

Railroad Bridge, Argenteuil

This text and image are provided courtesy of the Philadelphia Museum of Art.



Philadelphia Museum of Art: John G. Johnson Collection, 1917, cat. 1050

1874 Oil on canvas 21 x 28 inches (54.3 x 73.3 inches) CLAUDE MONET French, 1840-1926

A small sailboat drifts along the water in this tranquil scene. Warm, golden light brightens the bridge's white pillars and the boat's sail. Their reflections in the water add pink, yellow, and orange **hues** to the blue of the river. Along the top of the bridge, a train chugs along, letting out puffs of smoke that drift across the sky. A gentle wind pushes the boat across the calm river below.

Claude Monet (clahd MOE-nay), the French artist who created this work of art, enjoyed painting the outdoors directly from observation. He appreciated the variety of colors in the sky, water, plants, and trees, especially those seen at sunrise and sunset. Notice the deep greens, blues, and purples in the grassy riverbank, and the blues and yellows in the train's smoke. Monet had to work quickly to capture the color and light as he saw it, since both frequently change as time passes. Look closely and you'll see the many short, quick **brushstrokes** that make up the grass, trees, water, and clouds. This style of painting is known as **Impressionism**.

This painting shows the Seine River in the town of Argenteuil (ar-jen-TOY), located just outside Paris. Monet lived there when he painted this picture, so he didn't have to travel far to observe this scenic spot. At that time, the railroad service was expanding, and it became easier for city dwellers to take weekend trips to the nearby countryside. Perhaps the tiny figures in the boat are enjoying time away from the faster pace of urban life.

Name: _____ Date: _____

1. Which artist painted The Bridge at Argenteuil?

- A. Mary Cassatt
- B. Winslow Homer
- C. Edouard Manet
- D. Claude Monet

2. Which three topics does the text address?

- A. The painting's use of color, Impressionist brushstroke style, and the expansion of the railroad service
- B. The history of the Seine River, the founding of Argenteuil, and city life in France
- C. The founding of Impressionism, the popularity of sailing, and the personal life of Claude Monet
- D. Famous Impressionist painters, techniques for painting nature images, and the Paris art scene

3. Read this sentence from the text.

"A gentle wind pushes the boat across the calm river below."

What evidence from the painting supports the author's suggestion that there is a gentle wind?

- A. The brushstrokes are short and quick.
- B. The right side of the painting is full of shadows and varying shades of green.
- C. The boat's sail is full while the water remains calm.
- D. The figures in the boat are far-off and tiny.

4. Based on the information in the text and the painting, how could the mood of the painting best be described?

- A. Scary and threatening
- B. Calm and peaceful
- C. Wild and disturbing
- D. Exciting and fun

5. What is the main idea of the text?

- A. Claude Monet's appreciation of natural light and color is reflected in his painting of a calm outdoor scene near a river in Argenteuil.
- B. Impressionist painters such as Claude Monet preferred depicting natural scenes over scenes of urban life.
- C. The railroad bridge over the Seine River at Argenteuil inspired many Impressionist painters.
- D. The Seine River was typically calm and tranquil, making it a popular location for sailing among the people who lived in Argenteuil.

6. Read these sentences from the text.

"...the railroad service was expanding, and it became easier for city dwellers to take weekend trips to the nearby countryside. Perhaps the tiny figures in the boat are enjoying time away from the faster pace of urban life."

Why might the author have included this suggestion that the figures in the boat are taking relaxing time away from the city?

- A. To highlight the importance of the Seine River to French industry
- B. To highlight the sense of calm in the painting
- C. To suggest that the growing railroad service negatively affected quality of life in France
- D. To suggest that Monet preferred painting images of nature

7. Choose the answer that best completes the sentence.

Light and color change frequently throughout the day. _____, Monet had to work quickly to capture the color and light as he saw it.

- A. Still
- B. Because
- C. Therefore
- D. However

8. According to the text, what did Claude Monet appreciate about the outdoors?

9. Read this sentence from the text.

"A gentle wind pushes the boat across the calm river below."

What characteristics of the painting suggest that the wind is gentle?

Support your answer with evidence from the text and images.

10. What characteristics of the painting create a feeling of calm in the scene?

Support your answer with evidence from the text and images.

Rumpelstiltskin

by The Grimm Brothers

Once there was a miller who was poor, but who had a beautiful daughter. Now it happened that he had to go and speak to the King, and in order to make himself appear important he said to him, "I have a daughter who can spin straw into gold."

The King said to the miller, "That is an art which pleases me well. If your daughter is as clever as you say, bring her tomorrow to my palace, and I will try what she can do."

And when the girl was brought to him he took her into a room which was quite full of straw, gave her a spinning-wheel and a reel, and said, "Now set to work, and if by tomorrow morning early you have not spun this straw into gold during the night, you must die."

Thereupon he himself locked up the room, and left her in it alone. So there sat the poor miller's daughter, and for the life of her could not tell what to do. She had no idea how straw could be spun into gold, and she grew more and more miserable, until at last she began to weep.

But all at once the door opened, and in came a little man, and said, "Good evening, Mistress Miller; why are you crying so?"

"Alas!" answered the girl, "I have to spin straw into gold, and I do not know how to do it."

"What will you give me," said the manikin, "if I do it for you?"

"My necklace," said the girl.

