This project was developed at the Success for All Foundation under the direction of Robert E. Slavin and Nancy A. Madden to utilize the power of cooperative learning, frequent assessment and feedback, and schoolwide collaboration proven in decades of research to increase student learning.
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Sir Robert's Treasure

Elisabeth Bennet
Chapter One

Sir Robert Tremaine of the kingdom of Garren walked briskly into his stables.

"Ah, young Jackson," said Sir Robert to his stableboy. "Is my horse, Lightning, ready?"

"Ready and waiting for a hard, two-week trip, sir. Just as you asked, sir," Jackson answered.

"Very well," said Sir Robert. "Young Jackson, may I confide in you?"

"Of course, sir!"

"I am on a quest for a most precious treasure. I expect my journey to be very dangerous. I’ve not told this to my wife and children. I don’t want to worry them. They think I am going to visit my brother. But someone should know the truth in case I fail."

At first, Jackson was troubled by this news. There were so many questions he wanted to ask: Where are you going? Why? What treasure do you seek? How can I help you? He knew Sir Robert would not answer these questions now, but perhaps he would when he came back. In the meantime, Jackson couldn’t help feeling somewhat proud and just a little smug. Sir Robert had shared a secret with him!

Jackson loved Sir Robert as a father. He wanted to do well in Sir Robert’s eyes and make him proud. Orphaned when he was four, Jackson had spent the last ten years living in Sir Robert’s stables. He spent his mornings caring for the horses. In the afternoons, he read books, worked math problems, and practiced sword fighting. Sir Robert wanted Jackson to have an education. He also paid Jackson well to be his stableboy.

Sir Robert’s Treasure
Sir Robert’s two-week journey stretched into four. Journeys often took longer than expected, so no one in the family really worried. Keeping in mind what Sir Robert had told him, however, made Jackson begin to feel uneasy the longer Sir Robert was away.

Five weeks and three days after Sir Robert left, Charlotte walked purposefully into the stables. She was Sir Robert’s youngest daughter, about Jackson’s age, and Jackson did not particularly like her. She always thought she knew more about everything than anyone else. Today she carried several bulging saddlebags and a heavy cloak wrapped around some odd-shaped things. Looking around, she spied Jackson.

“Jackson!” she exclaimed. “I need my horse. Can you please saddle her up for me? Someone around here has got to do something.”


“Jackson, I know you can’t be a total idiot. Father must have gotten into some trouble. I intend to find him and bring him home.”
This did not sound like a good idea to Jackson. 
“What about your brothers?” he asked her.
“I know where my brothers are. I don’t need to find them,” Charlotte snapped.
Jackson sighed. “I mean, it seems to me that they should be the ones to go after him.”
Charlotte rolled her eyes. She liked Jackson as little as he liked her. “My brothers have no sense. Look, it’s not your job to stop me from doing what I need to do. Either you saddle up my horse, or I will.”
Jackson knew when he was beaten. He saddled up her horse, Elvira, and watched the two gallop away. Then he quickly threw a saddle on his horse, Pepper, and went after her. Soon he caught up with her. “Hey, miss,” he said. “Do you even know where you’re going?”
If Charlotte was surprised that he had followed her, she didn’t show it. “Where do you think?” she asked.
Jackson rolled his eyes and shook his head. “You want to ride unarmed into the Doomed Forest? Are you crazy?”
Charlotte gave Jackson a smug little smile. “Who said anything about being unarmed? I’ve got a bow, arrows, and a sword wrapped up in my cloak. We’ll be fine.”
Jackson had to admire her courage. Still, she hadn’t thought of everything, and he was determined to let her know it. “You know, if we ride into the Doomed Forest with the weapons wrapped in your cloak, they won’t do us any good.” Charlotte was angry, but mostly because she knew Jackson was right.

Ten minutes later, with Jackson wearing the sword and Charlotte carrying the bow and quiver of arrows, the pair entered the Doomed Forest.

The trees there were large and dense, allowing little sunlight to filter through. The forest had a stale, musty smell, and it was full of strange rustling and slithering sounds, deadly plants, wild beasts, and dangerous thieves in hiding. It was home to dark and dangerous things.

As they rode deeper and deeper into the forest, the light grew dimmer, and it became harder to look for Sir Robert. Suddenly Elvira whinnied in fear and began to buck and rear. Charlotte tried to control the frightened horse, but she slipped off Elvira’s back, and the horse galloped away. Jackson looked around and heard a piercing scream as he saw a giant black panther drop from a tree, just missing Charlotte. She tried to run, but she tripped over her long skirts. The panther crouched, ready to spring.

Jackson jumped off his horse and drew his sword. He was terrified, but he knew he had to try to save Charlotte. He ran to the panther and hit it over the head with the flat of his sword. Jackson and the panther lunged at each other, each just managing to fend off the other.
Jackson heard a whistle in his ear and felt something graze by. Too busy to worry about it, he kept fighting. Without warning, the panther gave a great scream and fell, shaking, to the ground. Then it lay still with an arrow in its side. Jackson looked up. Charlotte stood tall and pale, her eyes large and round, her bow at the ready. Jackson realized what had happened. Relief spilled over into shaky laughter.

“You know,” he said, wearily dropping to the ground, “you almost hit me.”

Charlotte plopped down next to him. “Yeah,” she said. “Sorry about that. I never said I was a good shot.”

“Good thing or you’d have been lying.” He looked over at the dead panther.

“Hey, let’s get away from here.”

Charlotte smiled. “At last we agree on something.”

As they walked away from the panther, Jackson put his sword back in its sheath and led Pepper by the bridle. Before they got very far, Elvira came trotting back.

Charlotte stroked Elvira’s nose and spoke softly to her. Then, patting one of the bulging saddlebags, she turned to Jackson and said, “Hungry?”

Jackson grinned. “I thought you’d never ask!”
Chapter Two

After they cared for their horses, Jackson cleared away loose sticks and dead leaves and built a small campfire. Charlotte took bread and cold meat from one of her saddlebags and handed some to Jackson as the two sat down by the fire.

“Thanks,” he said to her. “Actually, I really wanted to thank you for saving my life. You were incredible back there.”

Charlotte smiled shyly and looked at the ground. “Thank you,” she said. “You were pretty good with the sword too, you know.” She looked up at Jackson. “I guess those lessons Father gives you paid off.”

Now it was Jackson’s turn to smile shyly. He and Charlotte talked well into the night. Jackson thought about telling her about Sir Robert’s quest for his treasure, but he decided against it.
They set out early the next day. When they came to a particularly dense part of the forest, they had to work their way through the trees, vines, and brush. Suddenly, Charlotte gave a startled gasp.

She had brushed up against some Deadly Ivy, one of the most dangerous plants of the Doomed Forest. Deadly Ivy looks like ordinary ivy growing on ordinary trees. But when a person touches Deadly Ivy, the plant snakes itself around its victim, pulling tighter and tighter. It kills within seconds.

“Jackson, quick, cut it off!” Charlotte screamed. “I have a dagger in one of the saddlebags. Quick!”

Jackson ran to the saddlebags and frantically searched through them. Grabbing a small leather pouch, he turned to Charlotte. She started to protest when she saw he didn’t have the knife, but the ever-tightening Deadly Ivy silenced her. Jackson opened the pouch and began to pour salt on the Deadly Ivy. Immediately it loosed its grip, and Charlotte fell to the ground.
“Thanks Jackson,” she said gratefully as he helped her up. “How did you know to use salt to stop Deadly Ivy?”

“It was in one of the books I read. I never thought knowing that stuff would be helpful.”

Jackson and Charlotte continued their search. As dusk began to fall, Jackson thought he heard a familiar whinny in the distance. He and Charlotte tied their horses to a tree and checked for all of their weapons. Quickly and silently they crept toward the sound, and, sure enough, there was Lightning, tied to a tree.
Jackson and Charlotte continued on. They came to the edge of a clearing and spied three people around a campfire. Two were dirty, wild-looking men, surely two of the dangerous thieves who lived in the Doomed Forest. The other, who was tied to a tree, was Sir Robert!

Silently, Jackson and Charlotte waited until the three men fell asleep. Then Jackson motioned for Charlotte to give him the dagger. As she did so, she leaned forward and kissed Jackson on the cheek, startling him. “For luck,” she whispered. Jackson ran to Sir Robert and, putting his hand over Sir Robert’s mouth, gently shook him awake. Jackson quickly cut through the ropes, and then he and Sir Robert ran back to where Charlotte was waiting.
Chapter Three

Charlotte threw her arms around Sir Robert. In a whisper, Jackson told Charlotte to take her father back to their horses. He meant to go get Lightning. For once she didn’t argue with him.

Getting Lightning took longer than he had expected, but finally he returned to Charlotte and her father, who had made camp. Charlotte ran over to Jackson and grabbed his arm. “I was getting worried about you,” she said. “Come over to the fire. You must be starved.”

As the three began to eat, Charlotte asked, “So, Father, why are you here in the Doomed Forest?”

“As I told young Jackson, I’m on a quest to find my precious treasure.”

Charlotte turned to Jackson. “You knew about this? Why didn’t you tell me?” she demanded.

Jackson was sorry that he had angered her. “It was your father’s secret,” he said.
Still angry, Charlotte turned back to her father. “Is your quest over? Can we go home now?”

Sir Robert shook his head. “But it will be soon. I’ve learned that the leader of the thieves, Fearsome Joe Walsh, keeps my treasure in a leather pouch in a chest he keeps with him at all times. I’ve also learned where Fearsome Joe Walsh and his thieves live in the Doomed Forest.” He looked at Jackson. “Tomorrow young Jackson and I will go to their camp, take my treasure, and return home. You, young lady, will go home as soon as morning comes.”

Sir Robert raised his hand as Charlotte opened her mouth to argue. “No,” he said before she could say a word. “A den of dangerous thieves is no place for a girl.”
“Please, sir,” Jackson heard himself say. “It may not be my place to say this, but I think Charlotte should come. She’s the reason why we’re here. It was her idea to come after you. She thought to bring food, weapons, and warm clothes. She saved my life from a panther attack. She’s the bravest person I know.”

Sir Robert looked at his daughter for a long moment. “Very well,” he said at last. “You may come with us. But no fighting for you. Young Jackson and I will surprise the thieves with an early attack. While we fight them, Charlotte, you will sneak into the camp and take back my treasure. Give us a signal when you have it and we’ll follow. Now, let’s get some sleep.”
Jackson had trouble falling asleep. He was glad that Charlotte was coming with them, but he worried about her. She had no sword. What if one of the thieves attacked her? She can take care of herself, Jackson reminded himself. But what if she got hurt? What if she couldn’t find the treasure? Finally, as the questions swirled in his head, Jackson drifted off to sleep.

Early the next morning, Jackson and Sir Robert ran into Fearsome Joe’s camp, startling the sleepy thieves as they ate breakfast. Jackson raised his sword and began fighting three thieves at once, while Sir Robert began dueling with Fearsome Joe himself.
In the confusion, Charlotte sneaked in and hunted for the treasure chest.

Jackson, finished with his first three thieves, began fighting two more. Out of the corner of his eye, he saw a thief run up to Sir Robert and Fearsome Joe, who were still battling.

“Behind you!” Jackson shouted. Suddenly, he heard the owl’s hoot that was Charlotte’s signal. He and Sir Robert nodded at each other. With a last, fierce jab at their opponents, Jackson and Sir Robert fled the camp to their waiting horses.
Chapter Four

A
fter riding for what seemed like hours, the light finally grew brighter and the trees less dense. At last Sir Robert, Charlotte, and Jackson came out into the open sunlight.


Charlotte handed the leather pouch to her father. “What treasure was worth all this trouble?” she asked him.

Sir Robert opened the pouch, and a single silver coin fell out into his hand. “That’s it?” Charlotte said in surprise. “You went missing for that? I don’t understand.”

“This single coin means everything to me,” Sir Robert answered. “The only thing that means more is my family.”

“But why, Father? Why is this coin so important?”
“My grandfather was not a wealthy man, my dear Charlotte,” began Sir Robert. “He was like young Jackson, here, a stableboy. He wanted his sons to be their own masters, instead of working for someone else. He divided the little money he had between his sons. He told them to go into the world and make what they would of it. He gave each of them a single silver coin. My father took his coin and came to Garren. He worked hard and saved his money. In time he became a wealthy man with a manor house of his own, our house. This,” he said, holding it up, “was his single silver coin.”

“He never spent it?” Charlotte asked. “Why?”

“It’s a reminder. This coin reminds us of where our family came from and gives us hope for the future. It is our most precious treasure.”
They were silent for several minutes, thinking about the coin. “Please sir,” said Jackson. “How did Fearsome Joe Walsh get the coin?”

“When I was a boy, the manor house was robbed. We didn’t know then who had robbed us, but I have tried to find out over the years. Some weeks ago, I heard something that made me think Fearsome Joe had the coin.”

“What did you hear, Father?”

