Summer Reading Packet

Return this completed packet on the first day of school to Mrs. Lantz and receive a PRIZE!

Great readers create great learners!

The Wonders of Flight

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.

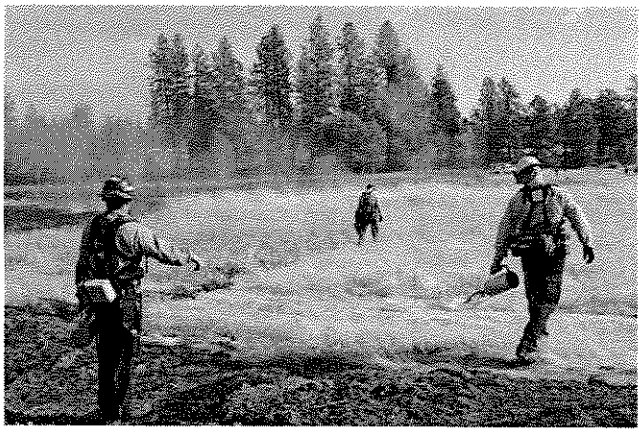
A thus
B also
C finally
D but

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?

Lightning and Fire



Florida receives the most lightning strikes in North America. Scientists have recorded over 20 million lightning strikes in the continental United States, and Florida gets more than any other state. Florida is mostly surrounded by water, with the Gulf of Mexico to the west, the Straits of Florida to the south, and the Atlantic Ocean to the east. This water is warm, which means it can be very humid in Florida throughout the year. During the hot summer season, this mix of heat and humidity creates many thunderstorms. This pattern of storms and the lightning they often bring is predictable. It is so common that Florida has been called the Lightning Capital of the World!

FIRE IS NATURAL

Over billions of years, lightning and the fires lit by lightning on the ground have shaped our planet. Many plants and animals in Florida depend on fire, and they have adapted to the constant presence of fire. A plant called wiregrass is so used to fire that it germinates, or grows out of its seeds, after a fire. The bare soil that remains after a fire is a soft and fertile soil bed. The wiregrass plant uses this soil bed to put down its roots. Without regular fires, wiregrasses might be taken over by trees and other plants that grow faster and taller.

An animal in Florida that likes to eat wiregrass is the gopher tortoise. Wiregrass is a big part of a gopher tortoise's diet, so regular fires mean gopher tortoises have a regular food supply. The gopher tortoise has adapted to fire by living and digging their homes, or burrows, in the ground. They don't have to dig very deep to escape a fire's heat, but their burrows can be almost 10 feet deep. These burrows provide great protection from fire, and other animals understand this, too. Mice, frogs, and snakes have been found in burrows with a gopher tortoise, during fires. Skunks, coyotes, and owls have often been found using burrows that gopher tortoises abandon.

FIGHT FIRE WITH FIRE

Before people built roads and cities, a fire could just burn and extinguish naturally. Today, when lightning hits the ground in and around people's homes, fires can cause a lot of damage to the houses or buildings, so firefighters work very hard to stop them. When they aren't fighting fires, some firefighters switch jobs and light fires on purpose! Don't worry, they are burning forests and grasslands, not where people live and work. To do this, they join something called a Prescribed Fire Crew.

Prescribed Fire Crews light fires for several reasons. One reason is to protect people from wildfires, and another is to maintain the ecosystems where species have adapted to the presence of fire. Although forest fires and grassfires can cause damage when they reach where people live and work, fire is necessary for many plants and animals around the world, not just for some of Florida's plants and animals.

The fires Prescribed Fire Crews set are carefully planned with clear start-and-end points. By regularly burning parts of a forest, they prevent larger wildfires. In some ways, they are fighting fire *with* fire because regular burning keeps the amount of fuel low. This fuel can be anything found in forests, like trees, leaves, and bushes. These fires are helpful for the people that live close-by and for the plants and animals that depend on fire.

Name: _____ Date: _____

1. Which state in the United States receives more lightning strikes than any other?

A) Texas
B) Florida
C) New York
D) California

2. Fires are an effect. What is one cause?

A) lightning
B) wiregrass
C) gopher tortoises
D) the Gulf of Mexico

3. Many plants and animals in Florida depend on fire.
What evidence from the passage supports this statement?

A) Forest fires and grassfires can cause a lot of damage when they reach where people live and work.
B) Prescribed Fire Crews set carefully planned fires with clear start-and-end points.
C) Florida is mostly surrounded by water, with the Gulf of Mexico to the west, the Straits of Florida to the south, and the Atlantic Ocean to the east.
D) A plant called wiregrass uses the bare soil that remains after a fire to put down its roots.

4. How do Prescribed Fire Crews fight fire with fire?

A) They find homes for mice, frogs, and snakes during wildfires.
B) They find homes for skunks, coyotes, and owls during wildfires.
C) They live in a state with lots of lightning strikes.
D) They light carefully planned fires to prevent larger wildfires.

5. What is this passage mostly about?

A) differences between the Gulf of Mexico and the Atlantic Ocean
B) how thunderstorms are created from a mix of heat and humidity
C) fires in Florida and how they affect life there
D) why Florida is known as the Lightning Capital of the World

6. Read the following sentence: "Many plants and animals in Florida depend on fire, and they have **adapted** to the constant presence of fire."
What does the word **adapted** mean in the sentence above?

A) burned to the ground
B) changed in order to live with
C) set carefully planned fires
D) surrounded by water on all sides

7. Choose the answer that best completes the sentence below.
Lightning often strikes Florida; _____, fires are sometimes started.

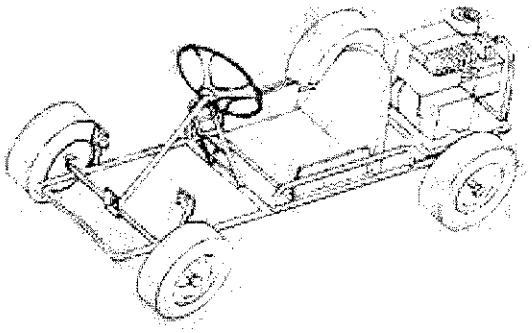
A) consequently
B) otherwise
C) such as
D) previously

8. What do gopher tortoises eat?

9. Why are regular fires important to gopher tortoises?

10. Are fires in Florida helpful or harmful? Explain your answer with evidence from the passage.

The Go-Kart



Michael and Sam had been neighbors for as long as they could remember, but they only just started loving go-karts a few months before. Sam's dad took the boys to the go-kart track for the first time as soon as school let out for the summer, and since then, they had been obsessed with getting their own go-kart. It would be a few years before Michael and Sam got their driver's licenses, and this seemed like the next-best thing. They would fantasize about go-karting down their block and into the main street, competing with taxis, speeding bikes, and other cars for room on the road. In these dreams they would wear old-fashioned brown helmets and vintage airplane goggles, like in old video footage of the people who got to drive the first-ever cars.