The little man took the necklace, seated himself in front of the wheel, and "whirr, whirr, whirr," three turns and the reel was full. Then he put another on, and whirr, whirr, whirr, three times round, and the second was full too. And so it went on until the morning, when all the straw was spun, and all the reels were full of gold. By daybreak the King was already there, and when he saw the gold he was astonished and delighted, but his heart became only more greedy. He had the miller's daughter taken into another room full of straw, which was much larger, and commanded her to spin that also in one night if she valued her life.

The girl knew not how to help herself, and was crying, when the door again opened, and the little man appeared and said, "What will you give me if I spin that straw into gold for you?"

"The ring on my finger," answered the girl. The little man took the ring, again began to turn the wheel, and by morning had spun all the straw into glittering gold.

The King rejoiced beyond measure at the sight, but still he had not gold enough. He had the miller's daughter taken into a still larger room full of straw, and said, "You must spin this, too, in the course of this night; but if you succeed, you shall be my wife."

"Even if she be a miller's daughter," thought he, "I could not find a richer wife in the whole world."

When the girl was alone the manikin came again for the third time, and said, "What will you give me if I spin the straw for you this time also?"

"I have nothing left that I could give," answered the girl.

"Then promise me, if you should become Queen, your first child."



"Who knows whether that will ever happen?" thought the miller's daughter. Not knowing how else to help herself in this strait, she promised the manikin what he wanted, and for that he once more span the straw into gold.

And when the King came in the morning and found all as he had wished, he took her in marriage, and the pretty miller's daughter became a Queen.

A year after, she had a beautiful child, and she never gave a thought to the manikin. But suddenly he came into her room, and said, "Now give me what you promised." The Queen was horror-struck, and offered the manikin all the riches of the kingdom if he would leave her the child. But the manikin said, "No, something that is living is dearer to me than all the treasures in the world." Then the Queen began to weep and cry, so that the manikin pitied her. "I will give you three days' time." said he. "If by that time you find out my name, then shall you keep your child."

So the Queen thought the whole night of all the names that she had ever heard, and she sent a messenger over the country to inquire, far and wide, for any other names that there might be. When the manikin came the next day, she began with Caspar, Melchior, Balthazar, and said all the names she knew, one after another. But to every one the little man said, "That is not my name."

On the second day she had inquiries made in the neighborhood as to the names of the people there, and she repeated to the manikin the most uncommon and curious. "Perhaps your name is Shortribs, or Sheepshanks, or Laceleg?" but he always answered, "That is not my name."

On the third day the messenger came back again, and said, "I have not been able to find a single new name, but as I came to a high mountain at the end of the forest, where the fox and the hare bid each other good night, there I saw a little house, and before the house a fire was burning, and round about the fire quite a ridiculous little man was jumping: he hopped upon one leg, and shouted-'Today I bake, tomorrow brew / The next I'll have the young Queen's child / Ha! glad am I that no one knew / That Rumpelstiltskin I am styled.'"

You may think how glad the Queen was when she heard the name! And when soon afterwards the little man came in and asked, "Now, Mistress Queen, what is my name?"

At first she said, "Is your name Conrad?"

"No."

"Is your name Harry?"

"No."

"Perhaps your name is Rumpelstiltskin?"

"The devil has told you that! The devil has told you that!" cried the little man, and in his anger he plunged his right foot so deep into the earth that his whole leg went in. Then in rage he pulled at his left leg so hard with both hands that he tore himself in two.

Name: _____ Date: _____

1. Who spun the straw into gold?

- A. the miller
- B. the miller's daughter
- C. the king
- D. the little man

2. What problem does the miller's daughter face at the beginning of the story?

- A. She does not love the king, but her father has threatened to kill her if she does not marry the king.
- B. She does not know how to spin straw into gold, but the king has threatened to kill her if she does not spin his straw into gold.
- C. She wants her necklace and ring back, but she has already given them to the little man in exchange for his help.
- D. She is afraid of the little man, but he is the only one who can spin straw into gold for her.

3. The little man is positive that nobody knows his name. What evidence from the text best supports this conclusion?

- A. "I will give you three days' time," said he. "If by that time you find out my name, then shall you keep your child."
- B. "Ha! glad am I that no one knew / That Rumpelstiltskin I am styled."
- C. "Perhaps your name is Shortribs, or Sheepshanks, or Laceleg?" but he always answered, "That is not my name."
- D. "And when soon afterwards the little man came in, and asked, 'Now, Mistress Queen, what is my name?'"

4. Why might Rumpelstiltskin have been jumping and shouting in his house?

- A. He was panicking because he thought his house had caught on fire.
- B. He was celebrating, thinking he was going to get the Queen's child.
- C. He was performing a magical spell to get the Queen's child.
- D. He was upset because he knew that the Queen knew his name.

5. What is a theme of this story?

- A. It's important to keep one's promises.
- B. One should not be greedy.
- C. It's important to forgive others.
- D. One should pity the less fortunate.

6. Read these sentences from the text:

"[The manikin said,] 'What will you give me if I spin the straw for you this time also?'

"I have nothing left that I could give,' answered the girl.

"Then promise me, if you should become Queen, your first child.'

"Who knows whether that will ever happen?' thought the miller's daughter; and, not knowing how else to help herself in this strait, she promised the manikin what he wanted, and for that he once more span the straw into gold."

What does the phrase "not knowing how else to help herself in this strait" mean based on these sentences?