“I heard that Fearsome Joe kept a silver coin with him at all times, thinking it brought him luck. My father had kept the coin in a special wooden box, so it would not be confused with any other coins. Fearsome Joe must have realized that this one coin was special, so he always kept it with him.”
Now, Jackson thought, Sir Robert’s quest is over and things will go back as they were before. He glanced over at Charlotte. Well, he thought, maybe not everything. Sir Robert was grateful for Jackson’s help in restoring his precious treasure and gave Jackson a large sum of money. Jackson saved the money and worked hard to earn more. In a few years, he had enough money to buy a large stable with many horses. He now had several stableboys working for him and was his own master.

Not long after that, Jackson married Charlotte in a large, happy ceremony. After all the guests had gone home, the couple opened Sir Robert’s wedding gift. It was a small wooden box with a single silver coin. Sir Robert’s treasure was now theirs.

The End
The Jester Jacob

King Marcus was in a terrible mood. Everyone in the castle tried their best to make him happy. The chefs cooked his favorite foods, the maids sewed him new robes to wear, and even the queen tried to get him to take a walk with her so he could relax. Finally, after everyone had tried their best, the king’s daughter, Princess Teresa, had a brilliant idea.

“Mother, let’s hire a jester!” the princess suggested to the queen. “He can tell stories and do tricks and make Father laugh.” The queen had to agree that it was a genius idea.

Early the next morning, Jacob the Jester arrived. He wore a ridiculous hat that was as colorful as an orchard of apples on a spring day. As soon as the queen and princess saw him, they both laughed heartily.

“This is going to work wonderfully,” cried the queen.

All the while, Jacob was growing quite nervous. He had heard terrible stories about the king’s temper, and he wanted very much to please the king. He fumbled with his bag and nearly tripped through the door.

“Don’t be nervous,” said Teresa. “You’ll do fine!” With that she gave him a pat on the back that sent him flying into the king’s chambers.

“Well don’t dance around, my dear boy. Come in! Get started!” boomed King Marcus. Given his mood, he was not pleased that the queen insisted he spend time with a jester.

Jacob began by telling the king about news from neighboring kingdoms. “Well, your majesty. Let’s see. King Dennis had a toe removed from his left foot. It’s a terrible story!” The king’s face contorted into an even more
fearsome snarl. “Ok...um...Queen Tiffany is expecting a child in the spring. She’s really hoping for a son this time....”

“Enough!” bellowed the king. “I’m not interested in ridiculous gossip!”

Jacob jumped like a rabbit at the sound of the king’s harsh tone. He decided to try some tricks. First he attempted to juggle, but he was so nervous that he could only catch two balls at once.

“I’m not sure tossing two balls into the air is juggling,” sneered the king. Jacob quickly put the balls away. He scratched his head desperately trying to think of another idea to entertain the king.

“I’ve got it!” cried Jacob. He dug into his bag and found his prized possession, a recorder. He cleared his throat and put the instrument to his lips. He took a deep breath, and the next sound was a horrible, ear piercing screech that caused that caused the king to put his hands over his ears.

“My good man, stop making that racket!” cried the king. “Guards! Guards! Take this man away at once!”

As the guards scrambled in, Jacob had the horrible thought that the king might throw him into the dungeon. He ran back and forth around the king’s chamber as the guards chased him. At one point, a guard tripped Jacob, who rolled into a ball and knocked down three guards, as if they were bowling balls.

Suddenly the scene was interrupted by an unusual sound. Everyone stopped in their tracks as the king’s face turned the color of a rose in full bloom. He exhaled and with it came a sound few had ever heard—the king’s laughter.
The Jester Tries a New Job

Jacob was a court jester, which many people might have thought would be a fun job. His duties included entertaining the king by telling stories, playing instruments, and performing tricks. Jacob’s problem was that he was not a very good jester. In fact, he usually only entertained the king by accident. So one day, Jacob decided to try a new job.

“Chase, will you please teach me to cook?” Jacob asked the king’s top chef. Chase looked at Jacob as if he’d grown an extra head.

“Why in the world would you want to learn to cook?” Chase asked. “I’m here to cook anything you’d like to eat.”

“It’s important to me, Chase. I really want to learn,” Jacob pleaded with him. Finally, after growing tired of listening to Jacob beg, Chase agreed. So the rest of the day was spent with Jacob picking up hot pots, spilling sauces, and sticking his fingers in the soup. By the end of the day, Chase had had enough.

“Leave my kitchen!” Chase yelled at the top of his lungs. “You cannot learn to cook! You cannot even learn to boil water!” Luckily Jacob’s feelings were not hurt. In fact, he agreed with Chase that cooking was not Jacob’s ideal job.

The next day he approached the maids, who promptly laughed at Jacob.

“Why are you bothering us? We have a lot of work to do, and we don’t have time for your games,” said Anastasia, the head maid.
“Please, Anastasia. I really want to learn how to do your job,” begged Jacob.

“Fine. Start with this,” Anastasia replied, as she pushed a loaded basket into his hands. “These curtains need to be hemmed.”

Jacob didn’t want to bother Anastasia further, so he didn’t mention that he did not know how to sew. Instead he gave it a shot on his own. He felt it was going rather well until after some time he tried to pick up the fabric. Somehow Jacob had managed to sew himself into the curtains. He felt like a caterpillar stuck in a cocoon.

“Anastasia!” he cried. “Could I bother you for some help?” Anastasia returned to the sewing room and found Jacob curled up in a ball with thread spooling in all directions. After she managed to untangle him, she quickly banished him from the sewing room.

“I don’t want to ever see you in this room again!” she yelled as she slammed the door. Once again, Jacob was not offended, but quite agreed that sewing was not a task he should ever try again.

Feeling somewhat disappointed that he’d yet to find a suitable job, Jacob meandered down to the knights’ stables. He watched in awe as the knights practiced striking targets and carrying a lance. He yearned to join them as they sped by, like lightning, riding their horses into the distance.

Maybe this is the job for me! thought Jacob. Just as he was about to approach Kevin, the head knight, he heard the men gather in a private meeting.
“Under the king’s orders, we will seize the castle of Middleburgh tomorrow. There will be fierce fighters, and the battle will be long and hard,” warned Kevin.

Jacob felt like cotton was growing in his mouth. He swallowed hard and quickly walked back to the castle.

Better to stay here and practice juggling, thought Jacob.
The Skating, Reading Plumber’s Kid

Story by Min Ha Li
Illustration by K. E. Lewis
“Hey Marlena!” her dad called from downstairs, “Come down here for a minute, por favor!”

“Just a minute, Papa!” she called from upstairs in her room. She knew her dad liked her to keep her room clean. So before she ran down the stairs, she made sure to put her skateboarding figurines away.

She ran downstairs. Her dad was gathering up his tool kit and looking for the keys to his truck. “Have you seen my keys, Marlena?” he asked.

Marlena rolled her eyes. “They’re in the same place they always are, Papa,” she said with a smile, and then she ran to the basket by the front door. The keys were underneath a pile of bills and letters.

She ran back to her father. “Think fast!” she said as she tossed him the keys.

“Gracias for looking out for me,” he said as he caught the keys with a smooth, quick movement of his hands.
“Are you going somewhere, Papa?” she asked, looking in his bag of tools. His wrenches, hammer, saw, and various other tools were in there.

“Yes, Marlena,” he said. “I have a job waiting for me. The shop says someone has a clogged sink. Here I go, off to rid the world of clogged sinks!”

“When will you be back?” Marlena asked. It was already 7:30 in the evening, and she wanted to go to bed soon.

“Well, that depends on how bad the clog is, Chica,” he said, ruffling her hair. “I could be gone for just an hour or so, or it could be longer. Help yourself to some ice cream before you go to bed, but don’t stay up too long. And make sure Ernie gets to bed before 8:30. Okay?”

Ernie was Marlena’s little brother. She was used to putting Ernie to bed because her dad worked late jobs pretty often. He was a late-night plumber. People who had problems with their drains could call his office at any time during the day or night. His office would call him at home, and off he’d go. Just like right now.

“Okay, Papa. If you get all dirty, I just washed all of your towels. They’re folded in the closet. See you soon!”

“Good girl,” her dad said. “I’ll be home as soon as I can. Good night!”

“Night, Papa,” Marlena said. She watched him grab his tool bag. The screen door slammed behind him as he walked out and down the stairs. Moments later, she heard him start up his big truck and roar away.
Chapter 2

After her dad left, Marlena called for Ernie. Ernie was just a year younger than Marlena. Most of the time, when Marlena was in charge, Ernie did as he was told. “Ernie, pick up your toys,” she’d say, and Ernie would pick up his toys. “Ernie, get ready for bed,” she’d say, and Ernie would brush his teeth and put on his pajamas. Marlena liked that. It made her feel really responsible, which was good because her mom wasn’t around anymore.

“Ernie, where are you?” she called.

“I’m in here!” he called from the den, where the TV was.

Marlena stormed into the den. “Ernie Banks Garcia,” she said sternly, “you know Papa doesn’t like you watching television at this hour of the night!” On the rare times that Marlena had to scold Ernie, she always used his full name. Her parents had named Ernie for her dad’s favorite baseball player, a Chicago baseball player named Ernie Banks. Ernie Banks had played years and years ago, but her father was still a big Chicago fan.

Ernie said, “But, Marlena, Dad’s not here. What he doesn’t know won’t hurt him, right?”

Marlena shook her head. “That’s not how things work around here, Ernie. You know that. Now turn off the TV and get ready for bed, okay?”

“Okay, Marlena,” Ernie grumbled, “whatever you say.”

“Whatever I say is right,” Marlena said, reminding Ernie who, indeed, was in charge. “Whenever Dad’s not home, I’m the boss. And don’t you forget it. Now get ready for bed.”

As Ernie turned off the television and went down the hall to the bathroom, Marlena went back into the kitchen. She saw the pile of dishes from dinner in the sink. “I’d better get to work,” she said to herself, “so the kitchen’s clean before Dad gets home.”
Marlena washed the dishes, dried them, and put them away. She swept up the kitchen and made sure everything was tidy for her father. When she was done, her dad still wasn’t home yet. Marlena quietly crept down the hall toward her brother’s room. She silently opened the door to check on him. As she did, the light from the hallway cascaded onto Ernie’s sleeping face. Good, she thought to herself, he’s asleep. Indeed the house was silent.

Marlena crept into the living room, where her book was sitting on the paisley sofa. Marlena thought that some good reading would be nice, so she sat down on the sofa and turned on the lamp behind her. She opened her book, turning to the place saved by her favorite bookmark. It was made of pink and green yarn. Her mother had made it for her years ago, when Marlena was just learning to read.

“This will help you always remember your place in a book,” her mother had said. Marlena started reading.

She didn’t get very far. First, her eyes began to feel heavy and dry. She was perhaps just a little too comfortable. But she wanted to keep reading because she was getting to a really exciting part in the book. The heroine, a young nanny named Jane Eyre, had just met the dashingly handsome Mr. Rochester. Marlena couldn’t help wondering if the two would fall in love, and she really wanted to find out.

But, before she knew it, she heard her dad come in through the kitchen door. Marlena looked at the clock on the wall. It read 11:30. 11:30! “I must have fallen asleep,” Marlena said to herself.

Her father came through into the living room as Marlena rubbed her sleepy eyes. “Ah, my little reader has fallen asleep,” he said softly.
“Hi, Papa,” Marlena said. “How was your job?”

“Quite a big one. A real nasty clog,” he said. “It took me a while to fix it. But we can talk about that at some other time. Let’s get you to bed, shall we?”

Marlena was even too tired to walk to her bedroom. “Carry me, Papa?” she asked.

Gently, her father picked her up from the couch and carried Marlena to her room. Marlena barely had enough energy to climb into bed. As soon as her head hit the pillow, she drifted off to sleep.
The next day was a Saturday, and it was summer anyway, so Marlena didn’t have school. She woke at her regular time, eight o’clock in the morning. When she came down the hall to the kitchen, Ernie and her dad were already awake.

Her dad was cooking breakfast. “Hey, Chica,” he said with a smile, “you want some pancakes?”

“Sure, Papa,” Marlena said, rubbing the sleep from her eyes, “I’d love some pancakes.”

“Two pancakes coming up,” Marlena’s dad said as Marlena helped herself to orange juice from the refrigerator. The three Garcias sat down to breakfast. When they finished, Marlena’s dad turned to her.

“So, Marlena,” he asked, “what are your plans for the day?”

“Well, Papa,” Marlena said thoughtfully, “I think I’ll try to finish my book. I’ve gotten to a really exciting part, and I want to see what happens.”

“Ah, yes,” her father said. “Has young Jane met Mr. Rochester yet? Watch out for that guy. I’m not sure Jane should trust him.”

“You’ve read Jane Eyre?” Marlena asked.

“Indeed, I have,” her dad said. “Sometimes, at the shop, we have a lot of down time. That is, when we’re waiting for a call to come in or to go out on a job. I’ve read quite a bit.”

“Neat!” Marlena exclaimed. “I didn’t know plumbers did a lot of reading!”
“We certainly do,” her dad said. Then he turned to Ernie. “What about you, son? What are your plans? You have many schemes and tricks you’ll be getting into today?” he asked.