One evening, Sam was talking about it—again—over dinner. "Wouldn't it be great? We'd be low to the ground so we could even drive under big trucks! We'd go so fast, we'd be like a blur in all of the traffic. Can I get a go-kart for Christmas?"

Sam's mom rolled her eyes and set down a helping of spaghetti and meatballs on his plate. "I don't think so," she said. "Why don't you and Michael just build one?"

After dinner, Sam went over to Michael's house. "My mom had the best idea," Sam said. "We should build our own go-kart!"

Michael was also excited by the idea. His uncle John worked at an auto repair shop, and the boys called him right away to ask if he had any spare parts he would give them, and if he could help them: they had no idea how to build a car. John was thrilled that Michael and Sam were interested, and promised to talk the boys through it later in the week.

That weekend, John came by Michael's apartment with a bunch of different auto parts that they could use for a go-kart, like a steering wheel, brakes, and an ignition pedal, as well as a large poster board.

"The first thing we need to do is draw how you want the go-kart to look," John said. He laid the poster board flat on Michael's kitchen table and looked at the boys expectantly.

Michael and Sam both agreed that they wanted the go-kart to be extremely fast, but other than that, they had no idea how it should look. John showed them a few drawings. They decided that a four-wheeler would be the best, with a long nose and an open top.

John wrote a list of materials that they would need. "You can get this stuff at a hardware store," he said. "Let me know when you have everything, and you can come out to the shop to build it."

A few weeks later, the boys showed up at John's auto shop with a cart full of materials to build the go-kart. They had bought most of the hardware with chore money, but had found some of it at a scrap yard by their school. They had tubing, plywood planks, bearings, bolts, and chains. John told them he would provide the frame, petrol tank, driving shaft, engine, and seat—all the objects they could get from an auto body shop. Michael, Sam, and John took over a corner of the shop and began to build.

Soon they had a prototype go-kart. "Let me try it first," Sam begged, grinning at Michael. He jumped into the shiny new go-kart and revved the engine. He pressed his foot down on the pedal, expecting the go-kart to shoot forward out of the garage and into the parking lot. Instead, it crept like a snail towards the open garage door.

"Woah!" Sam said. "This is way too slow." Sam stopped the kart and got out.

Michael nodded and said, "Yeah, I agree. Uncle John, how do we make it go faster?"

There were a few problems that the boys could fix, Uncle John said. First, the engine that Michael and Sam had chosen—the biggest one—took up a lot of space and was very heavy, so

it probably dragged the go-kart down. Second, the design they had chosen was not ideal for fast vehicles. Lastly, John said with a smile, it looked like Sam had forgotten to turn off the emergency brake.

So the three guys got back to work. They scoured the auto repair shop for a smaller engine, and found one in a small lawnmower that had been taken for disposal into the garage. They had fun taking the lawnmower apart to get to the small, powerful engine inside. The second problem was much more difficult to fix. Would they have to redesign the entire go-kart?

Together, they drew some other sample sketches that might make the go-kart less bottom-heavy, and even considered taking away one of the wheels so that it would be a three-wheel go-kart. Michael thought it would be a good idea to get lighter materials all around and keep their original design, but John didn't think that would work. Michael, Sam, and John needed to think about ways to maximize the go-kart for its speed: what aspects of their original design were unnecessary? The three of them came to the conclusion that it was probably the long nose. It looked cool, but ultimately, what was more important to Michael and Sam?

They had welded the nose to the frame, and used a grinder to break the metal away from the go-kart. When they were finally done, Michael stepped into the go-kart and put on the helmet he and Sam had found at a used-clothing store. He snapped on a pair of swimming goggles, revved the engine, and made sure to take the emergency brake off. All of a sudden, he sped out into the parking lot, and Sam ran after him with a big smile.

Name: _____ **Date:** _____

1. What do Michael and Sam build?

A) a fast car
B) a big truck
C) a go-kart
D) an engine

2. What problem do Michael and Sam face with their first go-kart prototype?

A) It is too slow.
B) It is too fast.
C) It is too small.
D) It breaks apart easily.

3. The second time Michael and Sam test their go-kart, they are satisfied with its speed. Which sentence supports this idea?

A) "Sam pressed his foot down on the pedal, expecting the go-kart to shoot forward out of the garage and into the parking lot."
B) "Michael, Sam, and John needed to think about ways to maximize the go-kart for its speed: what aspects of their original design were unnecessary?"
C) "Michael snapped on a pair of swimming goggles, revved the engine, and made sure to take the emergency break off."
D) "All of a sudden, Michael sped out into the parking lot, and Sam ran after him with a big smile."

4. Why might using a small engine instead of a large engine have increased the go-kart's speed?

A) The small engine was built for a go-kart, but the large engine was built for a lawnmower.
B) The small engine was easier for Sam and Michael to carry and work with than the large engine.
C) The small engine used more fuel than the large engine did.
D) The small engine did not weigh the go-kart down as much as the large engine did.

5. This passage is mainly about

A) how visiting a go-kart track can change someone's life
B) a mother who gives her son a piece of great advice
C) building a go-kart and then rebuilding it to make it faster
D) an uncle who lets his nephew and his nephew's friend play in his auto repair shop

6. Read the following sentence: "That weekend, John came by Michael's apartment with a bunch of different **auto** parts that they could use for a go-kart, like a steering wheel, brakes, and an ignition pedal, as well as a large poster board."
What does the word "**auto**" mean in the sentence above?