- A. not knowing how to act like a Queen
- B. not knowing how to spin straw into gold
- C. not knowing how to break a promise
- D. not knowing how else to solve her problem

7. Choose the answer that best completes the sentence:

The miller's daughter gave the manikin her necklace, _____ he spun the straw into gold.

- A. but
- B. yet
- C. so
- D. like

8. The first time the little man comes to the miller's daughter, she gives him her necklace. What does she give to the little man the second time he appears?

9. Why did the little man make the miller's daughter promise to give him her first child? Support your answer with evidence from the text.

10. Rumpelstiltskin is greedy.

Using evidence from the text, form an argument for or against this description of Rumpelstiltskin.

Spring

Bending with the wind
the small tree shows its strength
and agrees to compromise.
The bitten half moon

rests in a dark blue blanket 5
and waits for morning.
The frozen earth cracks
Like a beast that is yawning

and awakens to spring.
A chipmunk ran quickly 10
across the rain-slicked boulder
and slid into grass.

Name: _____ Date: _____

1. According to the first stanza of the poem, the tree did all of the following EXCEPT

- A. lose a branch
- B. show its strength
- C. agree to compromise
- D. bend with the wind

2. Read this stanza from the poem:

A chipmunk ran quickly
across the rain-slicked boulder
and slid into grass

Which of the following describes the relationship between these lines?

- A. The lines show a cause and an effect.
- B. The lines compare the chipmunk to the boulder.
- C. The lines contrast two different events.
- D. The lines show both sides of an argument.

3. To what does the author compare the frozen earth?

- A. to a beast
- B. to a yawn
- C. to a crack
- D. to the spring

4. Read these lines from the poem:

Bending with the wind
the small tree shows its strength
and agrees to compromise.

Based on the text, the word compromise means

- A. to fake an illness
- B. to settle a dispute
- C. to awaken quietly
- D. to move gracefully

5. The primary purpose of this poem is to describe

- A. how a chipmunk moves
- B. the season of spring
- C. the phases of the moon
- D. the motion of the wind

6. What phase of the moon is described in the poem?

7. What, do you think, is the "dark blue blanket" that covers the moon? How do you know?

8. The question below is an incomplete sentence. Choose the word that best completes the sentence.

A small tree bends with the wind, _____ it does not break.

- A. or
- B. unless
- C. yet
- D. until

Name: _____ Date: _____

1. What poetic images are used in this poem?

- A. the bitten half moon waits for morning
- B. a beast awakens to spring
- C. the small tree shows its strength
- D. all of the above

2. The cracks in the ground are compared to

- A. a chipmunk in a hole in a rock.
- B. the white moon in the blue sky.
- C. the mouth of a yawning animal.
- D. none of the above.

3. The passage has all the features of a poem except:

- A. rhyme.
- B. division into stanzas.
- C. figurative language.
- D. rhythm.

4. The tree "agrees to compromise" by

- A. becoming stronger each year.
- B. talking to the wind.
- C. bending but not breaking in the wind.
- D. growing around the boulder.

5. Using the ideas in the poem, turn the poem into a paragraph description of the morning in early spring.

The Penny Experiment

by Kyria Abrahams



Paola is 12 years old. She lives in Seville, Spain. The streets of her city are lined with beautiful orange trees. The oranges that grow here are sometimes called *Bitter Oranges*, because they are sharp to the taste. Tourists often come to Seville to see the beauty of Spain. They like to see flamenco, a colorful style of Spanish dancing, or visit a royal palace called the Alcázar.

But while all the tourists were coming to Spain, Paola and her family were off visiting New York City. They had many things to see while they were there, and seeing the Statue of Liberty was on the top of the list.

The Statue of Liberty is made of copper, but Paola noticed the statue didn't look much like copper. It was more of a bluish-green color. Once Paola noticed this, she started seeing this same color of copper all over the place. She noticed a green copper statue of the composer Beethoven in Central Park and a green copper roof on a famous old building called The Dakota.

There must be two kinds of copper, Paola thought to herself. I guess one kind of copper is green.

When Paola returned to Spain from New York, she brought home some souvenirs. One of the souvenirs wasn't something you could buy in a store, though. Paola is something of an amateur coin collector. So every time she travels, she brings home some money from that part of the world.

From this particular trip, she brought home about 30 pennies she had saved. She put them in a velvet pouch and packed it neatly in her suitcase. She had never held pennies before. In Spain, they use *euros*

Paola spread all the pennies out on her kitchen table. She noticed they all had different dates on

them. Some were old, and some were brand new. One of the pennies was from 1953, which happened to be the year Paola's grandmother was born. Paola started to organize the pennies by date when she noticed something else: the pennies were all slightly different colors.

The newer pennies were copper-colored and shiny. But the older pennies were dull and had green spots on them. This was the same kind of green color she had seen on the Statue of Liberty.

Maybe there weren't two different kinds of copper, after all. Maybe the copper was just dirty. Or maybe the copper was painted green!

Paola asked her mother why the pennies were green. Her mother explained that the pennies had gone through a process called *oxidation*. This is a chemical reaction that can take place on metal. In this case, it creates a substance on metal. This substance on copper is green. It is called *verdigris*.

Paola said, "In Spanish, the word for green is *verde*."

"That's right. Now let's see if we can recreate *verdigris* on these pennies," Mom said. "We need a glass bowl, some salt, and some vinegar."