“I don’t have any ideas about what I’ll do today,” Ernie replied, absently moving a leftover piece of pancake around on his plate.

“Well,” their dad said, “I’ll tell you what you’ll do today. You’ll come with me to the shop. It’s about time you learned a little about plumbing.”

“Whatever,” Ernie said.

Marlena couldn’t believe what she was hearing. Her brother was invited to the shop, the supreme invitation, and he didn’t want to go. She didn’t understand. “But, Papa,” she asked, “when can I learn about plumbing?” She had always wondered about her dad’s work.

Turning to her, her dad said, “We’ll talk about that later.” Marlena didn’t think this was fair.
Marlena had tried to convince her dad to let her go with them, but she couldn’t. After a few minutes of arguing, Marlena’s father put his foot down. “I said ‘no,’ Marlena, and that’s that. Don’t you understand?” he asked.

Marlena was very upset, but she knew there was no arguing with her father. Choking back tears, she said, “Okay, Papa.” To make matters worse, her father gave Marlena a list of chores to do at home when her reading was done. He asked her to mop the floors, do some laundry, and clean out the cat box. It just didn’t seem fair.

When Ernie and her father left, Marlena sat down to finish her book. But she couldn’t concentrate because she was too upset. As soon as she opened her book, she started to cry. As she sat with her head in her hands, Professor Higgins walked up to the couch. He jumped into her lap and licked her face.

“It’s not fair,” she said to the cat while stroking its fur. “Why can’t I go with Papa to the shop? Why does Ernie get to go? It isn’t fair. I wonder why? Is it because I’m a girl? Can’t girls learn about plumbing too?” Professor Higgins didn’t understand Marlena’s questions, but he tried to make her feel better by purring. It helped a little bit, and Marlena soon felt better enough to read her book. Soon enough, Marlena found herself lost in the world of poor Jane Eyre and the dashing Mr. Rochester. Maybe it wasn’t as nice as going to the shop with her dad, but it would have to do. For now.
That day, Marlena read most of the rest of her book. Then she did the chores her dad had assigned her to do. Even though she was unhappy doing them, she swept and cleaned to the best of her ability. One thing Marlena had learned was if something was worth doing, it was worth doing well. Before she knew it, the cat box was as clean as it had ever been. The kitchen floor sparkled and shined in the daylight. The laundry, with its bright whites and vibrant colors, was washed, folded, and neatly put away.

When she finished her last chore, the doorbell rang. It was Chazz, her best friend from school. He had his skateboard in his arms. He was also carrying his knee pads, elbow pads, and his helmet. “Hi, Chazz, what’s up?” Marlena asked as she came to the door.

“Hey, Marlie,” said Chazz. He’d always called her Marlie, ever since they were kids. “I’m about to hit the skate park. You want to join me?” he asked.

Marlena looked around the kitchen and into the living room. Her chores were all done. Part of her wanted to sit with Professor Higgins and read her book. But another part of her really wanted to talk to someone. After some thought, Marlena replied, “Yeah, let’s do that. It’ll be fun. Just give me a second to get my board and safety gear.”

She ran into her room and grabbed her skateboard, pads, and helmet. When she returned to the door, Chazz was strapping on his helmet. “I just need to write a note to my dad, telling him where I’ll be,” she said. She grabbed a pen and paper from the kitchen drawer. She wrote, Dear Dad, I’m out at the skate park with Chazz. I’ll be back before dinner. Love, Marlena.

Marlena strapped on her helmet and slipped on her pads. “All right, Chazz,” she said as they bolted down the steps to the street, “let’s skate. Last one to the park is a rotten egg.” Chazz and Marlena raced off down the street on their skateboards.
Chazz and Marlena arrived at the skate park. The skate park had been built a few years earlier by the City Council. The idea was to give neighborhood kids a safe place to get together and have some fun. The skate park was built next to an existing empty swimming pool. Some of the best skateboarders liked to skate inside the pool. The city council had also built ramps and bumps for all skaters to use. There were also bleachers for people to sit and watch the skaters.

When Chazz and Marlena arrived, the skate park was really crowded. It often was on nice Saturday afternoons. Chazz and Marlena decided to sit and watch some of the skaters for a while. They thought maybe they’d skate when the crowd thinned out a bit. Chazz pulled out a small bag of peanuts from his pocket.

“Peanut?” he said, offering one to Marlena. Marlena took a peanut, thanked him, and cracked the shell between her teeth.

Marlena thought for a moment as she chewed. Then she said, “Hey, Chazz, your dad’s a mechanic. Has he ever let you go with him to the garage?”

Chazz laughed and spit out a peanut shell. “Hah!” he said. “No way! I’d just annoy him and get in the way. Why do you ask?”

Marlena said, “Well, I asked my dad if I could go with him to the plumbers’ shop today, and he said ‘no.’”

Chazz said, “Well, maybe he thinks you’re not quite old enough yet. Maybe he thinks you’re not ready to go with him. You think?”
Marlena replied, “Well, I thought about that, but that’s not the reason, because he asked Ernie to go with him. And Ernie’s a year younger than I am.”

“Huh,” Chazz said in thought, “that’s weird. Doesn’t make any sense.”

“Here’s what’s worse,” Marlena continued. “After he told me I couldn’t go to the shop, he gave me a lot of chores to do at the house. Do you know what I’m afraid of?” she asked.

“No, what?” Chazz responded.

Before Marlena could say what she was thinking, Chazz interrupted her. “Hey, look! A few kids just left! Let’s skate!” Marlena was happy for the diversion. She had some things to think about, but right now she was going to skate.
Skating helped Marlena avoid thinking about what had happened at home. She was confused and worried, but not to such a degree that she couldn’t enjoy skating with Chazz. “Hey, show me that trick you did last week!” Chazz called from the bottom of the empty swimming pool.

“You mean the axle stall?” Marlena called down into the pool.

“Yeah, the axle stall! That’s it!” he called back.

“Okay! Here goes!” Marlena called down. She grabbed her skateboard, put one foot on it, and pushed off down into the empty pool. She raced down the side of the pool into the bottom. She raced across the bottom of the pool, pumping with her knees for speed. She then raced up the other side of the empty pool. When she reached the top of the pool, she leaned on the back axle of the skateboard and did a half spin on the edge of the pool. Marlena then brought the front of the skateboard down so it was resting along the edge of the pool. Marlena finished the trick by leaning back on the skateboard again and turning so she could race back down the side of the pool. At the bottom, she pumped her knees again and raced back up the other side of the pool. At the top, she did another axle stall. She did the trick perfectly. Then she skated back down into the pool and stopped at the bottom.

“Wow!” exclaimed Chazz when Marlena rolled to a stop. “That was AWESOME!”

Marlena blushed. “It’s no big deal,” she said humbly.
Marlena worked with Chazz for a half-hour or so. She tried to teach him the axle stall trick. He couldn’t quite get it. Each time, he’d try to spin on the axle, and then he’d fall off the board. Luckily, he had knee pads on to cushion his fall.

“I just can’t quite get the hang of it,” Chazz complained to Marlena. “What am I doing wrong?”

Marlena patted his arm after he crashed one more time. “Practice and concentration. That’s all you need. Concentrate on the spin at the top of your run. Keep your eyes on the board. Do you think you want to try again?”

Chazz sighed. “Yeah, I guess I’ll try again,” he said. He climbed to the top of the pool and kicked off down into the pool one more time. He raced to the top of the far side, stopped on the axle, and spun around perfectly.

“You got it, Chazz!” Marlena shouted as he raced through the pool past her. Chazz rocketed to the top of the pool again and jumped off his board.

“I did it!” shouted Chazz.

“You sure did!” shouted Marlena.

Then someone else started clapping. Marlena climbed to the top of the empty pool. There stood a boy Chazz and Marlena’s age or maybe a year or two older. Marlena had never seen him before. The boy said, “That’s a good trick. You should thank your coach. My name is Monroe, but you can call me Manny.”
Marlena said, “Hi, I’m Marlena, and this is my friend Chazz.”

“What’s up?” said Chazz.

Manny said, “You’re quite a skater, Marlena. I’ve been watching you today.

Marlena blushed. “Really?” she said. “I’m not THAT good!”

“Don’t be so bashful,” said Manny. Chazz agreed.

Then Manny said, “Listen, I’ve got to get home, but the three of us should get together tomorrow and skate.”

Chazz said, “That’s cool with me.”

Marlena smiled. “Okay! I can do that.” And for a moment, she’d forgotten about what had happened at home.
Later that day, Marlena decided not to bring up her concerns at home with her father. She decided she’d just try to ignore what had happened earlier, when he’d left her at home to do chores instead of taking her with him and Ernie to the shop. Instead, she thought about skating with Chazz and Manny the next day. But then something happened that changed everything.

Marlena, Ernie, and their father had dinner together like they always did. Dad and Ernie cooked, and Marlena set the table. Usually, if they cooked, she’d do the dishes. They thought that seemed like a fair way to get things done. So, when dinner was over, Marlena started clearing the table. Her dad and Ernie went into the living room to watch a baseball game on television.

Although it may seem weird to some, Marlena actually didn’t mind doing the dishes. She felt a certain satisfaction when she could turn a huge pile of dirty dishes into an orderly stack of gleaming, clean plates and bowls. She’d done it so many times that she had become quite good at it. Sometimes she’d turn on the radio as she cleaned. Other times, she’d think about whatever book she was reading. This time, she thought about new skateboarding tricks she might try the next day with Chazz and Manny.

Then it happened. When she finished doing the dishes, she pulled the plug on the kitchen sink to drain the water. But the water wouldn’t
go down. She reached into the bottom of the sink to see if something were blocking the drain. She couldn’t see or feel anything. She knew what this meant. Somewhere in the pipes below the kitchen sink was a clog.

Now, some people have to call plumbers when their sinks get clogged. Other people know how to fix it themselves. Marlena didn’t know how to fix it. She had to call a plumber. But luckily, she lived with a plumber, a plumber who could fix it for free.

“Hey, Papa!” Marlena called from the kitchen into the living room. “The sink is clogged!”
Marlena’s dad came into the kitchen and surveyed the scene. Marlena stepped aside. First, her dad reached into the watery sink and felt around in the drain.

“Yeah, that’s a clogged drain,” he said, stepping back to look at the sink.

“Can you fix it?” Marlena asked.

“Can I fix it?” her dad said, laughing. “What do I do for a living? Sell shoes?” He laughed at his own joke. “Of course, Chica, I can fix it. Just let me get my tools. I left them in my truck.” He walked out the door and down the steps. When he came back in, he set his tool bag on the kitchen floor. To make sure she was out of the way, Marlena started walking away.

“Where do you think you’re going, Marlena?” her dad asked.

“What do you mean?” replied Marlena. “I’m going to let you work. I don’t want to be in the way.”

Her dad said. “Well, this could be a big job. I could probably use some assistance. Do you want to help me?”

Marlena couldn’t believe what she was hearing. “Really?” she said with wonder. “You want me to help you?”

“Sure,” he replied. “Do you think you CAN help me?”

“Sure I do!” she said.

“All right, let’s get started,” he said. He opened the cabinet below the sink and cleared out the cleaning products Marlena kept down there. That exposed the pipes under the sink. He lay down on his back, and stuck his head inside the cabinet. “Get down here, just like me,” her father said to Marlena, “and lie down right next to me, here.”
For about an hour, Marlena and her dad worked on the clogged sink. Marlena learned how to turn the water off. She learned how to remove the pipe and clean it out. She learned how to put the pipes back together. Her dad was a good teacher too. He would explain how to do something, and then Marlena would do it. If she started doing something incorrectly, he would gently stop her. “No, try it this way, Marlena,” he would say. Then she would do it right. As she worked, Marlena thought that her dad was teaching her plumbing just like she taught Chazz skateboarding. Marlena was really enjoying it.
The next morning, Marlena had all but forgotten that her dad hadn’t invited her to the shop the day before. She thought that being able to help him with their own sink and actually learning how to do some plumbing was much better.

Her brother, Ernie, said, “You’re really lucky. I got to go with Dad on a few jobs, but I could only watch. I didn’t get to help.”

“Some day, Sport, you will,” their dad reassured Ernie.

“I’m in no hurry,” Ernie said.

Their dad turned to Marlena. “How about you, Chica? I have to go to the shop again today. Do you want to come with me?”

Marlena jumped at the opportunity. “Sure I do!” she exclaimed. Then she remembered something. “Oh, wait,” she said with a sigh. “I can’t come with you. I promised Chazz and our new friend, Manny, I’d skate with them today. Manny said I was one of the best skaters he’d ever seen. I want to show off some of my tricks. Plus, I promised I’d go with them.” Marlena was really disappointed.

Her dad said, “Well, that’s too bad. I won’t be going back to the shop for the next couple of days. I’ve finally got a few days off, after working and being on call for eight days straight. So this is your last chance for a while. But I’m glad you’re going to stick to your promise. How about you, Ernie? You want to come with me again?”

Ernie said, “Sure, that sounds good. When are we leaving?”