A) car
B) metal
C) cheap
D) simple

7. Choose the answer that best completes the sentence below.
The go-kart moves slowly _____ Michael and Sam rebuild it.

A) after
B) before
C) when
D) since

8. What does John say is the first thing that he, Michael, and Sam need to do in order to make the go-kart?

9. Why did Michael and Sam ultimately decide to shorten the nose of the go-kart?

10. If Michael and Sam were to make another go-kart, what might they do differently than what they did the first time? Support your answer with details from the story.

The Tree House

Jaclyn Einis

Billy gripped tightly as he reached for the next wood plank. Each step was nailed into the large oak tree about one foot above the last. But, near the top, they thinned out with gaps left where some of the old, rotting pieces had fallen off.

Billy struggled to the top and pulled himself into the tree house, bringing down a wall of spider webs with his face as he entered. Swatting and spitting the webs away, he glanced around. He had psyched himself up for something big and felt simultaneously relieved and disappointed to find a boring, empty room. No pile of gold, no skeletons, no lavish bed.

He sat down and let his legs swing outside the open doorway, sending tingles of fear up his body like the top of a rollercoaster hill. He spotted Gramps' house through the trees. Every time Billy visited his grandfather, he would go exploring the first chance he had. Gramps lived only a few hours' drive from New York City, but his mossy surroundings felt a world away from Billy's apartment.

It was getting dark earlier, and Billy was surprised to see the sun already starting to set. His stomach grumbled for dinner, confirming that he'd lost track of time. A faded oriental rug sat at the center of the room. The floorboards creaked as Billy stepped to the rug, touching its intricate pattern. It was oddly warm for a rug up in a chilly tree house.

He started to walk across the rug, but suddenly his knees went weak, his stomach flew to the sky, and his scream got lost in his throat. By the time he understood he was falling, that the surrounding blackness wasn't the nighttime air, but the inside of a hollow tree, he had landed.

How Billy didn't break his arms, legs, and neck was a mystery to him, but it felt more like he'd landed on a cloud covered in tufts of grass than on a hard forest floor. His eyes adjusted to the dark, and he slowly rose. As he reached out to touch the bark in front of him, it disappeared.

He was back in the forest, but now it was bathed in a golden light, and the autumn foliage was once again green. Something scurried past, brushing up against Billy's foot. Billy gasped, and the critter stopped. *A chipmunk!* he thought. *Just a normal, adorable chipmunk.* Maybe he'd fallen asleep outside, and the whole tree house thing had just been a strange dream.

The chipmunk turned around and winked. If this was a dream, it was not over. The chipmunk nodded its head toward the right, looking directly at Billy, before scampering off in the same direction. Without thinking, Billy followed the chipmunk between pine trees, under and over fallen trunks, through an archway of leaves, and into a majestic meadow underground.

Billy's new friend joined a group of chipmunks up on a branch. Something poked his hip.

"An elf!" Billy exclaimed, looking wide-eyed at the bearded figure below.

"Excuse me?" the little man asked, pulling down his pointed hat, which had nearly fallen off as he tipped his head up in horror.

"Sorry, that was rude. Hello, I'm Billy."

"And I'm a gnome, not an elf! Can't you see?"

Billy looked at the little man's pointed shoes. They seemed pretty elf-like to him. Then he recalled one of the bedtime stories Gramps used to tell him when he was younger about the people who lived underground. Gnomes lived underground. Elves stayed above ground.

"Right!" Billy said, "You're a gnome. Clearly."

Tiny cheers erupted all around him, and Billy realized he was surrounded by gnomes.

"The name's Gruff," said the gnome, shaking three of Billy's fingers with a strong grip. "Now, we don't have much time. Tie these together," he said, handing Billy a dandelion and bright green leaves with long stems.

Billy tied the flower and leaf stems together, while Gruff and a few other gnomes continued the chain, forming a small circle of flowers and leaves.

"It's ready. Kneel down," Gruff said.

Billy complied, and Gruff placed the crown on his head. Billy still felt clueless, but he was enjoying the mystery of it all.

"Thanks," Billy said. "Now what?"

"Now it's time for you to go. Just know that these flowers will never wilt and these leaves will never crumble. On the days when life feels boring and gray, let this crown be a reminder that the world is full of surprises."

Billy loved his present. As he leaned in to give Gruff a hug, the gnomes knocked him into a pile of leaves. His whole body was sucked into the pile like dust into a vacuum. There was a flash of black, a warm softness hugging his body, and then the feeling of cold, wet leaves beneath him.

He was back in the forest. It had rained, but he was dry. He looked up. This was the tree he had climbed, but there was no ladder, no tree house. Billy stumbled back to Gramps' house, where Gramps was putting dinner on the table.

"You're back!" he smiled, "And just in time for dinner."

Billy scratched his head, realizing the crown was still there. Gramps was staring right at it. His smile widened. "Make sure you don't climb trees in the rain, Billy. It can be very dangerous."

Name: _____ **Date:** _____

1. What does Billy do every time he visits his grandfather?

A) He visits the tree house.
B) He visits gnomes.
C) He goes exploring.
D) He cooks dinner for his grandfather.

2. Where does the beginning of the story take place?

A) Billy's apartment in New York City
B) a mystical meadow in the middle of the woods
C) the inside of a tree house near Gramps' house
D) underground, inside a magical tree

3. In the passage, the tree house's rotting pieces of wood, spider webs, and a fading rug are described. Based on this evidence, what conclusion can be made?

A) The tree house is old.
B) The tree house is magical.
C) The tree house is high up in the tree.
D) The tree house was built by Gramps.

4. Billy feels relieved when he enters the tree house and sees a boring, empty room. What conclusion can be made from this?

A) Billy had been in the tree house before.
B) Billy was a little scared about what he might find.
C) Billy hoped to find something more interesting.
D) Billy was convinced that the tree house would be magical.

5. What is this story mostly about?

A) Billy's disappointment over finding nothing in the tree house
B) Billy's eagerness to find treasure
C) Billy's adventure in an underground world
D) Billy's relationship with his grandfather

6. Read the following sentence: "He was back in the forest, but now it was bathed in a golden light, and the autumn **foliage** was once again green."
As used in the passage, what word could best replace **foliage**?

A) plant leaves
B) forest floor
C) animals
D) lakes and rivers

7. Choose the answer that best completes the sentence below.
Billy followed a chipmunk into a meadow _____ meeting a bearded gnome.