Together, they mixed a $\frac{1}{2}$ cup of vinegar and two teaspoons of salt together in the bowl. They mixed the vinegar around until the salt dissolved. Then they put 10 of the shiny new pennies into the mixture.

"What are we doing, cooking pennies?" Paola asked.

"In a way," said Mom, laughing. "I promise I won't make you eat pennies for dinner, though."

After about five minutes, Paola emptied the bowl of vinegar, salt, and pennies into a colander over the sink, and let all the liquid drain out. Then she spread two paper towels out on the counter.

"Now separate out the pennies into two groups of five," said Mom. "Wash half with water, and leave half the way they are."

Since there were 10 pennies, Paola placed five on each paper towel. She placed the washed pennies on the right side so that she wouldn't get confused later.

The next (and hardest) part was waiting for the results. They had to let the pennies dry for about an hour while the chemistry experiment worked its magic. To pass the time, Paola went for a bike ride.

She rode her bike up the street to the *Giralda*, a very old bell tower in Seville. It was completed in the year 1198. As she passed the tower, Paola remembered it used to have a copper sphere on the top. She had learned in school that the sphere fell off during an earthquake in the year 1365. She wondered whether that sphere would also be green today if it hadn't fallen off in the earthquake.

When she returned home, she ran to the kitchen to check on her pennies. She was so excited she almost forgot to close the front door.

Here's what had happened: the pennies that had been rinsed off in water looked really shiny and not at all green.

The five unwashed pennies on the left, however, had started to turn green.

Paola hadn't painted the pennies. The vinegar mixture created a chemical reaction between the copper and the air. This is also known as *redox*, or what happens whenever atoms change their *oxidation* state. A substance of copper oxide mixed with chlorine from the salt had formed on the penny, and the substance looked green.

But, if this was how you oxidize copper, how did the Statue of Liberty turn green? Had an airplane dumped a giant bowl of vinegar over her head?

"There is more than one way for a metal to oxidize," Mom explained.

Paola's mom continued to explain that vinegar is a mild acid. When combined with salt (a neutral base), it can form hydrochloric acid, which both cleans and oxidizes copper.

When you wash it off, the penny looks shiny. When you leave it on, the penny turns green.

There are also other ways of making copper turn green, however. For example, there could be products in the air that react in different ways when combined with oxygen, such as sulfur from coal. They will behave in a similar way to the vinegar. And that is why statues and buildings might have green-colored copper.

Paola decided to recreate the experiment. This time she used some of the bitter oranges from the tree in her backyard. Oranges are also mildly acidic, just like vinegar. She followed all the steps from the first experiment, only replacing vinegar with orange juice. She got the same result.

She called to her mother, who was relaxing on the porch, thumbing through a cookbook.

"Look, Mom, I made *verdigris* with oranges, too!"

"That's great," Mom said, pointing to the cookbook. "Because I'm about to make marmalade with the rest of the oranges."

"Just make sure you leave out the pennies!" said Paola.

Name: _____ Date: _____

1. What do Paola and her mom perform an experiment on?

- A. coal
- B. salt
- C. pennies
- D. the Statue of Liberty

2. What is the order of events in this story?

- A. Paola wonders why some copper is green; Paola experiments; Paola understands why some copper is green.
- B. Paola experiments; Paola understands why some copper is green; Paola wonders why some copper is green.
- C. Paola experiments; Paola wonders why some copper is green; Paola understands why some copper is green.
- D. Paola understands why some copper is green; Paola experiments; Paola wonders why some copper is green.

3. Acid causes copper to turn green.

What evidence from the story supports this statement?

- A. Paola brings home 30 pennies from her trip to the United States.
- B. Paola lives in Seville, Spain, and the streets of her city are lined with orange trees.
- C. Paola's mother is going to make marmalade with oranges from the backyard.
- D. Both vinegar and orange juice cause some of Paola's pennies to turn green

4. Why does Paola's mom suggest doing an experiment on pennies?

- A. to make Paola appreciate the music of Beethoven
- B. to explain why tourists like to see flamenco performances
- C. to show Paola how copper changes color
- D. to teach Paola the history of an old bell tower

5. What is this story mainly about?

- A. the Statue of Liberty
- B. why copper changes color
- C. why people visit Spain
- D. why people visit New York City

6. Read the following sentences: "This substance on copper is green. It is called *verdigris*. Paola said, '**In Spanish, the word for green is verde.**'"

Why does the author mention that the Spanish word for green is *verde*?

- A. to show readers a connection between the word *verdigris* and the color green
- B. to prove to readers that learning Spanish is more useful than learning English
- C. to explain where the word "copper" comes from
- D. to illustrate the difficulty of learning a new language

7. Choose the answer that best completes the sentence below.

Paola does experiments with pennies; _____, she learns why copper changes color.

- A. as a result
- B. however
- C. previously
- D. first

8. What is different about the first experiment and the second experiment that Paola does?

9. What is similar about the first experiment and the second experiment Paola does?

10. Why does Paola recreate the first experiment? Support your answer with evidence from the story.

The Power of the Wind

by ReadWorks



A soft, rumbling hum vibrated in Kyle's ears as he approached the farm. His mom walked in front of him, taking long, purposeful strides. Next to him, a group of curious visitors trotted in tow, listening to Kyle's mom spout off facts. She was giving a tour of a wind turbine farm located in northern California in order to educate the public on the benefits of using wind energy. Kyle decided to tag along and learn something for himself. He knew only the basics about his mom's profession, but was becoming more and more interested in alternative energy after living in Los Angeles for so long and experiencing the pollution and smog in the air.