“In about fifteen minutes,” Dad replied.

Marlena read Jane Eyre while her father and brother got ready to go, but she couldn’t concentrate. Marlena was disappointed that she couldn’t go with them. However, she was still excited that she was going to skate with Manny. Marlena just wished there were more hours in a day so that she could do more things. Oh well, she thought. You win some, you lose some.
A little later, the doorbell rang. It was Chazz. He had his skateboard, helmet, and pads with him. “Hey Marlie,” he said through the screen door. “You ready to skate?”

Marlena sighed. “Yeah, I guess so,” she said.

“What’s the problem?” Chazz asked, opening the door and coming into the kitchen. Marlena told him about the night before, about how she’d helped her dad fix the sink. She also told Chazz about how her dad had invited her to the shop, but that she couldn’t go.

“Jeez, that’s tough,” Chazz said. “It’s too bad there aren’t more hours in a day.”

“That’s precisely what I said,” Marlena said, smiling. She was glad Chazz understood.

“Well, no reason to mope around. Let’s skate!” Chazz said eagerly. Marlena agreed. She ran to get her board, pads, and helmet. Before she knew it, she and Chazz were at the skate park. The park usually wasn’t as crowded on Sundays as it was on Saturdays. There were only a few kids skating around.

As Marlena and Chazz tightened their pads, they watched some of the kids. “Hey, is that Manny?” asked Chazz, pointing to a kid who was skating really well in the empty pool. The kid was skating so fast that he was shooting into the air every time he hit the top of the pool’s wall. He was doing flips, spins, and turns unlike anything Marlena had ever seen.

“Yeah, that is Manny,” said Marlena. “Hey, Manny,” she called over to him. Manny stopped at the bottom of the pool and then climbed out.
“Hey, Marlena, Chazz,” Manny said, “you guys ready to skate?”

Marlena said, “Yeah, can you teach me some of those big air tricks?”

“Sure thing,” Manny said. “If you’re as good as it seemed you were yesterday, you’re ready for big air tricks.”

Manny worked with Chazz and Marlena for a couple of hours. It took a while, but soon Marlena was pulling off big air tricks just like Manny. Chazz was having a few more problems and kept slamming into the ground.

“I think I’ll just stick with the axle stall for now,” Chazz said laughing, remembering the trick he’d perfected the day before.

“Good idea,” said Manny. The three skaters laughed.
Chapter 14

After skating for a while, Manny suggested that they all take a break. “You guys want to get some lemonade? It’s my treat.” Manny said, pointing at the lemonade stand across the street from the skate park.

“Yeah, that’s a good idea,” Chazz said, and Marlena agreed.

“Okay,” Manny continued, “I’ll run and get ’em, and you guys just grab a seat on the bleachers.”

Marlena and Chazz sat down. Soon Manny returned with three ice-cold lemonades.

“Man, that hits the spot,” said Marlena.

“No doubt,” said Chazz. “I was thirsty.”

Then Manny said, “You know, I was thinking. There’s a skateboarding competition next weekend. And it’s a team competition. Each team needs three skaters. I think we should enter as a team, the three of us. What do you think?”

Chazz said, “I think that’s a great idea. I mean, I’m not as good as you two, but I think we could do pretty well.”

“Good,” said Manny. “What about you, Marlena?” he asked, turning to Marlena.

Marlena thought for a minute. “Gee, I don’t know. My dad’s been teaching me how to do plumbing, plus I’ve been trying to do a lot of reading. I’m not sure I have the time.”

“Aw, c’mon, Marlena,” Chazz pleaded.

Marlena thought about it for a while. Then she said, “Okay, I’ll tell you what. Let me talk to my dad about it. There are some things I want to talk to him about anyway. Let’s meet here at noon tomorrow, and we’ll talk again then. Okay?”

The boys agreed that was okay. Marlena said good-bye and skated home to talk to her dad.
When Marlena got home, her dad was at the kitchen table. He was reading the Sunday paper. “Hey, Papa,” Marlena said as she put down her board and took off her helmet and pads. “Can I talk to you about a couple of things?”

Her dad folded the paper and gestured for her to sit next to him. “Sure thing, Marlena,” he said. “Have a seat.” Marlena sat down. “What’s on your mind?” Marlena didn’t know where to start. Her dad could tell that she was having trouble. “Marlena,” he continued seriously, “you can talk to me about anything.”

Marlena took a deep breath. She was uncomfortable talking about the first thing, but she knew she needed to. Okay, she thought to herself, here goes. “Well, Papa,” she said, “I have to say I was offended when you and Ernie went to the shop the other day, and I wasn’t invited.”

Her dad looked at her and said, “Okay, tell me more.”

Marlena continued, “I was afraid…I was worried…well, I was afraid that you didn’t invite me because I’m a girl.”

A look unlike one she’d ever seen came over her dad’s face. He wiped his brow, took a deep breath, and then spoke. “I was afraid of that, Chica,” he said, “and that’s partly true. But I didn’t mean it, not at all,” he said. Then he continued. “In fact, that was why I insisted that you help me with the clogged sink. That was my way of telling you that I didn’t mean to hurt your feelings.”

Marlena felt a huge sense of relief. She said, “So you don’t think that plumbing is just work for boys, right?”
Her dad said, “That’s right. You see, Marlena, I come from an old-fashioned family. Your grandfather, my Papa, worked his whole life. Your grandmother, my Mama, stayed at home and took care of the housework. Maybe part of me just thought that was how things were supposed to be. But I know that’s not right. I’ve tried to raise you and Ernie to believe you can do anything you set your mind to. That’s why I encourage your reading and also your skateboarding. I know you’re great at both. If my old-fashioned ways get in the way sometimes, I’ll try to work harder. How does that sound?” he said.

Marlena thought this was the best conversation she’d ever had with her dad. She felt like they both understood each other. “That makes sense, Papa,” she said. There was one more thing she needed to talk to her dad about. “There’s one more thing,” she said. “I need some advice.”

“Shoot,” he said.

“Well, I really enjoy reading. And I really enjoy skateboarding. But I also like helping you with the plumbing. Sometimes I feel that there’s not enough time in the day to do all the things that I want to do. And plus, there’s a skateboarding competition next week. I really want to join with Manny and Chazz, but I’m not sure I have time.”

Her dad thought for a while. Then he said, “Ah, the problem of time management. But I have an idea.”
Marlena’s father suggested that Marlena make herself a schedule for the week, but Marlena didn’t know where to start. “Okay,” her dad said, “start with priorities. What’s most important to you this week?”

Marlena said, “Well, I suppose that I really need to practice for the skateboard competition, since it’s only six days away.”

Her dad said, “Okay, then how about planning to skateboard every afternoon.” On a piece of paper, he drew a simple calendar for the week, with slots for all the hours of the day. At the top, he wrote “Marlena’s Schedule for the Week.” From noon until four o’clock each day, he wrote “skateboarding practice.” Then he said, “Okay, so now you’ve scheduled skateboarding practice for every afternoon.”

“But what about learning plumbing?” she asked.

Her dad said, “I’ve figured that out too. Since you’ll be so busy skateboarding, you can’t really come with me to the shop. But there are a few plumbing projects around the house that I’ve wanted to get started on. You can help me with those projects. Let’s plan on Tuesday and Thursday evenings.” In the evening hour slots for those two days, Marlena’s dad wrote, “plumbing projects.”

“This is pretty neat,” Marlena said as she looked at the schedule. She’d never made a schedule for herself before.

“It IS pretty neat,” her dad said. “I make one for myself each week. But back to yours. We still have one more thing to schedule.”

“Oh, yeah,” Marlena said, “my reading.”
Her dad looked over the schedule. “Well, you still have Monday, Wednesday, and Friday nights free. How about we schedule your reading for those evenings?”

“Sounds good,” Marlena said. Her dad wrote “reading time” in those time slots.

Marlena had one more question. “But what about my chores, like the laundry and cleaning?”

Her dad laughed. “I’ll tell you what,” he said. “You’ve got a busy schedule. So, I’ll work with your brother to make a schedule. He can help out with the chores, as can I. That’ll make things easier for you. How does that sound?”

Marlena thought that sounded pretty good indeed.
When Marlena woke on Monday morning, she was eager to try her new schedule. The way things were set up, she knew she'd have an abundance of time to do everything she wanted to do. That morning, her father asked her to wash the windows while her brother cleaned the front landing.

“It shouldn’t take you very long, kids,” Marlena’s father said.

“That’s no problem,” Marlena said. Ernie agreed.

When Marlena finished washing the windows, she had plenty of time to meet Chazz and Manny at the skate park. She suited up and skated away. Chazz and Manny arrived at just about the same time.

Manny said, “So what did you decide? Shall we join the competition?”

Marlena explained all about the schedule she and her father had set up. She told the boys how excited she was to be able to get everything done on time.

Chazz said, “Yeah, my mom and I make one of those schedules for me every week. As long as you follow the schedule, more or less, you never feel that you’re missing anything.”

“I hope you’re right,” Marlena said.

Then Manny interrupted. Pointing across the skate park, he said, “I’m going to go and sign us up for the competition on the board over there.”

The kids practiced new and old tricks all afternoon. Chazz made the most progress, getting better and better as he practiced.
“You’re doing really well, Chazz,” said Manny.

“Thanks,” said Chazz with a smile, “we all are. I think we’re going to do really well next weekend.”

“I think we are too,” said Marlena. Things were going really well. Marlena thought to herself that her conversation with her father was the best thing she’d ever done. Later that day, she went home for dinner. She enjoyed dinner, and then she quickly did the dishes.

“You mind if I read for a while?” she asked her father afterward.

“That’s what the schedule says,” her dad said with a smile.

“Yes it does,” she replied.
Throughout the week, Marlena followed her schedule. She practiced skating with the boys every afternoon. In the evening, she read or helped her dad with the plumbing. On Tuesday evening, her dad told her about the plumbing project.

“We’re going to replace the pipes and faucet in the bathroom sink,” he told her. “That’s a basic plumbing skill, and we should be able to knock it out in one or two evenings. They worked Tuesday and Thursday nights. Her dad explained everything to her, and Marlena helped him with every step. Her dad was right; they finished the project by eight o’clock on Thursday.

“How does it feel to finish a big project?” her dad asked.

Marlena turned on the water in the new sink. “It feels pretty darn good, Papa,” she said with a smile.

Then Friday evening came around. Marlena knew she could also finish Jane Eyre. And finish it she did. She felt as though she’d completed a lot during the week. She’d nearly perfected her skateboarding skills. She’d helped replace pipes and a faucet in a sink. She’d also made time to finish her book. She was so confident that she went to bed Friday not even nervous about the next day’s skateboard competition.

When Marlena woke up Saturday morning, her dad was waiting with breakfast. “Are you ready for the competition?” he asked her.

“I am, Papa,” she said. “Thanks so much for teaching me about schedules.”

“No thanks needed,” he said. Then he said, “Now remember, it doesn’t matter if you and the boys win today. What matters is that you do your best and enjoy yourself.”
“I know, Papa,” Marlena said with a smile.

“Well, I have one more scheduling surprise,” her dad said.

“Yeah? What’s that?” she asked.

“I’ve changed my schedule around. I’ll be in the stands watching you today.” Marlena was so excited. She knew she and the boys would do well. It really didn’t matter if she won or lost. What mattered was that she had fun. Still, Marlena was confident. In just a week, she had gone from being a young girl with not enough time for her favorite things to becoming a successful skating, reading plumber’s kid.

“Let’s go, Dad,” she said.

“Okay, Chica, let’s go.”
Zebras

1. Looking for a zebra?
In the wild, zebras roam the length of eastern Africa—from the northern country of Ethiopia to the southernmost country of South Africa. They live on the grassy plains, in the woods, and even on mountainsides.

2. Yipes, stripes!
Zebras belong to the same family of hoofed animals as horses and donkeys, but unlike these animals, zebras are striped. Why? No one knows. It’s a mystery. There are three different types of zebras, each with its own pattern of stripes. In fact, not only does each type of zebra have distinctive stripes, but if you look closely, you’ll see that each zebra has a different striping pattern.

3. Eat your greens.
Like sheep, cows, and horses, zebras are grazers. This means they eat grass, along with a few leaves and twigs.

4. A Zebra’s Life
Zebras are very sociable animals that usually live in small family groups made up of a male (stallion), one or more females (mares), and their babies (foals). The size of the family depends on how much food and water is available. If attacked, males defend their families by kicking and biting. At night, one family member stays awake to watch for predators. Zebra families can come together to form a larger group called a herd, but within the herd, each family sticks together. Zebra herds often share their living area with other animals, such as gazelles and antelopes. If the food runs out in one area, zebras will migrate hundreds of miles to search for a new food source. When zebras

These are Burchell’s zebras, which are also called plains zebras. They have broad stripes that range in color from black to dark brown on a white or light tan background.
travel, one of the older females leads the family to the new area, making sure that they don’t wander too far from water.