A) initially
B) instead
C) after
D) before

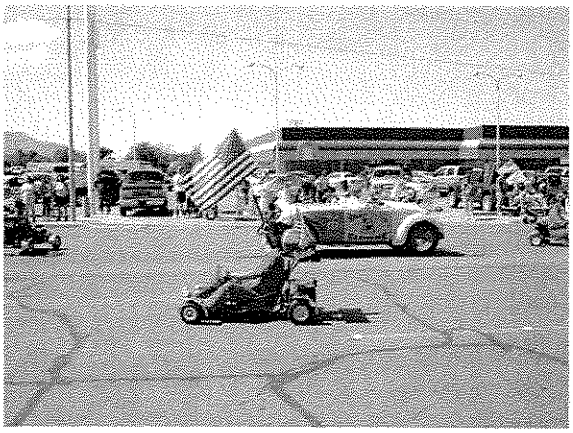
8. How does Billy return home from the majestic meadow?

9. What evidence supports the conclusion that Gramps knows about the tree house and magical underground world of the gnomes?

10. Gruff tells Billy that the crown should "be a reminder that the world if full of surprises." How does the story illustrate the message that the world is full of surprises? Use information from the story to support your answer.

Blue Lightning

By A.P. Raj



Sondra loved cars more than anything else. When she was a kid, she begged her dad to let her join the Boy Scouts, just so she could build a car to race in the Pinewood Derby. Her car was a jagged spike of pinewood painted a glittery, electric shade of blue. She named that car "Blue Lightning."

Blue Lightning didn't win the Pinewood Derby, but it did come in 2nd place. Sondra had been so proud, and her dad was proud of her, too. She had doodled drawings of Blue Lightning all over her notebooks. She sometimes dreamt that Blue Lightning became a real car sitting out in her driveway, and she would get in and take it out for a drive. Even though she was too young, and had never driven a car, in those dreams she always knew exactly what to do. Driving Blue Lightning made her feel powerful and free.

Then one lazy Saturday in spring, Sondra was flipping through a car magazine she liked, when an ad caught her eye:

AMATEUR GO-KART RACERS, START YOUR ENGINES!

Do you LOVE cars? Do you have a passion for racing? Build your very own go-Kart and enter the Go-Go Derby! All experience levels welcome! Racers ages 13 and up may enter with parental supervision.

Sondra had just turned 13 that fall. She screamed with delight and immediately ran to her dad to beg him for permission to enter. She was ready to build Blue Lightning, Mark II.

Her dad read the magazine ad and frowned.

"I don't know, Sondra," he said. "Building a car for the Pinewood Derby was one thing, but a go-kart? That's a whole new level. It sounds kind of dangerous."

"Not if you help me!" she said.

"That's true. It could be a fun project. And we'd both learn a lot," he said.

"Exactly! So we can do it?" Sondra said.

"Well, I'll ask your mother what she thinks. And I want to know that you're serious about it. So how about this: you do some research into how we're actually going to build this thing, and come back to me in a week with a design."

Sondra jumped with joy. "You got it, Dad!" she said. She gave him a big hug and a kiss on the cheek, and went straight to her computer to start researching go-kart designs.

In a week, Sondra had a notebook full of drawings and notes about her project, from spending hours after school researching, thinking and planning. Blue Lightning, Mark II looked ready to go. Sondra's design was a lot like the original Blue Lightning, except instead of pinewood, it would be made of steel. And of course, it would be a real vehicle that she could drive. Thrilled at the thought of building it, Sondra brought her sketches and notes to her dad.

He put on his glasses and looked over her work, thinking. "These are some interesting ideas, honey," he said. "I see you've designed this a lot like your Pinewood Derby car from a few years ago, even down to the lightning bolt shape you love so much."

"That's right!" Sondra said, beaming.

"Well, it will certainly look unique," he said. "But how will it drive?"

"What do you mean?" Sondra asked.

"Well..." Her dad stopped to think. It seemed like he had something to say, but decided against it. "Tell you what. Instead of telling you what *I* think, why don't we build Blue Lightning, Mark II the way you've designed it?"

Sondra was a bit confused, but she wanted to build the go-kart more than anything, so she agreed.

They took a trip to the hardware store to buy all the parts they needed: a lot of metal, engines, cables, brackets, bolts and screws. They had to stop at a specialty hobbyist store to pick up the steering wheel and the materials they needed to build the steering block—the accelerator and brake pedals, and, of course, a comfy seat for Sondra to sit in. Finally, they stopped at a sporting goods store to buy a helmet and pads for her to wear when she was driving.

Back at home, they brought all their new stuff into the garage and went to work. Over two weekends of hard work, they turned Sondra's sketches and notes into a real, working go-kart. When they finally mounted the seat on Blue Lightning, Mark II, Sondra felt more proud than she had ever felt in her whole life.

"She looks great!" Sondra said. "All we have to do now is the paint job!"

"Before we do, why don't we take it for a test drive?" her dad said.

Sondra thought she heard some mischief in his voice and thought about how he had almost said something about her design, but had decided not to. What was he up to?

"Okay," she said. "Let's do it!"

So they took the second Blue Lightning out to a nearby parking lot, and Sondra took it for a spin. Her dad made sure she wore her helmet and pads, and watched her as she drove the go-kart around the lot. She noticed that when she tried to go fast, she felt a lot of resistance from the wind. When she slowed down, she didn't notice it as much.

After she had her fun, she drove back to where her dad was standing. He was smiling like he expected something from her.

"Well, that was fun!" she said. "But I think I know why you wanted me to take it for a test drive."

"Oh, do you?" he said. "Please share."

"I noticed that there was a lot of push-back when I would drive it fast," she said.

"Yes, and?"

"*And* I think it's because of the lightning bolt shape. The wind pushes in and kind of gets caught in the zigzagging part of the frame," she said.

"Very good!" her dad said.

"So, why didn't you tell me about that problem in the first place?" Sondra said. She was a little bit annoyed.

Her dad laughed. "Where's the fun in that? Didn't I ever tell you the story about teaching someone to fish?"

"'If you give a man a fish, he'll eat for a day,'" Sondra said, mimicking a very wise tone her parents used when they were teaching her lessons. "'But if you teach a man to fish, he'll eat for a lifetime.'"