"So there are three major types of wind power: utility-scale wind, distributed wind, and offshore wind," his mom yelled to the group in an attempt to be heard over the hum of the turbines. "Here, we use utility-scale wind, in which turbines larger than 100 kilowatts generate electricity that is typically distributed by power system operators." The visitors all nodded their heads, some taking notes. "When wind blows past the turbine, it triggers the movement of the blades, which starts to spin a shaft inside of the turbine, which then causes an attached generator to produce electricity," she explained. She had studied both environmental science and engineering in college, so she understood how these turbines worked and the positive impact they had on the environment. She had been working at an environmental non-profit organization in Los Angeles before moving her family a few hours upstate in order to promote the wind turbine farm and its energy efficiency.

As Kyle's mom continued to rattle off information about the turbines, Kyle's mind drifted to his life in LA. He wasn't too excited to leave his friends, but he couldn't wait to move to "the country"-or at least that's what everyone at school called it. They knew that he and his parents were moving to a farm, but not many knew exactly what a wind turbine farm was. All they could picture were those gigantic fan-looking machines that slowly rotated in the breeze. They were right to an extent, since that was exactly what Kyle and the group were about to see. But since several families had moved closer to the farm to work with wind energy, there were plenty of kids whom Kyle could befriend. Their parents also worked with the turbines.

Finally, the group reached their destination. "Well, this is it!" said Kyle's mom. At that point, the soft hum had increased to the sound of a loud lawnmower, and the visitors had to yell to each other to be heard. Everyone craned their necks back to look toward the top of the large turbines, each with three

blades that slowly rotated with the wind. Kyle always imagined them moving faster, since they had to generate electricity, but his mom assured everyone that this was enough speed to produce adequate energy for the area. "In fact, California has the most utility-scale wind turbines in the United States, with more than 12,000 turbines," she told the group. Everyone stood in silence for a while, admiring the tall, white machines rotating against the clear blue sky. Kyle breathed in the fresh air and closed his eyes, feeling perfectly content.

On the way back to the farm's main office, Kyle's mom told the group about her job and responsibilities. Since she specialized in engineering, she was particularly interested in the design of the wind turbine blades. She was heavily involved in research to design a blade that could more efficiently capture energy from the wind. After building a few prototypes, she and her team would test the blade in an air tunnel and measure the amount of energy it could produce. "Then we'll make sure we can manufacture the most efficient model on a larger scale, and hopefully distribute them to farms across the country," she explained.

Kyle knew plenty about this part of the job, mainly because his mom often missed dinners or left extremely early for work when she was in certain stages of designing. She would then come home and excitedly share her work with Kyle and his dad, who always listened patiently, even when they could hardly understand anything she was saying. That's why they decided to move to the country—her passion for her work. When she was offered a job at the wind turbine farm, they packed up the car and drove north. Kyle remembered feeling the air change. As they drove further and further away from the city, he kept rolling his window down bit by bit.

After his friends, he missed LA food the most, and being able to walk out of his house at any hour of the day to find at least a food truck open for business. Out near the farm, there were only a few restaurants that offered meals that suited Kyle's palate. But he could hardly complain when he spent the whole day outside, wandering among the vast fields and hiking new trails. Each day he returned home exhausted from the fresh air and the relentless sun. Since he was still on his summer break, the only opportunity he had to meet new friends was through his mom's work. With school, he knew he would meet more. And maybe his old friends from the city would come visit, and see the beauty of the countryside—fields, wind turbines, fresh air, and all.

Name: _____ Date: _____

1. Where does Kyle's mom work?

2. How does Kyle's mom feel about her work?

3. Read the following sentences.

"But he could hardly complain when he spent the whole day outside, wandering among the vast fields and hiking new trails. Each day he returned home exhausted from the fresh air and the relentless sun. Since he was still on his summer break, the only opportunity he had to meet new friends was through his mom's work."

Based on this information, how does Kyle most likely feel about his new life in northern California?

4. Based on the text, why is Kyle's mom interested in wind turbines?

5. What is this story mostly about?

6. Read the sentences and answer the question.

"Here, we use utility-scale wind, in which turbines larger than 100 kilowatts generate electricity that is typically distributed by power system operators.' The visitors all nodded their heads, some taking notes. 'When wind blows past the turbine, it triggers the movement of the blades, which starts to spin a shaft inside of the turbine. This causes an attached generator to produce electricity,' she explained."

What does the word "generate" most nearly mean as used in the text?

7. What word or phrase best completes the sentence?

Kyle's mom was offered a job at the wind turbine farm. _____, his family moved to northern California.

8. Why is Kyle joining his mom on the tour she is giving of a wind turbine farm?

9. Why did Kyle know plenty about the work his mom did to design more efficient wind turbine blades?

10. Explain how Kyle's mom's career has impacted him. Support your answer using evidence from the text.

The Wonders of Flight

by ReadWorks



Maria gripped the handles of the airplane seat and squeezed her eyes shut. Engines fired up one by one, and the inside of the cabin soon filled with their powerful roar. Maria had put in earplugs to block out the noise, but some of it crept in anyway. She could sense the plane preparing for takeoff. Her mother, who sat next to her, reached out to stroke her hand, but she shook off this comforting touch. Maria did not want anyone, not even her own mother, to know just how terrified she was. Across the aisle, her older brother Luis sat with his arms loose and relaxed in his lap. He chatted with their father about the hot springs and majestic mountains they were going to see in Montana, where they were headed on vacation. Luis showed no signs of fear. Maria felt a sharp pang of jealousy at her brother's courage.

