="checkbox"/> B	5
Mark the statement that is <i>too narrow</i>	<input type="checkbox"/> N	5

- The cat showed her kittens to the minister.
- By watching and listening to cats we can better understand them.
- A true story can teach us more about cats and whom they trust.

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Score 15 points for each correct answer.

Score

- Subject Matter 2 Another good title for this passage would be
- ☐ a. Cats and Kittens.
 - ☐ b. The Minister Finds a Friend.
 - ☐ c. Listening to Cats.
 - ☐ d. More Cat Facts.

- Supporting
Details 3 The mother cat kept her kittens
- ☐ a. in the basement of the house.
 - ☐ b. in a dry grass nest.
 - ☐ c. in a warm shoebox.
 - ☐ d. in a bright part of the yard.

- Conclusion 4 The last paragraph suggests that
- ☐ a. cats can teach us a lot.
 - ☐ b. there is more to learn about cat's behaviors.
 - ☐ c. we can understand cats if we know how to listen to them.
 - ☐ d. cat sense is like human sense.

- Clarifying
Devices 5 To make his points about cats the author depends mainly on
- ☐ a. facts given by cat owners.
 - ☐ b. details about cats and kittens.
 - ☐ c. statements showing why everyone should own cats.
 - ☐ d. a story about a cat.

- Vocabulary
in Context 6 Nasty suggests that the cat was
- ☐ a. mean.
 - ☐ b. dirty.
 - ☐ c. angry.
 - ☐ d. ugly.

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and on the graph on page 211.

Total
Score