"Exactly, kiddo," he said. "You may be annoyed now, but I promise, you'll thank me when you're older."

Sondra rolled her eyes. "You always say that!"

"It's always true," her dad said, laughing.

"So, now what?" she said.

"Now, we get ice cream. But after that, it's back to the drawing board for you."

Sondra smiled. "Sounds good to me. Designing is half the fun anyway!"

So Sondra went back to researching, sketching and taking notes. Her dad emailed her an article about aerodynamics: the science of how air interacts with solid objects. After she read it, she felt silly about her lightning bolt design. But her dad told her that sometimes, the only way we learn how to do something right is by doing it a few times first, and making silly mistakes along the way.

"You know who makes more mistakes than anybody?" he said. "Great inventors!"

That inspired Sondra and she worked harder than ever. Her next design wasn't shaped like a lightning bolt at all, but more like a Formula One racecar. She started to understand why they were designed the way they were.

She showed her dad her new design, and he nodded with pride. Once again, they went to work, taking apart the first go-kart they'd built and putting it back together again. When Sondra test-drove the newest Blue Lightning, it came a lot closer to living up to its name.

"What do you think, Dad?" she asked. "Do we need to go back to the drawing board again?"

"You can always make improvements on a design," he said. "But the race is in two weeks!"

So they decided that Blue Lightning, Mark II was in racing condition, and painted it with the electric blue paint Sondra loved. When the time came to race in the Go-Go Derby, Sondra wasn't worried about whether she came in first place — in her mind, she had already won, by building something better than she had ever built before.

Name: _____ **Date:** _____

1. What does Sondra build with the help of her dad?

A) a garage where her family can keep its cars
B) a go-kart named Blue Lightning, Mark II
C) a racetrack where she can test her go-kart
D) a hardware store that sells cables and brackets

2. Sondra notices a problem when she takes her go-kart for a test drive. The problem is that when she drives fast, she gets a lot of push-back from the wind. How does she solve this problem?

A) Sondra gets annoyed at her dad.
B) Sondra eats ice cream.
C) Sondra rebuilds her go-kart in a different shape.
D) Sondra designs her go-kart in the shape of a lightning bolt.

3. Read this sentence from the story: "When Sondra test-drove the newest Blue Lightning, it came a lot closer to living up to its name."
What can be concluded from this sentence?

A) Sondra does not like her second go-kart design as much as her first go-kart design.
B) Sondra hopes to finish in first place at the Go-Go Derby.
C) Sondra is upset with her dad.
D) Sondra's go-kart becomes a lot faster after she rebuilds it.

4. Why does Sondra's dad not tell her about the problem with the lightning-shaped design for her go-kart?

A) He does not notice the problem until it is too late.
B) He does not want Sondra to take part in the Go-Go Derby.
C) He is mad at Sondra and does not want her go-kart to work.
D) He wants Sondra to discover the problem on her own.

5. What is a theme of this story?

A) Parents should not let their children try new things.
B) Making mistakes can help you learn.
C) Females are better at building things than males.
D) People should always share their feelings with each other.

6. Read the following sentence: "'So how about this: you do some research into how we're actually going to build this thing, and come back to me in a week with a **design**.'" What does the word **design** mean in this sentence?

A) a very dangerous idea
B) a place where people go to do research
C) a plan for building something
D) a company that sells cars

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

Sondra learns from her mistake with the first go-kart, _____ her second go-kart is faster.

A) so
B) namely
C) initially
D) specifically

8. What mistake does Sondra make when designing her first go-kart?

9. What does Sondra do to fix this mistake when rebuilding her go-kart?

10. Read these sentences from the passage: "'If you give a man a fish, he'll eat for a day,' Sondra said, mimicking a very wise tone her parents used when they were teaching her lessons. 'But if you teach a man to fish, he'll eat for a lifetime.'" Explain how the idea of teaching a man to fish relates to the events of the story.

Marine Biology

Frank had surfed for as long as he could remember.

A tall and thin, but athletic guy, he grew up in the sleepy beach town of Montauk, New York, at the very tip of Long Island. His parents, who owned a popular seafood restaurant on Main Street, had first put him on a board at age three or four. Some of his first memories involved sliding down a wave in the sun, seated at the front of his dad's longboard.

During the winter, Montauk had great waves. In fact, they were considered some of the best on the East Coast of the United States. But the water was so cold, a wetsuit was required. And while the waves in the summer weren't too bad, either, they were nothing compared to the waves in Southern California.

As a boy, Frank and his friends subscribed to all the big surf magazines. They dreamed of surfing big waves on the North Shore of Oahu, Hawaii, or at Teahupo'o on the island of Tahiti. Their pal Clay, who moved to Montauk from Santa Barbara, California in middle school, filled their heads with stories of surfing in his hometown.

"Sometimes the waves got as high as 20 feet!" he'd say, causing Frank and his surfing buddies to gasp. Clay, of course, had never actually surfed a 20-foot wave. But he had sat and watched as professional surfers paddled out, caught them, and rode them all the way to the shore.

At only 13, Frank saved up enough from his weekly allowance to buy a plane ticket to Los Angeles. His uncle, Jim, lived near Malibu, a small beach town north of L.A. He drove Frank out to a famous surf break near his bungalow in the hills.

Used to the small, easy waves of Montauk, Frank was intimidated by the booming surf. Standing on the beach, he could feel the pounding of the waves vibrating under his feet. He paddled out anyway. After a struggle, he

finally made it into the line-up. The other surfers in the water stared at him warily. They could tell he wasn't from California; his pale skin gave him away. But when Frank started paddling into a wave, they moved out of the way for him.

"Let's see what the kid can do," one of them said.

They all watched as Frank stood up. Almost as quickly, he was back in the water. The wave crashed over him, and sent Frank tumbling through the wake.

Frank wasn't discouraged. In fact, he was filled with optimism. As he gasped for air after the wipeout, he resolved to attend college in California. That way, whenever he wasn't studying, he could drive out to the beach and surf waves like this.

Eventually, he thought, he'd be able to handle them like Kelly Slater, the 11-time World Surfing Champion. Like anything, he thought, all it takes is practice.