Wheels turned with greater and greater speed. Wind rushed over the frame of the plane and added to the deafening noise. Suddenly, with a jolt that made her stomach lurch, they were in the air. Beads of cold sweat trickled down Maria's neck. All she wanted was to be back on solid ground. She hated the idea of being trapped in a flimsy aluminum and plastic tube, hurtling at 500 miles an hour through the skies. Every time she had flown on an airplane in the past, she had remained frozen in her seat for the entire flight, trembling and praying for a safe landing. This time, on her fourth trip, she had promised herself she would overcome this crippling fear. Instead of pulling down the window shade next to her, as she always did, she kept it open. Now she peered out the window cautiously, and couldn't help but marvel at the receding landscape of New York City below her: the neat rows of apartment buildings, trees and skyscrapers that now seemed small enough to pluck with her fingers. Puffy white clouds drew closer and soon moved right through the airplane wing. Then Maria noticed the wing flapping like a fragile leaf in a strong gust of wind. She closed her eyes again.

"We have now reached cruising altitude," said the pilot. "You may remove your seatbelts." Maria

stayed put but ventured another glance out the window. It had been raining all night but seemed as though the sun would shine today. The sky now appeared as a beguiling mix of dark rainclouds and bright yellow light and little pockets of sky blue. Maria gazed in wonder at this close-up view of the skies. After a few moments, she saw what seemed to be a rainbow poking out of a cloud. As the plane moved along she could see it more clearly. It was the most beautiful rainbow she had ever seen. Its colors were vibrant and sharp, and it was in the shape of a full circle instead of the usual semicircle. For a minute she thought she was imagining this magnificent rainbow, but it did not go away when she blinked her eyes a few times. Forgetting her fears altogether, she exclaimed, "Look, Luis! Mom! Dad! A rainbow!" Luis and her parents got out of their seats and huddled around her window to take a look.

"I have never seen anything like it in my forty-two years on this planet!" said her father. "A circular rainbow!"

"Well spotted, Maria!" said her mother.

Luis looked at her with a bit of envy for having made such an interesting discovery. But eventually, he too complimented Maria for finding the rainbow. "Very cool," he said, appreciating the sight.

Everyone else on the plane started to wonder what the buzz was about, and soon other passengers and even flight attendants wandered over to Maria's side of the plane to gaze at the unusual rainbow. Maria's fears of flying seemed to have vanished. She snapped off her seatbelt and stood up. "Does anybody know why it is a full circle?" she asked. "And why does a rainbow even appear? I've never quite understood it."

A slim young woman wearing wire-rimmed glasses happened to be sitting behind Maria. "That's a very good question, young lady," she said. "I'm Laura," she said, holding out her hand. "I'm a physicist, and I study the way light travels from stars like the sun. Would you like me to explain to you a bit more about rainbows?"

"Yes," said Maria, nodding excitedly. She had just finished snapping pictures of the rainbow with her smartphone. "I know it has something to do with the way sunlight hits water particles in the air, right?"

"Yes," said Laura, "That's exactly right. You only get a rainbow when sunlight hits fine particles of water-mist or fog, or even falling raindrops. Normally we only see sunlight as bright white or yellow in color, but when a ray of sunlight hits a water droplet suspended in the air, the sunray bends its path, bouncing off the water droplet in a completely different direction. As it bounces off, the sunray gets split up into all the different wavelengths of light that it is composed of: red, orange, yellow, green, blue, indigo, and violet. That's when we see a rainbow."

"Interesting," said Maria. "But why doesn't sunlight form rainbows when it hits other particles, like human bodies for instance?"

"Because sunlight, like all light, normally travels in straight lines, even when it comes into contact with other substances like human flesh, or a tree, or a piece of wood. Only when it hits water or some other transparent material, like glass, does the sunray bend. And only when it hits water does it bend in such a way that it gets broken up into all of its wavelengths of color, forming a rainbow."

Maria stared at Laura in awe. It was amazing that she knew how to explain the science behind that beautiful sight out the window. A group of people now huddled around Laura as she explained things.

"What I really want to know is," said Luis. "Why this rainbow is a circle? Can we get to that part now?"

"Yes, of course," said Laura, with a twinkle in her eye. "That's easy to explain. Normally we view rainbows from the ground, and the surface of the earth breaks up the rainbow and stops us from seeing it as a whole. From high up in the air we can see the full effect because there is no land mass blocking off the other half of it. Maria was very, very lucky to have spotted a rainbow from an airplane window. It's rare to see a full circle rainbow, and we might not have another chance for the rest of our lives. She's made this a flight to remember for all of us."

Everyone on the plane erupted into applause. "Well done, young lady!" said an old man, patting her on the back before pulling out his camera to take photos.