5. Zebra Foals
Zebras can stand on their own within fifteen minutes of birth and run within a day. Their mothers feed them until they are about one year old and they begin grazing on their own. Although zebra mothers try to protect their babies, many zebra foals are killed by lions and hyenas.

6. Endangered?
The Burchell’s zebra is the only type of zebra that is not endangered—although their numbers are decreasing in the wild. The zebra’s greatest danger is from humans, who hunt them for sport and for their beautiful striped hides. Human settlements also reduce the zebras’ habitats, or living areas.
1. Where are the rhinos?

The rhinoceros lives in Africa and Asia. The rhinos at the zoo are white rhinos from Africa. You’re probably thinking that these rhinos look gray not white, and you’re right! But their name comes from the Afrikaans (an African language) word *weit*, which means wide and refers to the size of the rhino’s mouth, rather than to its skin color.

Rhinoceroses are huge—up to 6 feet tall, 15 feet long, and weighing as much as 8,000 pounds! They also have a large, curved horn, which they use to protect themselves against lions, tigers, and hyenas and to fight with one another for land and females.

2. Ancestors

Rhinoceroses have been on earth for about 34 million years! A relative of the modern rhino first appeared just after the age of the dinosaurs. Rhinolike animals once roamed Europe, Africa, and even North America. Many were covered with thick fur and can still be seen in the cave paintings left by early humans.

3. Don’t bother me, I’m eating.

Even though they look scary, rhinos are herbivores, meaning that they only eat plants. White rhinos prefer grass. Other rhinos eat the leaves of trees or bushes.

4. In fact, don’t bother me at all.

Rhinoceroses like to live alone. Both male and female rhinos establish territories—land that they consider theirs alone. Males mark and defend their territories to keep other rhinos away. They will even attack cars and trucks that drive through their territory.

Even after male and female rhinos mate, they go their separate ways. Female rhinos give birth about once every two or three years. The babies, called calves, stay with their mother until the next baby is born.
**5. Endangered?**

All species, or kinds, of rhinos are endangered from loss of habitat and hunting. The rhino’s horn, which is ground up and used as medicine, is especially prized. The horns are also used as handles for knives. Sometimes poachers will kill the animal and walk off with nothing but its horn. Unless they are protected, the rhinoceros, which has lived on Earth for millions of years, could die off and become extinct.
1. Standing Out in the Crowd
Giraffes are the world’s tallest mammals. Adult males, called bulls, can be up to 19 feet tall and weigh up to 3,000 pounds. Adult females, or cows, can reach 16 feet and weigh up to 2,600 pounds.

It’s easy to spot a giraffe because of its long neck and patchy coat. In fact, each giraffe has its own, uniquely shaped patches—no two giraffes look exactly alike!

2. Home Turf
Giraffes live on the grassy plains of central, eastern, and southern Africa.

3. Eat your leaves.
Giraffes eat leaves—up to 75 pounds of leaves every day. Their height, and their very long—18-inch—tongue enable them to reach the tops of small trees and pluck the best leaves. Females spend more than half their day eating, males slightly less. If they need to, giraffes can go for several days without water.

4. Please, share my turf.
Giraffes are sociable. They live together peaceably with other animals. Giraffes live in loose herds that can be made up of all males, all females, or a mix of males and females, old and young. Sometimes they travel alone. Even in a herd, giraffes scatter themselves around the grassy plains looking for food. They rarely cluster together unless they’re attracted to the same tree or are nervous about nearby lions. Because they’re so tall and have very good eyesight, giraffes can keep each other in sight, even over long distances.

5. Baby Giraffes
A giraffe mother carefully guards her baby for the first week of its life. If a calf gets lost, its mother bellows for it. When a mother goes off to look for food or water, she often leaves her baby in the care of another female.

Female giraffes spend over half their day eating, males slightly less.
It's common to see an adult female caring for several babies at a time in a sort of nursery. This care is necessary because baby giraffes cannot defend themselves, and as many as 75% of them are killed by lions or hyenas in the first months of life. Giraffes that survive to reach adulthood can live about twenty-five years in the wild and even longer in a zoo.

6. Endangered?

As adults, giraffes have no regular predators. They are threatened by hunters, who kill them for their meat or coat, and from loss of habitat due to increased human settlement. The population of giraffes in the wild is stable but at its lowest level ever.
1. Where Warthogs Live
Warthogs live in the warm, dry savannahs (grasslands) of Africa. They do not live in the desert, the mountains, or in rainforests. They appear throughout Africa, south of the Sahara Desert, from the west to the east coasts.

2. Not a Pretty Picture
Warthogs are piglike animals. They can be brown or black. Like pigs, they have a snout and hoofed feet. However, a warthog’s snout is much longer than a pig’s, and a warthog also has two curved tusks on the front of its face. The males are much larger than the females. A female warthog weighs up to 150 pounds, while a male warthog weighs up to 220 pounds. Their name comes from the wartlike bumps on their faces.

3. Moo?
Like cows, warthogs are grazing animals. They eat short grasses, and they dig in the ground for roots and bulbs when grass isn’t available.

4. Working with Others
Warthogs get along well with many other animals. For example, warthogs let birds sit on their bodies and eat bugs off their skin. This helps the warthog get rid of annoying bugs and provides the birds with food.

Warthogs also benefit from the work of burrowing animals, such as aardvarks, which dig tunnels and small dens in the ground. Though warthogs are also able to dig, they prefer to live in burrows dug by aardvarks. These burrows give them a safe place to sleep at night. However, lions sometimes stay outside the burrows and wait for the warthogs to come out. The warthogs are too clever for that trick though. They back into the burrow at night so their head is facing the outside. This allows them to use their tusks for protection. Then, in the mornings, they run out of the burrows at top speed, which is an amazing 34 miles per hour, before the lion can catch them!

In the wild, warthogs live about eighteen years.
5. **Young Warthogs**

Warthogs have two to five baby warthogs at a time. Since warthog females only raise one litter of babies at a time, she chases her last litter away when she is ready to give birth to the next. Warthogs become self-sufficient very early in life. They begin grazing at two months old and stop getting milk from their mother entirely at four months old.

6. **Endangered?**

Warthogs are not endangered at all. They are able to survive with very little water, and their preferred habitat, or living area, is plentiful. Because warthogs do not bother humans nor are they considered valuable, they are seldom hunted.
1. Habitat
Chimpanzees are native to the forests and grasslands of Central and West Africa. There are two types of chimpanzees: common chimpanzees, such as those at our zoo, and their smaller relatives called bonobos.

2. Great Apes
Chimpanzees, gorillas, and orangutans are all part of the great ape group. Fully grown chimpanzee males weigh 85 to 175 pounds, females from 65 to 130 pounds. They are covered with thick, dark fur except on their faces, fingers, toes, palms of their hands, and soles of their feet.

3. The Wild Life
Chimpanzees live in groups, called troops, consisting of twenty to about 100 individuals, but they travel most of the time in small groups. They spend time both on the ground and in the trees, using their long arms to climb and swing from the branches. They usually sleep in nests that they make in the trees. On the ground, chimps usually walk bent over, using the soles of their feet and their knuckles to walk, but they can also walk upright, like humans, for short distances.

4. Eat your veggies.
In the wild, chimps mostly eat fruit, leaves, nuts, and seeds. They also eat insects, and they will hunt smaller animals, such as monkeys, for meat.

5. A Lot Like Us
Chimpanzees have many humanlike characteristics. Like us, they have opposable thumbs, which means that they can touch their thumbs to their other fingers, allowing them to get a good grip on things. Chimpanzees make and use tools. For example, they use twigs to pull termites out of their holes. They also use rocks to crack open nuts, and they squeeze drinking water from leaves.

Chimpanzees play, and they show care and affection for one another by grooming one another and hugging. But they can also be aggressive and mean—especially males who are trying
to be the boss of a group. Chimpanzees use different facial expressions to show their feelings. They also speak to one another, using more than thirty different vocal sounds. In captivity, chimps have been taught how to communicate with humans through sign language. As they age, chimps even turn gray and go bald!

6. Baby Chimps

A female chimpanzee has one baby at a time. A baby chimp stays with its mother until it is about three years old, but young chimpanzees often maintain close relationships with their mothers for years. In the wild, chimps can live up to fifty years. In captivity, they can live even longer.

Endangered?

Sadly, chimpanzees—like all great apes—are an endangered species. There are only about 15,000–23,000 chimps left in the wild, and their numbers decrease every year due to loss of habitat, as human populations grow and need more land for farming, and disease—including illnesses that chimps get from humans. Chimps are also killed for their meat and captured to sell as pets.
1. Tracking the Polar Bear

Polar bears live in the far north at the Arctic Circle. They are at home on the ice, on land, and in the water. Strong swimmers, polar bears can stay in the water for hours at a time. They use their front paws to paddle and their hind legs and feet to steer.

Polar bears travel around in search of food and shelter within a home territory that can be up to 135,000 square miles in size.

2. How You'll Know When You Find One

Polar bears are the largest land carnivore, which means meat eater. Males (boars) are 8 to 9 feet long and can weigh over 650 pounds. Females (sows) are 6 to 8 feet long and weigh up to 250 pounds. The largest polar bear ever recorded weighed in at 2,200 pounds!

The bear’s twelve-inch-wide paws act like snowshoes, evenly spreading its weight out so it doesn’t fall through the ice.

To survive in the Arctic, where winter temperatures average 29 degrees below zero, the polar bear has a coat that’s 1 ½ inches thick. It’s made of a layer of wooly underhair and stiff, shiny, clear guard hair that reflects sunlight. This makes the bear look white. The coat is oily and water repellent so the bear can easily shake off water and ice after swimming. The bears molt, or shed, their coats and grow new ones once a year.

3. Not a Picky Eater

In the wild, polar bears mainly eat seals, but they will also dine on walrus, some whales, sea birds, fish, ducks, eggs, reindeer, berries, vegetation, and human garbage. They will even eat humans if they are nearby and no other food is available.

Polar bears can smell a seal up to twenty miles away. They hunt in several ways. One is called still hunting. This is when the bear sits perfectly still beside a hole in the ice, sometimes for hours at a time. When a seal appears, the bear flips it onto the ice and kills it. On land, polar bears stalk their prey and then suddenly charge it at a speed of up to twenty-five miles per hour.
4. A Polar Bear's Day

When they're not hunting, polar bears mainly rest or sleep. In the summer, they dig a pit in the ground to lie in. In the winter, they dig dens out of the snow or use a natural shelter, such as a small cave, to keep warm.

They live mostly alone. Only mating pairs and mothers and cubs travel together.

5. Baby Bears

Females usually give birth to two cubs at a time. The cubs are born between November and January in a sheltered den where they stay with their mother until spring. At birth, polar bear cubs are hairless, helpless, weigh only 16 to 24 ounces and are just 12 inches long. But they grow quickly: they grow fur and begin walking at about two months. By the time they come out of the den, the cubs weigh 22 to 33 pounds and will playfully chase and tackle each other.

A mother bear nurses and protects her young, often touching and grooming them. She also leads them to the ice—sometimes by carrying them on her back. Cubs learn how to hunt by watching their moms, but they don’t become good at it until they are at least two years old.

Cubs stay with their mothers for thirty months. By then, the mother bear is ready to give birth again, so she chases the cubs away to fend for themselves. Sadly, some cubs are eaten by wolves or other polar bears, or they die of starvation because they’re not skilled enough at finding food.

6. Endangered?

In the wild, polar bears live for twenty to thirty years. They live even longer in zoos. Because the United States and Canada have passed laws to limit polar bear hunting, and Norway and Russia have stopped polar bear hunting altogether, polar bear numbers have increased. But there are still environmental dangers such as oil spills, which damage the bear’s fur so it loses protection from the cold and poisons its food sources. Young bears and old, weak bears also sometimes die of starvation.

So, while they are not endangered, polar bears are considered vulnerable, or at risk.
What is a cheetah?
A cheetah is a very large cat, similar to the leopard, lion, and jaguar. Cheetahs are sometimes mistaken for leopards. Cheetahs are similar in color, tan or orange, with black spots. But one trait that makes the cheetah’s appearance unique is the teardrop-shaped black lines that run from the corner of its eyes to its mouth. Its body is much leaner and it has longer legs than other cats too. It also has claws that are not retractable, unlike most other cats.

Another factor that makes the cheetah very different from the other cats is its speed. It is the fastest land animal alive. It can run up to speeds of 70 miles an hour! But it can only maintain this speed for up to 600 yards. After that the cheetah is vulnerable because it is exhausted. Often this is when the cheetah is attacked or its food is stolen.

Where do cheetahs live?
Cheetahs live in eastern and southwestern parts of Africa. They prefer to live in open land where they can utilize their speed. Like the leopard, cheetahs like to live alone. They do not live in packs like lions. They even hunt alone and don’t share their food with other cheetahs. The only exception to this rule is when mothers share their prey with cubs. Cubs can be seen with their mothers for up to a year, and then they leave to live on their own. Males are seen with females only during mating season.

What do cheetahs eat?
Cheetahs hunt small prey such as young gazelles, wildebeest calves, or other small mammals and birds. Cheetahs use their speed to catch prey. They prefer to hunt during the day, usually feeding in early morning.