So when it came time to apply to college, Frank looked only at schools bordering the ocean on the West Coast. His parents, who didn't like the idea of their son moving so far away, tried to convince him to stay closer to home.

"Parts of southern New Jersey have great waves," his dad said over pasta dinner one night.

"And don't forget the swells at Rockaway Beach," his mom added. "Ever since Hurricane Sandy, they've been getting bigger and bigger. If you went to New York University, Rockaway Beach is only 30 minutes away!"

But Frank had made up his mind. He applied to the University of California at Santa Cruz, the University of California at Santa Barbara, and Pepperdine University, which was located just a short drive from his uncle Jim's in Malibu. His grades and SAT scores were good enough that he was admitted to all three. He resorted to drawing straws.

"Pepperdine it is!" he shouted, as his mom and dad looked on from the couch. As much as they didn't want him to be so far from home, they understood his dedication to surfing.

"Just remember: Studying before surfing," his mom warned him. "Not everyone becomes a rich and famous professional surfer. You have to think about an actual career. After all, if you want to live near the beach when you're older, you're going to have to earn some money!"

"I know, Mom," Frank said, giving her a hug. He promised to surf only once he'd finished his homework.

This proved harder than he had imagined.

After growing up in the choppy, waist-high surf of Long Island, the curling blue barrels of Southern California were a big distraction from the hard, lonely work of studying Chemistry 101 and the history of the Civil War. His first month at Pepperdine, he spent every morning surfing at world-famous beaches like Leo Carrillo and El Matador. Pretty soon, he was spending every late afternoon surfing there, too.

Due to the amount of time he spent in the ocean, he quickly befriended the local surfers from the area. A social, handsome guy as well as a talented surfer, Frank became popular in Malibu's surfing community. While his college roommate made friends with other students, Frank found himself hanging out with people from town instead.

Needless to say, his obsession with surfing didn't help his grades. When the waves were good, Frank would skip class to go out and ride them. And the better he got, the more he wanted to be out there.

"This is all I ever wanted out of life," he told his new friends one night, as they roasted marshmallows around a bonfire on the beach. They smiled and nodded. They knew exactly what he meant. Several of them had dropped out of college to become what they called, "full-time surfers."

Then one day he got a call from his advisor, a professor of marine biology, whose class Frank had skipped on many occasions.

"I'm looking at your attendance record here, Frank, and it's not pretty," Professor Blankfein began. "Over the last month, you've missed more than half of your scheduled classes. From my conversations with your professors, you're in danger of failing three out of four of your classes. Is there a problem I should know about?"

Frank was silent on the other line. He didn't know what to say. He was fully aware that he hadn't been showing up to class. But the fact that he might flunk out of college in his first semester, sent a chill through his body. It reminded him of the feeling of jumping into the sea in Montauk in mid-February. Having finally tasted the waves of Malibu, he certainly didn't want to return to those meager, freezing waves.

"I'm sorry, Professor Blankfein," Frank said, at last. "I don't know what's come over me. It's just, the waves out here...I think I've become obsessed with them."

Frank heard his marine biology professor laugh on the other line.

"I sympathize," he said. "I grew up surfing in New Jersey. Why do you think I work at Pepperdine, in the field of marine biology? I created a career that allows me to be in the water as much as I want. If you're serious about the ocean, you should start thinking about a career in marine biology."

Frank thanked his professor and hung up the phone. The thick marine biology textbook on his desk suddenly seemed full of possibility.

Name: _____ Date: _____

1. What does Frank like to do?

A Frank likes to study.
B Frank likes going to seafood restaurants.
C Frank likes to surf.
D Frank likes taking the SAT.

2. What is the conflict that Frank has to deal with in college?

A going surfing versus going to class
B studying chemistry versus studying history
C hanging out with his roommate versus hanging out with his friends
D talking to his advisor versus talking to his parents

3. Frank enjoys surfing.

What evidence from the passage supports this statement?

A Frank's parents own a popular seafood restaurant in New York.
B Frank has an uncle named Jim who lives in a town north of L.A.
C Frank is worried that he might flunk out of college in his first semester.
D In his first month of college, Frank goes surfing every morning.

4. Why does the marine biology textbook seem full of possibility to Frank at the **end of** the story?

A He realizes that a career in marine biology may allow him to spend his life around the ocean.
B He is easily distracted from the hard, lonely work of studying the history of the Civil War.
C He is a social, handsome guy who becomes popular in Malibu's surfing community.
D When applying to college, Frank looks only at schools bordering the ocean on the West Coast.

5. What is this story mostly about?

A what growing up in Montauk, New York is like
B a trip a young man takes to California when he is 13
C a young man who is obsessed with surfing
D the steps involved in applying to college

6. Read the following sentence: "Needless to say, his **obsession** with surfing didn't help his grades."

What does the word **obsession** mean?

A homework
B weakness
C a very strong interest in something
D a very strong dislike of something

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

Frank keeps skipping class; _____, Professor Blankfein gives him a call.

A for example
B as a result
C namely
D even though

8. What does Professor Blankfein tell Frank he should start thinking about?

9. Why does Professor Blankfein tell Frank he should start thinking about a career in marine biology?

10. Should Frank drop out of college to become a full-time surfer or stay in college to study marine biology? Explain your answer with evidence from the passage.

Water from the Air: Cloud Forests

Alden Wicker

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 are found in cold climates without much animal life
D humid forests that are found 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 can be found 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.

_____

_____

_____

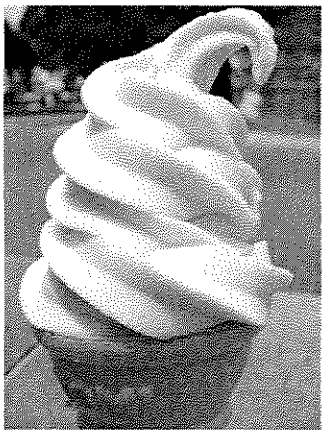
_____

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.

The Inside Scoop

By Michael Stahl



In New York City, one of the most popular brands of ice cream comes from a company called Mister Softee. Mister Softee sells ice cream to children and adults alike right out of a large blue-and-white truck. One particular Mister Softee truck driver is named Gus Elefantis. He has not only made Mister Softee ice cream his career, but the tasty, smooth ice cream has helped him make a few friends, too, since he first bought a truck in the mid-1980s.