After a few more minutes the rainbow drifted out of view, but the joy of discovering it stayed with Maria for the rest of her flight. Now she would have a great story to tell her friends when she got home. Even when the plane hit a patch of turbulence and jolted around a bit in the air, Maria did not feel as afraid as she had before. She now appreciated that the airplane was a marvelous invention that had allowed her to see something rare and beautiful, something that she would never have seen on solid ground. When the plane touched down in Montana, she knew that thanks to the special rainbow she had been so lucky to see, she had solved her fears of flying.

Name: _____ Date: _____

1. Where does this story take place?

- A. Montana
- B. New York City
- C. on an airplane
- D. in a helicopter

2. What main problem does Maria face?

- A. She does not want to go on vacation.
- B. She is afraid of flying.
- C. She does not like her brother.
- D. She has never seen a rainbow.

3. Maria is trying to get over her fear of flying. Which details from the text support this statement?

- A. Maria keeps her window shade open instead of closing it like she usually does.
- B. Maria stays in her seat with her seatbelt fastened.
- C. Maria wears earplugs to block out the noise.
- D. Maria spots a rainbow.

4. How does Maria feel about discovering the rare circular rainbow?

- A. bored and uninterested
- B. jealous and annoyed
- C. scared and doubtful
- D. happy and excited

5. What is this passage mostly about?

- A. Maria's family vacation to Montana
- B. the beautiful mountains and hot springs of Montana
- C. how a rainbow helps Maria overcome her fear of flying
- D. the scientific study of light waves

6. Read the following sentences: "It had been raining all night but seemed as though the sun would shine today. The sky now appeared as a **beguiling** mix of dark rainclouds and bright yellow light and little pockets of sky blue. Maria gazed in wonder at this close-up view of the skies."

What does "**beguiling**" mean?

- A. fascinating or attractive
- B. ugly or uninteresting
- C. bright or colorful
- D. strange or mysterious

7. Choose the answer that best completes the sentence below.

Rainbows are usually shaped like a semicircle, _____ the rainbow Maria saw in the sky was a full circle.

- A. thus
- B. also
- C. finally
- D. but

8. How are rainbows formed?

9. Why does Laura the physicist say that Maria "made this a flight to remember"?

10. How did Maria's attitude towards flying and airplanes change throughout the course of the story? What caused this change?

Water from the Air: Cloud Forests

by Alden Wicker



Mindo Cloud Forest

In the Americas, Asia, and Africa, there's a special kind of forest. It's rare, beautiful, and incredibly important to the animals and plants living there, and the humans who live nearby.

It's called the cloud forest. Cloud forests, like the name implies, can be found in the clouds on the slopes of mountains. Because they are often shrouded in warm mist, cloud forests are very humid and wet places. But that's what makes these forests so valuable.

Like rainforests, cloud forests experience rainfall, but they also capture water straight from the air. Water condenses on the leaves of the plants (sort of like dew on the grass in the morning) and drips through the canopy to the floor. If you stand

in a cloud forest, you'll hear the constant drip of water, even if it's not raining. The water captured is pure and unpolluted, and flows through the ground into streams and then rivers.

Some people call cloud forests "water towers," because they are so important for providing water to nearby villages and cities. In the capital of Honduras, Tegucigalpa, four out of 10 people get their water from La Tigre National Park. That's about 340,000 people drinking cloud forest water! And there are a lot of other big cities that get some of their water from cloud forests, like Quito, Ecuador; Mexico City, Mexico; and Dar es Salaam, Tanzania.

In Guatemala, most of the water comes from the Sierra de las Minas Biosphere Reserve. More than 60 permanent streams flow from the reserve downhill to settlements, villages, and cities. People drink the water, use it for cooking, and irrigate their farm fields with it. In Kenya, people rely on the water from cloud forests to provide electricity by harnessing the energy of rivers that flow from Mount Kenya.

But it's not just humans who rely on cloud forests. While they only make up 2.5 percent of the world's forests, they are home to a stunning array of animals and plants. There are more species of hummingbirds in cloud forests than anywhere else in the world. Colorful birds, lizards, moss, and ferns live here; plus plants that grow on trees, called bromeliads. There's even a bear called the spectacled bear, named for the markings on its face. It's the only bear that lives in South America, and there are only a few thousand remaining because of habitat destruction and hunting.

We don't even know all of the plants, animals, and insects that live in cloud forests, yet we keep discovering new ones. In the 1990s, scientists discovered two bird species that only live in cloud forests. One is the Jocotoco Antpitta, or *Grallaria ridgelyi*, which lives in Ecuador in a small patch of cloud forest. Another is the Scarlet-banded Barbet, or *Capito wallacei*, which was discovered in Peru living on just one mountain. Scientists also discovered a new type of cow and barking deer in the cloud forests of Laos and Vietnam.

As you can see, cloud forests are extremely special places. But they are also very fragile and face a wide array of threats. Local poor people clear the forest so that they can grow subsistence crops. They also hunt endangered and threatened animals for meat, and cut down trees to heat their homes and cook. Commercial farmers convert the land so that they can grow fruits, vegetables, and coffee beans. Cloud forests are cleared and turned into pasture for cattle. Building roads and gem mines also severely

damages the cloud forests.

Once cloud forests are cleared, the damage can be irreversible. The cloud cover, which is so essential to the growth of these forests, disperses. The soil degrades and erodes, washing down the mountain slopes. Many species vital to the ecosystem die off. What is left behind is a barren, dusty slope unsuitable for farming and unable to support animals, plants, or even people.