Are cheetahs endangered?
Cheetahs are endangered due to a lack of natural habitat and prey and because cheetah cubs often die from disease before they are three months old. Many ranchers also hunt cheetahs because cheetahs are a threat to their livestock. All these factors combined make the cheetahs’ future uncertain.
HIPPOS

What is a hippopotamus?
A hippopotamus, often called a hippo, is the third-largest living land mammal. In fact, it can weigh nearly a ton! The hippo has tough, gray skin with a large, round body and rather short legs. It has four thick webbed toes that help it paddle through water and maintain its balance on land.

Where do hippos live?
Hippos live in Africa on the east and west coasts. They live in herds of up to fifteen members. The group has a leader, called a bull, who is usually the oldest and strongest male in the group.

Hippos live very close to bodies of water such as rivers, lakes, and swamps. Water is vital to hippos because they do not have sweat glands. They rely on water to keep them cool in the hot climate. In fact, hippos spend almost the entire day submerged in water. After the sun goes down, they leave the water to graze on land.

What do hippos eat?
Hippos are plant eaters. They eat mostly grass and can eat up to 150 pounds of grass in one day! Their inactive lifestyle means that they do not need a lot of other types of food for nutrients. They forage for up to five hours a night, usually within a few miles of water.

It’s surprising that hippos have very large mouths and teeth, since they eat mainly grass. But hippos do have powerful jaws that they use when fighting for territory or precious space in a small pool of water.

Are hippos endangered?
Hippos are not on the endangered-species list; however, they are fewer in number than they were many years ago. This is mostly due to hunters who kill hippos for their meat and to preserve land. Many farmers feel that hippos destroy land because hippos use the same paths when they go out to forage, creating deep ruts in the land.
1. Where to find an Okapi
(Good luck!)

In the wild, okapi live in only one place: the Ituri forest in the Democratic Republic of the Congo in central Africa. Okapi need to live in a thick rainforest, though they do sometimes go out into more open areas. Okapi can be very hard to find. Their coloring and size allow them to blend into the forest. And, since they like to be alone, they stay away from other animals, even other okapi.

In fact, okapi were one of the last large mammals to be discovered—in 1900.

2. Recognizing an Okapi
(You’ll know when you see one.)

Imagine an animal with the legs of a zebra, the body of a horse, the head of a giraffe, and a 14-inch-long tongue. Sounds like something you might find in a fairy tale or a fantasy book, doesn’t it? Well, that’s what an okapi looks like. Okapi are between 5 and 6 feet tall, and they weigh between 465 and 550 pounds. You can tell a male okapi from a female okapi by looking at their heads. The male okapi has small horns; the female has no horns at all.

An okapi’s legs have black and white stripes, like a zebra, while its body is very dark brown or black. Their giraffelike necks and faces (though their necks are much shorter than a giraffe’s) are lighter in color than their bodies, though the exact color varies greatly.

Okapi are hoofed mammals. Originally, scientists thought okapi were related to horses, but it is now known that the okapi’s closest relative is the giraffe. In fact, okapi are the only relatives of giraffes.

Fun fact: Okapi are the only mammals that can clean their ears with their tongues.

3. Tree = Yum

Okapi are herbivores, meaning that they don’t eat any meat at all. They use their long, long tongues to strip bark, twigs, leaves, and berries off the lower branches of trees in the forest. They also eat clay from riverbanks to get extra minerals.
4. What Okapi Do

Okapi lead fairly quiet lives. They are usually active in the daytime. However, they have to be alert at night, too, because leopards, which love to eat okapi, are nocturnal (night hunters). Okapi are solitary animals, tending to live either alone or, for young okapi, with a small family group. In the wild, okapi live for about thirty years.

5. Mini-Okapi

Okapi mothers have only one child per birth, and a baby okapi weighs about 35 pounds. Okapi give birth in the thickest parts of the forest to keep the babies safe. Unlike other mammals, okapi do not imprint to their mothers. In other words, okapi young don’t seem to have any sort of special relationship with their mothers. In fact, young okapi have been seen nursing from more than one female.

6. Endangered?

The okapi is an endangered species. It is difficult to estimate how many okapi are living in the wild because of the thick forests in which they live. Okapi are not threatened by hunters. The biggest threat to okapi is a loss of forested land.
1. Where does a 10,000-pound African elephant sleep? Anywhere it wants!

African elephants have many different habitats. They live in countries south of the Sahara Desert, in grasslands (savannah), forests, and scrub and semi-deserts. However, their habitat has been greatly reduced by humans, so many elephants are now limited to living in wildlife preserves.

2. World’s Longest Nose

African elephants are the world’s largest land animals. They are 10 to 13 feet tall and 19 to 24 feet long (not including a 4-foot-long tail). They weigh between 7 and 14 thousand pounds!

Besides its size, you can tell an elephant by its ears, tusks, and trunk. Elephants use their large ears as a fan to keep them cool and keep insects away. Their ears are much more sensitive than those of a human, and they can hear sounds over much greater distances. They use this ability to communicate with one another.

An elephant’s tusks are really teeth that have grown outside the mouth. The elephants use their tusks to uproot plants to eat and to dig holes to find water. The tusks are made of ivory, which is very precious and rare. Because of this, African elephants were once hunted for their ivory tusks.

Elephants’ trunks are long extensions of their noses and upper lips. They draw water into the trunk to then spray either in their mouths for a drink or on themselves for a shower. The tip of the trunk has two knobs that act like fingers to help the elephant bring food into its mouth.

3. Big Eaters

African elephants are herbivores, or plant eaters. They will eat almost any plant, fruit, or vegetable that they can find, and they do! Elephants need to eat 300 to 600 pounds of food per day. Wild African elephants sometimes uproot whole trees just to eat their leaves and inner pulp. African elephants drink between thirty and fifty gallons of water per day.
African Elephants

4. Families stick together.
African elephants live in family groups called herds. A herd consists of ten or so related mothers and their children under the leadership of one female, usually the oldest and largest one. Once they mature, the male children are sent away to live in separate bachelor herds, and males only join the females for mating. Related herds tend to stay close together, and, in times of danger, herds can come together to form clans of 200 or more elephants.

African elephants need to keep cool in the hot African climate and to protect their sensitive skin from the sun. To keep cool, they try to take a bath every day. This also washes off any annoying insects. Then, afterwards, they roll in the dirt to provide a layer of protection from the sun and insects.

Because elephants are so large, they have very few predators besides poachers—human hunters who kill elephants for their ivory. Sometimes lions and tigers will try to attack baby elephants, which are smaller and less able to protect themselves. When predators are near, the herd will form a circle around the younger elephants to protect them. The older elephants will also trumpet to scare the predators away. African elephants live for about seventy years in the wild.

5. Not-So-Little “Little” Elephants
Female elephants usually give birth to just one calf, or baby, at a time. Elephant calves weigh between 175 and 250 pounds at birth.

6. Endangered?
African elephants were once considered endangered because ivory poachers were killing so many of them. However, stricter ivory-control laws are now in effect, and African elephants are now only classified as threatened. Humans remain the biggest threat to African elephants by moving into their habitat. To protect wild African elephants, humans are going to have to find a way to peacefully co-exist with them.
1. Where to Find an African Penguin

African penguins are found along the coastline and on the small, rocky islands of southern Africa. Even though southern Africa has the coldest temperatures on the continent (because of the closeness of the South Pole), the temperatures are still much higher than that of other penguin habitats. Because of this, African penguins spend a lot of time in the cold water. When they do have to rest on land, they stay sheltered in the shade.

2. What African Penguins Look Like

African penguins have black backs and white chests, except for a black band that goes across their upper chests. Their faces are ringed with white, while the area around their eyes and beaks is black. The shape of their bodies is very streamlined, which makes them very good swimmers.

3. Go fish!

African penguins live almost entirely on small fish. They are very effective predators in the water, able to swim at speeds of up to 12 miles per hour.

4. Everyone in the water!

When African penguins aren’t sleeping or eating, they like to spend time in the water. They are very skilled divers. A usual dive is about 100 feet, but they have been seen diving as deep as 420 feet. African penguins walk very slowly on land, so they have to be very careful not to get eaten by their predators. For this reason, penguins try to only come on land to rest and to mate. When they do come on land, they generally stick to islands to avoid mainland predators like leopards. To escape the heat, African penguins sleep at night, are most active at dawn and at dusk, and stay in the water during the hottest parts of the day. African penguins only fear one predator in the water, the Cape fur seal.

Although they are birds, penguins can’t fly. They walk on land, and they are very strong swimmers.
5. **Valuable Nest Eggs**
African penguin babies are called chicks. Young African penguins are extremely vulnerable to predators, especially sea birds that eat the eggs and the young chicks. For this reason, and also as a protection from the heat, African penguins lay their eggs in sheltered burrows, where the chicks stay when their parents hunt for food.

6. **Endangered?**
Since 1900, African penguins have declined in number greatly, about 90 percent. Though not yet considered endangered, the African penguin is listed as a vulnerable species.
BECOME A JUNIOR HISTORIAN!

STUDYING ANCIENT GREECE AND ROME

By Kathleen Collins
INTRODUCTION

Take a look around your town or city. What do you see? You might see things that are inspired by ancient civilizations. Do you see any buildings with tall columns, statues, or domed roofs? Do you see buildings that host sporting events for thousands of spectators? Have you ever seen a play or been to a movie theater? You probably answered, “Yes!” to some of these questions. If so, you have encountered ancient Greek and Roman influences in the modern world.
How do we know these ideas came from the ancient Greeks and Romans? Historians have studied these two cultures for centuries. Historians study how people in ancient civilizations lived. They share their findings with us through books, magazine articles, museum exhibits, the Internet, and educational programs on television. What we learn influences our ideas about everything, from sculptures or buildings to modern sports, games, and other forms of entertainment. Let’s explore ancient Greece and Rome to see how these ancient civilizations continue to influence our lives today.

THE HISTORIAN’S KNAPSACK

Being a historian takes a lot of reading and studying, and sometimes it requires you to get a little dirty. Archaeologists are historians who work outside looking for ancient sites, texts, art, or buildings that other historians can study to put together a civilization’s story. Other historians may study sports and games, languages, clothing, or weapons from ancient civilizations. Let’s explore some of the tools these people use so we can become junior historians.
BOOKS AND CULTURAL TEXTS

A good historian learns by reading many different kinds of texts. Historians may read books written by other historians who researched a subject in the past. They may read the works of ancient historians and eyewitnesses who recorded events as they happened long ago. Literature, such as the epic poems of Greece’s Homer and Rome’s Virgil, give historians an idea about a civilization’s culture and what people enjoyed for entertainment. Philosophical texts, such as those by Greece’s Plato and Rome’s Cicero, tell historians what thoughts and ideas were important to a civilization. Texts, such as those by the Greek Hesiod and Roman Ovid, that provide background on mythology and religious practices provide historians with a lot of clues about the customs and history of an ancient civilization. But historians can’t read literature or any other texts and just accept them as truth. They have to ask, “What is fact, and what is fiction in this text?” or “Did this writer dislike a group of people?” Historians have to interpret a text and use context to figure out whether an author is stating facts or expressing opinions.
ARCHITECTURE GUIDES

Some historians study the architecture of ancient civilizations by studying ancient buildings, if they are still standing, building ruins, or plans and drawings that others have made of the buildings. Historians can determine when an ancient Greek or Roman building was made just by looking at the columns. And the style of the columns tells a skilled observer when a temple or building was built and how the architectural styles changed from one area of the empire to another.

Doric columns were the most popular and were used in mainland Greece and in Greek colonies in mainland Italy and Sicily starting around 800 BCE. These columns are wider at their base and have a plain capital, or top.

Ionic columns are skinnier than Doric columns and have a scrolled capital. These are found in Eastern Greece and the Greek islands and were made around 500 BCE.

Corinthian columns began to appear around 300 BCE. They have capitals that look like leaves, but the Greeks didn’t actually use this style of column very often. The Romans liked these decorative columns and used them much more often, so historians know a building with Corinthian columns was most likely designed by Romans.

The Romans used a lot of Greek ideas, such as columns, but they also created their own developments in architecture. They perfected making cement, which is a mixture of limestone, water, sand, and volcanic ash or broken tiles; this allowed them to build bigger and more elaborate buildings than the Greeks. Cement allowed the Romans to make building blocks in a variety of shapes very inexpensively, and it proved to be a strong material. With cement, the Romans could create arches to build walls higher than ever before.
An arch is made of wedge-shaped blocks, with a keystone in the middle. The keystone pushes against the other blocks, which then support one another and create a very strong structure. The Romans learned that they could have larger open spaces in their buildings by using arches because they no longer needed to have columns every few feet to support the walls and ceilings.

The Romans also learned that they could make domes with their arches. Think of an arch, and then rotate one of its legs around in a circle. This is how the Romans thought of creating domes, which added height and beauty to their buildings.