Gus Elefantis's summer days begin at about 8 a.m. when he and his wife Lola wake up to make breakfast for their two daughters. Once breakfast is finished, Gus and Lola leave their daughters at home (the oldest daughter is 18 years old and capable of babysitting) and drive 20 minutes to a very special parking lot. It is there where Gus parks his very own Mister Softee ice cream truck every night alongside about a dozen others.

As soon as they arrive, Lola begins cleaning and stocking his truck, inserting all of the local favorite types of ice cream pops and flavored frozen ices into specific freezer compartments to be sold once Gus drives along his route. "Everything's in the same place every day," says the short, blonde lady. "This way, my husband doesn't even have to think!"

Gus agrees, saying he won't even need to glance inside the freezer as he fills orders for the long lines of customers waiting on the sidewalks.

Watching his wife wipe down the sink, the refrigerator and the slushy machine, Gus explains that Lola has cleaned the truck for over 20 years, ever since they were first married. "She's the best at it," he says with a heavy Greek accent. "I've tried to clean the truck plenty of times before, but I'm no good at it. When Lola cleans, it is spotless."

Gus's morning duty is to "go shopping" and purchase any new stock the truck needs for the day. He buys these items from his old friend Dimitri Tsirkos, who got Gus into the business and now runs the Mister Softee station. The station consists of a few parking lots for the trucks and a store where drivers buy supplies. Into a shopping cart Gus loads a few cartons of chocolate and vanilla ice cream mix, which will later freeze up inside the truck's dispenser machine. He adds a can of whipped cream, some blue paper cups and a gallon of strawberry syrup.

Lola has finished cleaning Gus's truck. Tupperware containers of sprinkles are filled. Gallons of milk are placed just behind a steel refrigerator door at Gus's feet. Chocolate sauce that hardens when chilled is poured into a bowl for Dip Cones. The truck is finally ready.

After unplugging the back of the truck from a wall outlet that is used to keep the refrigerators and freezers inside running overnight, then starting up and revving the engine for a while to warm it up (the truck itself is over 30 years old), Gus drives out of the garage to sell ice cream in the neighborhood he's called home for over 40 years: Astoria, New York. Gus will spend between nine and ten hours driving around, jumping from the driver's seat to the serving window countless times. This takes a toll on a big man's body. "You're walking on steel all day," he says. "Talk to any Mister Softee driver and they'll tell you that their legs from the knees down are a problem."

Though there is an air conditioner in the truck that isn't completely useless, its work is made more difficult by the heat coming from the refrigerators, not to mention the sweltering humidity in New York City's summer air. The back of the truck is searing on days when temperatures climb above 95 degrees, which are also some of the least profitable days because customers stay inside their air-conditioned homes. Naturally, rainy days hurt business as well. How much money the drivers make changes from year to year, depending on the weather. Gus remembers one year, though, when the weather was so cooperative, he started driving in February and didn't stop until Thanksgiving! "I made a lot of money that year," he says with a nod of his head.

Usually, Gus doesn't drive the Mister Softee truck for more than six months a year. He works every day it doesn't rain between April and October, unless there is an important family event or holiday like Greek Easter. A day spent inside his home is a day he's not making money, so he'll put in 12-hour days as often as he possibly can. On those days he misses his daughters, Joann, the older one, and Nora, who is eight.

After a long summer season and parking his truck for winter, Gus searches for a new winter job to provide for his family. "Once I drove a cab, but that was too much driving in one year for me," he laughs. "Usually, I work part-time in construction or at a restaurant just like when I was young." In some ways, he would love a stable, everyday job, he says. But with Mister Softee, he's his own boss, which has its perks.

"I eat ice cream every day," Gus says, admitting that he dips into his own supply, usually after accidentally making something a customer didn't ask for, like a cone with chocolate sprinkles instead of rainbow. "I feel like I have to eat the mistakes. I don't want them to go to waste!"

When he's had enough ice cream for the day, he gives his errors away, no charge. Gus loves giving away free ice cream, which has gotten him a lot of fans. However, the people of Astoria don't go to his truck just for ice cream—whether it's free or not—they also go to see their friend.

"My husband loves everyone," says Lola. "Adults, kids, pets. It doesn't matter."

The side windows of the truck have few stickers, making it easy to see into the back where Gus works. This was done on purpose. He feels it makes parents much more comfortable dealing with him because it shows he has nothing to hide. Gus doesn't drive his route late at night because he knows the truck's song will get kids to jump out of bed. During the daytime, he plays the song only once per block to limit the disturbance.

"My mother always told me that if you live in a glass house, don't throw stones at your neighbors. And I live in a glass house," he says, referring to his windowed truck. He calls the job "easy," despite the long hours away from his daughters while they're on summer vacation, the heat, the hurt in his legs, and the requirement of a new job every winter. But Gus Elefantis isn't going anywhere, to the delight of the many Astorians with which he comes into daily summer contact. "Unless I hit the lotto," he says, "which I don't play, I'm not going to stop."

Name: _____ Date: _____

1. What does Gus Elefantis do during the summer?

A Gus Elefantis teaches Greek to tourists.
B Gus Elefantis drives an ice cream truck.
C Gus Elefantis works on a construction site.
D Gus Elefantis waits tables at a restaurant.

2. What is the sequence of events in a summer day for Gus?

A Gus gives away ice cream for free; Gus goes shopping for supplies; Gus drives around to sell ice cream.
B Gus gives away ice cream for free; Gus drives around to sell ice cream; Gus goes shopping for supplies.
C Gus goes shopping for supplies; Gus drives around to sell ice cream; Gus gives away ice cream for free.
D Gus goes shopping for supplies; Gus gives away ice cream for free; Gus drives around to sell ice cream.

3. Many people in Astoria like Gus.

What evidence from the passage supports this statement?

A "However, the people of Astoria don't go to his truck just for ice cream—whether it's free or not—they also go to see their friend."
B "Gus's morning duty is to 'go shopping' and purchase any new stock the truck needs for the day."
C "Gus Elefantis's summer days begin at about 8 a.m. when he and his wife Lola wake up to make breakfast for their two daughters."
D "The side windows of the truck have few stickers, making it easy to see into the back where Gus works."