You can think of cloud forests sort of like little habitat islands, bounded by other types of forests and habitats on all sides. Many species are unable to leave one patch to travel to another. Once one patch is completely cleared, many species of plants and animals can go extinct, without ever being seen or studied by people like us. Some of the plant species lost could have been a new medicine or edible crop.

Scientists estimate that each year, 1.1 percent of the world's total cloud forest land is cleared for logging and timber falling. But even more worrying is the threat of climate change. Cloud forests form at very specific altitudes and rely on certain temperatures to thrive. If world temperatures rise, cloud forests would have to move up to a higher altitude where the temperatures are cooler in order to adjust. Some cloud forests are on mountain peaks with nowhere to climb and would die out. Climate change could also lessen cloud cover, which cloud forests rely on to grow. Because of this, the rate of loss could double.

As you can see, cloud forests are essential, providing water, food, and medicine to the people living in, around, and near them. So why would local people destroy them? To understand why, you have to put yourself in the shoes of a poor local farmer.

Imagine that you have no electricity or gas to heat your home or cook your meals. You do not have an oven or stove, so you get wood from the forest to build a fire. You also need food, and you cannot find a job that pays enough to buy any. There might not be a grocery store anywhere nearby, either. Therefore, you clear some forest next to your home so that you can plant fruits, vegetables, and grains. You also hunt local animals to eat. You would probably be excited to have a road built through the forest to your village, so you can easily go to a nearby city, or reach a hospital if you or someone in your family has an emergency.

If only a few people did these things, it might not be a problem. But the population is growing fast, and when thousands of people clear the forest and hunt animals, it becomes a crisis. Scientists fear we might lose cloud forests altogether, along with the water and other services they provide.

To combat the problem, some governments have designated certain stretches of cloud forest as protected, and it's illegal to clear or log them. This can help preserve cloud forests against mining companies and large commercial farmers. But it can be hard to enforce these rules against local populations. To work with local populations of people is more effective, providing them with other ways to get food and energy so that they can leave the cloud forests intact.

It is also effective to educate the local population on how cloud forests provide fresh water and what happens when they are cleared. For example, in the indigenous community of Loma Alta in Ecuador, once the people understood that the cloud forest is necessary to provide water for farms at lower altitudes, they worked together successfully to protect it.

Cloud forests are too valuable of a natural resource to lose. With laws to protect them, education, and economic support for local people, we might be able to save them-plus the animals and plants they support-before it's too late.

Name: _____ Date: _____

1. What are cloud forests?

- A. forests that are made out of clouds and float through the earth's atmosphere
- B. forests of oak and maple trees found in the northeastern United States
- C. pine forests that live in cold climates without much animal life
- D. humid forests that live among clouds on mountain slopes

2. What does this article try to persuade the reader of?

- A. Governments should not interfere with businesses.
- B. It is too late to save cloud forests.
- C. Protecting cloud forests is important.
- D. Commercial farming is more important than cloud forests.

3. The loss of cloud forests is harmful to the surrounding ecosystem.

What evidence from the passage supports this statement?

- A. When cloud forests are cleared away, the soil degrades and erodes. What is left behind is a dusty slope that is unable to support animals, plants, and people.
- B. Cloud forests live among the clouds on the slopes of mountains. They are often surrounded by warm mist, which makes them very humid and wet places.
- C. The Jocotoco Antpitta, or *Grallaria ridgelyi*, lives in Ecuador. The Scarlet-banded Barbet, or *Capito wallacei*, lives in Peru. Barking deer live in Laos and Vietnam.
- D. Commercial farmers sometimes clear cloud forests so that the land can be used as pasture for cattle. Other times, cloud forests are cleared to build roads.

4. Why might providing economic support to people living near cloud forests help save the forests?

- A. People living near cloud forests would be less likely to care about protecting animals like the Jocotoco Antpitta and the Scarlet-banded Barbet.
- B. People living near cloud forests would be less likely to clear away parts of the forest to try to support themselves.
- C. People living near cloud forests would be more likely to buy cars and build roads through the forest to drive on.
- D. People living near cloud forests would be more likely to buy gems dug from the ground by mining companies.

5. What is this passage mainly about?

- A. how people in Tegucigalpa, Quito, Mexico City, and Dar es Salaam get their water
- B. the history of the Sierra de las Minas Biosphere Reserve in Guatemala
- C. the mining companies and commercial farms that threaten cloud forests around the world
- D. cloud forests, the threats they face, and what can be done to save them

6. Read the following sentences: "It is also effective to educate the **local** population on how cloud forests provide fresh water and what happens when they are cleared. For example, in the indigenous community of Loma Alta in Ecuador, once the people understood that the cloud forest is necessary to provide water for farms at lower altitudes, they worked together successfully to protect it."

What does the word "**local**" mean?

- A. shrinking slowly over a long period of time
- B. turning out differently from what was expected
- C. having to do with a particular place or area
- D. causing people to feel extremely happy

7. Choose the answer that best completes the sentence below.

Cloud forests are home to unusual animals, _____ spectacled bears and barking deer.

- A. previously
- B. such as
- C. as a result
- D. third

8. Name an animal that is found only in cloud forests.

9. How are cloud forests valuable to human beings? Support your answer with evidence from the passage.

10. Are cloud forests too valuable of a natural resource to lose, as the author claims? Explain why or why not, using evidence from the passage.