Historians can also figure out where Romans had a heavy influence on local cultures based on the architecture found in a particular location. The Roman Empire was very large and covered a lot of territory in Europe, northern Africa, and the Middle East. As the Romans conquered different parts of the world, they brought their building designs with them. For example, historians can tell which buildings in England were made before the Romans arrived and which were made after the Romans took control of the country. In England, France, Turkey, and other places that were once part of the Roman Empire, you can still find ancient Roman structures; these buildings demonstrate the widespread and long-lasting influence of this empire.
MAPS

Look around your home or classroom. Do you see any maps? At home, you might have maps that help you find your way on road trips. At school, you probably have maps that show you where countries are around the world, where to find rivers, other bodies of water, and forests, and where ancient boundaries are located. Many historians use maps to gather information about early civilizations.

A map of the terrain might show historians how a city was easily defended from its position on top of a hill. Maps can show the common land or sea routes that cities used to trade with one another; such information can provide clues as to why one city may have had more power or influence than others.

The following two maps show the ancient civilizations of Greece and Rome at their greatest size.

When the ancient Greek civilization was at its greatest height, the center of it all was Athens.

When the ancient Roman empire was at its greatest height, the center of it all was Rome.
Historians might look at these two maps and think about how expanding its borders into Persia and Egypt affected Greece or how Roman control of the Mediterranean helped that empire expand so quickly. They might compare the ancient maps to modern ones to see how the boundaries of empires and countries have changed over time. A map may show which cities were the largest, where important sites were located, or provide information about the dominant language in an area at the time by showing how far an empire stretched.

Rome is the capital of the modern-day country of Italy.

The site of the ancient city of Mycenae is in the modern-day country of Greece and the site of the ancient city of Troy is in the modern-day country of Turkey.

Athens is the capital of the modern-day country of Greece.
TIMELINES

You saw a timeline at the beginning of this text. A timeline is a valuable tool that a historian can use to organize important historical events. By listing key events in the order in which they happened, timelines help historians recognize how different events affected one another. You can make timelines to show many different kinds of information. Some historians make timelines to show advances in art or literature. Others might make timelines to show how government leadership changed over time.

We divide history into two eras on a timeline. You might notice that ancient dates have BCE written after them. That means “before the common era.” The abbreviation CE means “of the common era.” We say that we live in the twenty-first century CE, but someone living in ancient Greece or Rome wouldn’t say he or she lived in the third century BCE. Romans and Greeks didn’t measure time that way. Instead, they measured time based on special events or who was in power at a certain time. A Greek woman might have said she was born during the twenty-eighth Olympiad, or a Roman man could have said that he was born in the sixth year of Emperor Augustus Caesar’s rule.
Timelines can be confusing when you are looking at both the common era and the time period before it. Let’s look at a sample timeline of important events in Greek and Roman history. According to the timeline, the numbers used for BCE dates count down and get smaller as they move toward the year 1 BCE. On the BCE portion of a timeline, the larger the number is, the more ancient that particular event is. In the common era, the numerals we use to keep track of historical events increase with time; therefore, the smaller the number is, the farther back in time the event took place. We read the events on a horizontal timeline like this one from left to right, starting with the oldest event and ending at the most recent one. Remember, people living in ancient Greece and Rome did not think of years this way, but we do to help us organize dates.
**How to Create Your Own Timeline**

Now that you know how a timeline helps you to understand the order of events in history and how those events affect one another, you can make a timeline to study your own history. Let’s learn how!

1. Choose the earliest and latest events that you want to include on the timeline. If you are creating a timeline about yourself, you probably want to include the day you were born and the last major event in your life.

2. Think about the units of time, or segments, into which you will divide your timeline. Do you want to divide the timeline into segments that indicate each month or year of your life? Or do you want the timeline divided into periods of five, ten, or fifty years? In your personal timeline, you can probably use years as your unit of time. That means there should be a segment on the timeline for each year of your life.

3. Draw a line, and create segments that are equally spaced. Label the segments.

4. Think about the important events you want to include on your timeline. What really stands out in your life? For example, moving to a new town and starting school in a new place would be pretty important events.

5. Give your timeline a title when you are finished.

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**TALIA’S TIMELINE**

- Born April 30, 1999, Tulsa, OK
- Moves to Portland, OR with family
- Moves to Hartford, CT
- Adopts Muttsy from the dog pound
- Begins taking dance lessons
- Has lead role in ballet program
- May, learns to ride a bike
- July, breaks leg in biking accident

We can learn several things about Talia from her timeline. Her family has moved around the country twice, and she likes dogs. We can also identify some causes and effects in Talia’s life. She learned to ride a bike in May 2005, but she crashed her bike and broke her leg a few months later. If you were a historian looking back on this timeline, what conclusions might you draw about Talia’s broken leg? What other causes and effects can you identify in the timeline?
CURIOUSITY AND OBSERVATIONAL SKILLS

Finally, a historian doesn’t just use physical tools to study ancient civilizations. Historians have to be curious about the subject they are studying and feel driven to uncover new information about the past. It is hard work, and there is a lot of information out there, but historians know they need to expand their knowledge by reading and researching if they are going to make the next big discovery. Historians also have to be observant enough to identify clues as they study. For example, they read ancient texts carefully to see if they might find information someone else missed or misinterpreted. Archaeologists study their dig sites carefully because even a small piece of pottery can give them clues about who lived in that location and when they lived there. Historians don’t want to overlook anything when they are on the trail of a new discovery. It takes a lot of patience to study history, but that is all in a day’s work for a historian.

Now that we have the proper tools, it’s time to pack up our knapsack and take a tour of Greece and Rome to find out what kind of history we can uncover!
A TOUR OF TEMPLES

Some of the most prominent buildings we will see as we look around Greece and Rome are temples. Greece is famous for the ruins of ancient temples that lie throughout its countryside. One of the best spots to see a Greek temple is the Acropolis in Athens. The Acropolis was both a sacred place and a fortress for people living in the ancient city. The most famous building in the Acropolis is the Parthenon, a large temple dedicated to the goddess Athena, who the Greeks believed watched over Athens. We can use our architecture tools to learn from the Parthenon and other temples in Greece and Rome.

First let’s look at the shape and structure of the Parthenon. Like most Greek temples, it is rectangular and symmetrical, or identical on both sides. It is surrounded by columns that not only provided strength to the building, but also made it more beautiful. Now take a closer look at the columns of the Parthenon. This temple has columns that are wider at the bottom than the top, and the top of each column is very plain. If we look at our architecture guide, we see that these are Doric columns. What does this tell us about the Parthenon?

Let’s move on to Rome to see an example of a Roman temple. When the Romans invaded Greece, they were impressed by the Greeks’ temples. They copied the Greek structures but added their own tastes and ideas to the designs. One of the most famous temples in Rome is the Pantheon, which was built to honor all the Roman gods. From the front,
it looks just like a Greek temple because of its columns, but let’s see how it is different. What do you notice about the top of the columns? You can tell that the columns are Corinthian because the tops look like layers of leaves. Walk around the back, and you’ll see that the temple is round. The Romans also gave this temple a domed roof to make it more special. What do you think the use of elaborate Corinthian columns, a rounded temple body, and the dome says about Roman culture? It’s your job as a historian to figure that out!

You can connect the past and the present by thinking about how Greek and Roman temples have influenced modern architects. Have you ever been to Washington, D.C., or seen pictures of memorials to the presidents there? What do the pictures of the Lincoln Memorial on the back of a penny and Thomas Jefferson’s home, Monticello, on the back of a nickel, remind you of? Examine the shapes of these buildings and the columns used in them. You can also examine architecture that’s closer to home by looking at the buildings in your city. What buildings have you noticed that remind you of ancient Greece and Rome? Why do you think people designed the buildings that way?

The word *pantheon* comes from the Greek words *pan* (all) and *theos* (gods). Today we might put any important people or heroes in a pantheon. For example, the pantheon of American heroes might include George Washington, Thomas Jefferson, Harriet Tubman, Abraham Lincoln, Susan B. Anthony, and Martin Luther King, Jr.
SPORTS LOVERS PAST AND PRESENT

Moving along on our tour, let’s stop to think about sports in ancient Greece and Rome. The Greeks invented the Olympics, which we still hold today, and the Romans built the Colosseum, one of the oldest stadium structures around. A good place to start our research is in Olympia, Greece, the home of the Olympics for more than 1,200 years.

Using tools from our knapsack, we can unravel the story of the ancient Olympics. First, our timeline of the histories of ancient Greece and Rome states that the first recorded Olympic games were held in 776 BCE. Recorded means someone wrote the information down. Most historians think the Olympics are even older than that since these kinds of games were very popular as tributes to dead kings or heroes in ancient Greece. The Olympics were held every four years until 393 CE, when Rome banned the games.

A Greek poet named Pindar (518–438 BCE) wrote that the origin of the Olympic games dates back to games held by Pelops, a warrior who, with the help of the god Poseidon, defeated a king named Oinomaos in a chariot race. Another of Pindar’s poems says the games were started by the hero Heracles to honor his father, Zeus. But remember what we learned about using literature as a source. Pindar provides no dates for these events, but if they happened, it was long before 776 BCE. Pindar lived more than 200 years after the first Olympics were even recorded. How might that affect his history of the Olympics? As a historian, it is important to interpret what poets like Pindar wrote and find the truth about the origins of the first Olympics. What do you think the truth might be?
The number and types of events that took place during the ancient Olympics changed over the years. We can learn this from records of the winners from the ancient games. At first there were only footraces, but the games grew to include javelin throwing, jumping, and chariot races. Why might these other events have become important to the Greeks?

Now that we’ve learned a little about the first Olympics from our timeline and history books, let’s learn about ancient stadiums. Our word stadium comes from the Greek word stade. This unit of measure was the length of a straight racetrack, which was about 210 yards (192 meters) long. The Greeks placed their racetracks in small valleys and arranged seating along three sides of the hills to create U-shaped stadiums that could hold 50,000 spectators.

Now we go to Rome to check out the Colosseum, one of the largest of the ancient stadiums. Just as they did with temples, the Romans copied the Greek stadium design but made their own improvements to it. While the Greeks built their stadiums in valleys surrounded by hills, the Romans built theirs in the middle of the city. Roman stadiums were round or elliptical so the spectators’ attention was focused on the action in the middle. The Romans also didn’t need hills to make seating for the spectators; they could build tall stadiums with straight sides that could seat large numbers of people. The Colosseum was three levels high and could fit as many as 50,000 people in it. Historians also know that the Romans constructed huge awnings on the Colosseum to protect spectators from the sun.
Let’s take a closer look at the Colosseum and use some of our architectural knowledge to learn more about this ancient stadium. One of the first things you should notice is that the Romans used columns to decorate the outside of the building. The Romans used Doric columns on the bottom level, Ionic columns on the second level, and Corinthian columns on the third level. The Colosseum also has arches, which is significant. Our architecture guides explain that arches are very strong. How do you think this affected the way the Romans decided to build the Colosseum and other stadiums in their empire?

On the inside of the Colosseum, we see tunnels that lead out to walkways. The stadium is in ruins, but can you imagine where the seating was? How do you think the tunnels and walkways helped spectators move around the stadium?

We can see how the ancient Olympics and ancient stadiums, such as the Colosseum, still influence us today. The modern Olympics games have occurred every four years since 1896, except during World Wars I and II. Historians had a hand in explaining the traditions of the ancient Olympics, and now some of those same traditions, such as the lighting of the torch, are still followed. The next time you are in a big city or watching a baseball or football game, take a look at the stadium, and think about how it is shaped, how the seats are organized, and whether the stadium designers built structures to protect the spectators from the sun and rain. You might find there is a lot in common between the ancient Colosseum and the home of your favorite sports team!
A CHANGE IN SCENERY

Let’s continue to look at entertainment in ancient Greece and Rome. Today when we think of the theater, we often think of sitting back in a dark room and watching a movie on the big screen. If you live in a big city, you might also think about theaters where you can see famous plays and musicals performed by live actors on a stage. In ancient times, people went to plays to relax and watch a story come to life. Plays were very popular in Greece, and most cities had large, open-air theatrons where people could watch them. Let’s take a look at a famous ancient theater in Athens, the Odeon of Herodes Atticus.

Like Greek stadiums, theaters were built so the seating was on a hill, allowing everyone in the audience to see the orchestra and skene where the actors performed. When you hear the word orchestra today, you probably think of musicians. In ancient Greece, the orchestra was the part of the theater where the actors performed. The skene was a two-story building behind the orchestra that provided the play’s background, such as a palace or forest. Roman theaters looked very similar to Greek ones, though Roman skenes were usually three stories tall.

Learn your roots!
The modern English word theater comes from the Greek word theatron, which means seeing place.
Use your architecture guides to see if you notice anything interesting about this Greek theater. Is there anything in its design that stands out? The arches! Here we have a theater in Greece, but it seems to have a Roman influence. A good historian can put together pieces of information like this to figure out why Roman architecture would appear in a Greek city. If we use our timeline, we learn that by 146 BCE, Greece was under Roman control. How do you think that situation might have affected the people living in Greece and the structures they built?