4. What is one problem with Gus's job?

A Gus buys the items he needs for his truck from a friend.
B Gus works in Astoria, New York.
C Gus's job causes pain in his legs.
D Gus's job allows him to interact with people.

5. What is this passage mostly about?

A an ice cream company called Mister Softee
B the neighborhood of Astoria, New York
C different flavors of ice cream
D the work of an ice cream truck driver

6. Read the following sentence: "Gus agrees, saying he won't even need to glance inside the freezer as he fills orders for the long lines of **customers** waiting on the sidewalks."

What does the word **customers** mean?

A people who get into trouble
B people who work hard
C people who are mean to others
D people who buy things

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

Gus likes some things about his job _____ not others.

A in summary
B above all
C but
D after

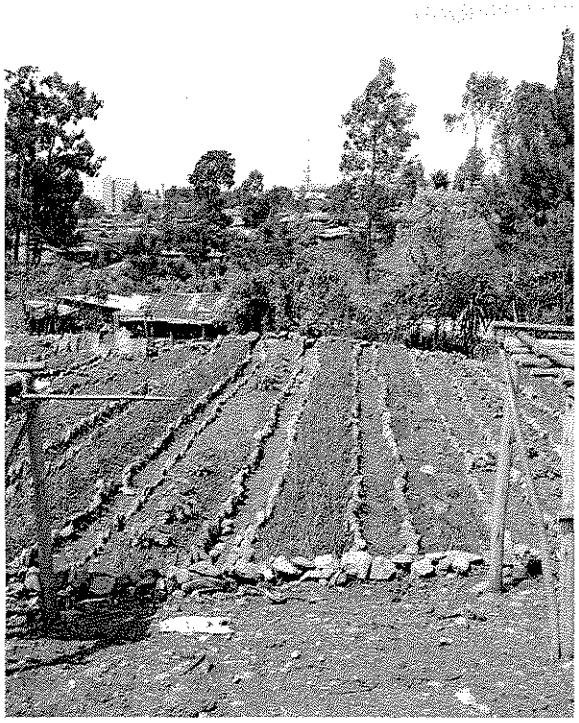
8. Name two things Gus likes about his job.

9. Name two things Gus does not like about his job.

10. Gus says that, in some ways, he would love a stable, everyday job. Why does he choose to be an ice cream truck driver instead? Support your answer with evidence from the passage.

Urban Farms

Susannah Edelbaum



Many people wrongly think that cities don't have farms and that fruits and vegetables are only grown in the country. Believe it or not, there are more and more urban farms popping up in cities all over the world.

Alexandra Sullivan, a food systems researcher in New York City, studies urban agriculture. Urban agriculture is another name for farming and gardening in a city environment. Ms. Sullivan studies everything from tiny gardens in empty lots between buildings to bigger fields that have been planted and cultivated. According to Ms. Sullivan, "Urban agriculture has existed since cities have, across the world."

The number of humans living in urban areas, or cities, is increasing. The amount of people who want to garden in urban areas is also rising. Ms. Sullivan says, "In small gardens, on rooftops and indoors, city residents grow fruits, vegetables, grains, and herbs, and raise animals to produce dairy, eggs, honey, and meat. City residents use these foods as supplements [additions] to food produced by rural agriculture." Even though some people who live in urban areas grow crops, urban residents still need to rely on food grown in rural areas. This is because a city doesn't have enough space to grow enough food for everyone living in it.

In New York City, urban farmers have come up with many different ways to grow their own produce, even though there isn't a lot of room. For example, Brooklyn Grange is a farming operation that has two rooftop vegetable farms in New York City. All together, the farms are made up of 2.5 acres of rooftop space. This makes Brooklyn Grange one of the largest rooftop farming operations in the world.

Brooklyn Grange grows tomatoes, lettuce, peppers, kale, chard, herbs, carrots, radishes, and beans. The farming company sells its vegetables to local residents and restaurants. And because the farms are on rooftops, they are specially adapted to their urban location. They use available space that is not needed for anything else. As more urban farmers find ways to grow food in cities, urban residents will be better able to get fresher ingredients for their meals.

Name: _____ Date: _____

1. What is urban agriculture?

A farming and gardening in the country
B a term for cities that have farms
C farming and gardening in a city environment
D a method of growing food indoors

2. What does the passage describe?

A how to grow potatoes and beans on a roof
B agriculture in urban environments
C the history of urban agriculture
D technology used in urban agriculture

3. Urban agriculture cannot serve as the only food source for a large city. What evidence from the passage supports this statement?

A "This is because a city doesn't have enough space to grow enough food for everyone living in it."
B "In New York City, urban farmers have come up with many different ways to grow their own produce, even though there isn't a lot of room."
C "'In small gardens, on rooftops and indoors, city residents grow fruits, vegetables, grains and herbs, and raise animals to produce dairy, eggs, honey and meat.'"
D "Brooklyn Grange grows tomatoes, lettuce, peppers, kale, chard, herbs, carrots, radishes, and beans."

4. Based on the text, what is a common challenge urban farmers face?

A Growing produce during water shortages.
B Keeping urban farms safe from city residents.
C Fighting against cities' laws that ban urban agriculture.
D Finding the right space to grow their produce.

5. What is this passage mostly about?

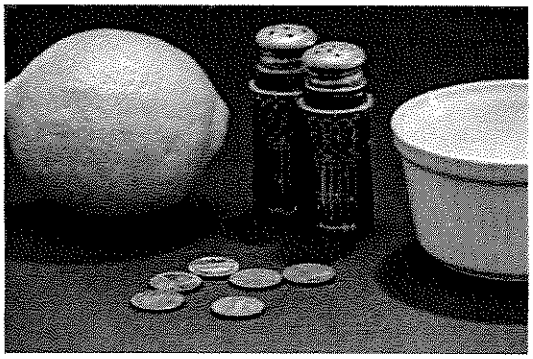
A farming in city environments
B the advantages of urban agriculture
C how people can begin their own urban farm
D the rooftop gardens of Brooklyn Grange

9. Give an example of a place where urban farmers can grow their own produce.

10. Explain how and why urban farms adapt to their city environment. Support your answer using information from the passage.

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 ½ 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.