Today we still go to theaters, and some are very similar to the ancient Greek and Roman structures. We still have open-air theaters at local parks that may host plays, concerts, or even movies when the weather is nice. We also put theaters inside buildings so we can enjoy plays and movies all year. The next time you’re at the movies, try to think about how a modern theater looks similar to the Odeon of Herodes Atticus in Athens.

Learn your roots!

The Greek word *skene* is the root word of *scene*. We think of a scene in a play as a part of the story that takes place in a certain location. When a play changes scenes, the props and background change, and the action takes place in a different location.

Did you know?

Some ancient Greek and Roman theaters could seat about 15,000 people. Imagine watching a movie with 14,999 people! What would that movie experience be like?
CALL THE PLUMBER!

If we pay a visit to Rome, we can see some examples of this civilization’s most amazing engineering: plumbing. The Romans didn’t invent sewers or pipes for carrying water, but like many things they adopted, they made them bigger and better. Roman leaders knew the importance of running water, which helped to keep cities clean and people healthy and provided beauty and relaxation to the people. To get the water they needed, Romans sometimes had to transport it from mountain springs to their cities. They built hundreds of miles of underground pipes and above-ground channels, called aqueducts, to move water from one place to another. The city of Rome had eleven aqueducts supplying its residents with cool clean water.

If we look at the visible part of an aqueduct, we can see that the Romans built tall arched structures that crossed valleys. These aqueducts created a bridge to keep the water flowing steadily across the large open spaces between hills and mountains. Remember what we have learned from our architecture guides: arches are strong. The arch allowed the Romans to build their aqueducts as tall as necessary to keep the water flowing. It also allowed for something else. Imagine if the Romans had needed to build tall solid walls across valleys to carry their water. What problems could that have caused for a growing empire? A historian looks at the types of structures a civilization made and figures out why they constructed buildings that way.

Think it out!

Historians know that civilizations usually build cities near rivers that can supply everyone with water. As a city grew, sometimes the nearby river couldn’t supply enough water for crops and other uses. Aqueducts allowed cities to grow bigger than ever while providing everyone with water.
The water from the aqueducts flowed into large cisterns, or water-tower structures. Pipes from the cisterns brought water to various places around the city such as public fountains where city residents could get water for drinking, bathing, and cleaning. The wealthiest families had pipes that led directly to their homes. The aqueducts also fed the public baths, which were an important part of Roman culture. Public baths were a place where men and women could go after a long day of work to refresh themselves and relax with friends. Baths were so important to Romans that they built them all over the empire, sometimes using natural hot springs, like those in Bath, England.

Many of the ancient aqueducts scattered around the Roman Empire still work! In the city of Rome, many of the public fountains were turned into beautiful pieces of artwork that are still fed by the ancient aqueducts. Modern aqueducts are used today to supply cities that are far away from a good source of water. Los Angeles, California, needs an aqueduct to support the millions of people who live there. Think about your city. Do you think the water you use might come from somewhere hundreds of miles away? Does your city have public fountains? They might be fed from a distant source of water, just like Roman fountains. The Romans really taught us a lot about plumbing!
MYTHS IN MODERN TIMES

Let’s take a look at Greek and Roman temples again, but this time we will focus on their cultural use. These buildings were created to house statues of the gods and goddesses and to provide a public place to worship. The ancient polytheistic religions of ancient Greece and Rome are no longer practiced, but people around the world still know the names and stories of these gods and goddesses. That’s because the stories told by Greek and Roman authors are still popular today. Historians read and study these stories because they provide clues about the culture of the ancient Greek and Roman people.

Homer is Greece’s most famous poet. He wrote the epic poems *The Iliad* and *The Odyssey*, which tell the story of the ten-year war between Greece and Troy and the return of one of Greece’s heroes, Odysseus, from the war. Greek gods and goddesses are characters in the stories, and their actions create much of the conflict. A historian named Heinrich Schliemann has already used Homer’s poems to help uncover some history. Until 1870, most historians thought Homer’s *Iliad* was just a fantasy. After all, there was no record of a city called Troy on any maps they had seen, and the chances of a ten-year war being fought over a queen were slim. But Schliemann thought there could be some truth to the story. He used information from *The Iliad* to dig around in northwestern Turkey, in a spot that would have been a good place for a major city.
Schliemann was a self-taught historian, and he thought about possible locations in the ancient world where a city might prosper from trade and good resources for food and money. He most likely studied maps while reading *The Iliad* and *The Odyssey*, putting together events in the stories and locations on the maps. His hard work paid off, and he found evidence of a city on the coast of Turkey near an important trade route. It was important enough to have been rebuilt several times before being abandoned. He immediately declared that the city was Troy. Later, Schliemann also uncovered the ancient city of Mycenae in Greece, where the Greek characters in *The Iliad* come from. Most historians now think that the Trojan War may have been a real event, even if Homer’s poem has many fictional details. Take a look at your modern map of Greece to see where Schliemann’s rediscovered cities of Mycenae and Troy are located. What would the Greek army need to think about before attacking Troy?

Hesiod is another famous Greek poet. He wrote poems that told stories about the gods, goddesses, and other creatures, which have provided us with a lot of our knowledge of ancient Greek religion. But historians don’t just see how important the gods, goddesses, and heroes were to the people of Greece by reading poems and books. The Greeks told these stories visually as well, illustrating them with carvings and paintings on walls, in temples, and on pottery. Statues in the temples and other places showed how the Greeks envisioned their gods and goddesses.
The Roman Empire also had poets who told the stories of the Roman gods and goddesses, many of which were borrowed from ancient Greece. Virgil is famous for writing *The Aeneid*, which tells how Rome was founded by a warrior named Aeneas who escaped Troy as the city fell to the Greeks. Virgil was very familiar with Homer's poems and wanted his poem to be similar in style while showing Rome's superiority over Greece. His poems feature the Roman gods and goddesses helping Aeneas to find a new home after escaping Troy. Think about the kind of information historians can gather about Roman culture from Virgil's writing, not only from the story itself, but from the fact that Virgil was inspired by Homer. Another famous Roman poet, Ovid, also told stories about the creation of the gods, goddesses, and other mythical beings. His poem *Metamorphoses*, along with Hesiod's poems, have given us most of our information about Greek and Roman mythology.
The Romans were heavily influenced by Greek religion. They adopted many of Greece’s gods, goddesses, and stories and made them their own.
Historians have helped keep the stories of the Greek and Roman gods and goddesses alive today. Think about where you might hear the names of the gods and goddesses in your life. If you really enjoy the fantasy genre of books and movies, you might have run across the gods, goddesses, or other characters from Greek and Roman mythology in many stories. Every year around February 14, images of Cupid, a Roman god, appear in stores across the country to symbolize love. Around Mother’s Day, you might see a company advertise its flower-delivery service with an image of Hermes, a Greek god wearing winged shoes. You use the names of Roman gods and goddesses whenever you discuss the solar system in science class. Are the names or images of the gods and goddesses used for any popular products that you or other people buy?
BECOME A HISTORY MASTER!

You have worked hard using the tools of a historian to uncover history on our tour of ancient Greece and Rome. Now you better understand how historians use a variety of information to draw conclusions and tell the story of an ancient culture. Sometimes there are gaps in the historical record, and historians have to dig a little deeper to find the information that will complete the story. It is big news for historians when a new text or ancient site is discovered because they never know what new information they will find. The most important part about being a historian is being curious and observant. You have to want to learn more to become a good historian. Lucky for you, there are a ton of resources available as close as your library and your fingertips. You can find out other ways ancient Greece and Rome have influenced us, or learn about another ancient civilization that has affected our own.

So get out there, and start digging through history, whether it is in a book, on the Internet, or at a historical site on vacation! Don’t forget your tools as you go out in search of history. You’ll need your books, timelines, maps, and guides to architecture to find out how an ancient civilization has made its mark on modern society. It may surprise you to learn how much of our culture has ancient roots!
Touring Hollywood History

by Kathleen Collins
Welcome aboard!

**Hello and welcome** to Hollywood, where movie magic is made. I’ll be your host today as we take a tour through the history of moviemaking.

I bet that when you think of movies, you think of big budget films full of exciting action and amazing special effects. Movies and movie stars today are full of glitz and glamour, and Hollywood is the symbol of it all. Would you be surprised to know that this wasn’t always the case, and that Hollywood wasn’t the original home of the movie industry? Movies have a much humbler start than the big budget productions we’re used to seeing each summer. It didn’t take long for movies and movie stars to catch on though. Moviemaking has come a long way in just over one hundred years!

Now, if you will take a seat, buckle up, and help yourself to some popcorn, let’s begin our tour.
Making Pictures Move

THE FIRST STOP on our tour is the evolution from still photographs to moving images. Cameras are everywhere today, from tiny cameras on cellular phones and music players to digital cameras of all sizes. The first photograph was taken in 1826 by a French inventor named Joseph Nicéphore Niépce. It took eight hours for his camera to make an image. Imagine a modern camera taking that long to snap a picture! Would you be able to sit still for eight hours? Today cameras take pictures as quickly as you can push a button, and we can see images on a digital screen immediately after taking them.

It took more than fifty years to put photographs in motion. In 1878, Eadweard Muybridge took a series of photographs of a horse running around a racetrack. If you put the images together in a stack and flipped through it quickly, it looked as though the horse were galloping. Although this gave the illusion of a moving picture, it was still just separate photographs. At this time, cameras took pictures on dry glass plates that had to be switched in and out of the cameras, making it difficult to take photographs quickly. Movies, such as the ones you see in theaters today, are split-second photographs taken on one continuous strip of film. By 1885, an American inventor and photography enthusiast named George Eastman had begun working to create rolls of flexible film that could be cranked through a simple camera. Instead of swapping out heavy, fragile glass plates, a photographer just had to roll the film to the next frame to take a new picture. If you could crank the film fast enough, you could take nearly seamless pictures of people moving.

You have heard of Thomas Edison, right? He invented the light bulb, among other things. He was passionate about inventing new tools to make life easier for people, and he created a large laboratory in Menlo Park, New Jersey. One of his assistants, William K. L. Dickinson, began working to create moving pictures with the new flexible
film and a way to view them. Dickinson created the \textit{kinetoscope} (kih-NET-uh-scope) in 1891, which was a box with holes in the top. You could look through the holes and see a short movie of people dancing or doing other tasks. Most of the films were made in Edison’s own movie studio, called the Black Maria. This was the first movie studio in the country, and soon it produced movies for kinetoscopes located at carnivals, arcades, and storefronts all across the country.

The problem with kinetoscopes was that only one person could watch a movie at a time. Auguste and Louis Lumière, French brothers who were interested in photography, took care of that problem in 1895 with the creation of a camera that also acted as a movie projector. Their device, called a \textit{cinematographe} (sin-uh-MAT-uh-graph), could be placed in the back of a room and project the movie on a screen or wall in front of an audience. They held the first public viewing of a movie for an audience in 1895, showing a series of ten short films that lasted a total of twenty minutes. Temporary movie theaters started popping up in carnivals and other places around the world after their invention became popular.

Now that we have an idea of how we got moving pictures, let’s move on with the tour.

**Did you know?**

Both the words \textit{kinetoscope} and \textit{cinematographe} use the Greek root \textit{kineto}, which means moving.

**Movie Fact**

The first movie theaters were often called \textit{nickelodeons} because a patron was charged five cents to see a movie. How much does a movie cost at your local theater?
Silence is golden.

Our next stop is 1902 for the creation of the United States’ first official movie theater! Thomas L. Talley built his 200-seat Electric Theater in Los Angeles, California, and wowed the crowds with films. By then, movies were longer and told stories. If you walked into Talley’s theater in the early 1900s, what do you think you would see and hear? You’d see actors on a screen, but you wouldn’t hear anything coming out of their mouths. That’s right, early movies were silent. At the time, recording sound was difficult since early records could only play a few minutes of music. It would have taken several records to record movie dialogue and sound effects!

The theater wasn’t completely silent because theater owners hired people to play the piano and other musical instruments during the movies. The music was important because it helped the audience know the mood of the story. The music might have been loud and booming during an action sequence, sinister and dark when the villain walked on-screen, or sweeping and beautiful during a romantic scene. Silent movies also gave viewers some light reading. Every so often, the screen would cut to a line or two of dialogue from a character to keep the plot moving.

Think about how you would act if you were scared. How would you move your arms? What would your expression look like? Now really exaggerate that emotion! That’s how many actors in silent films acted. Since there was no sound, you couldn’t hear an actor screaming, crying, or laughing. Actors really had to exaggerate their emotions so moviegoers understood how the actors felt. It might seem odd and unnatural to us now, but early movie audiences loved it.

Example of an intertitle, dialogue or descriptive text shown on the screen during silent movies

“Mademoiselle — will you think me too bold — if I ask to see your face?”

In a scene from The Barker, a 1928 romantic silent film, the actors exaggerated their expressions to help the audience understand how the characters felt.

Screenshot image from the famous 1902 silent film, A Trip to the Moon
Moviemaking really changed during the silent era. At first, most movies filmed in the United States were made on the East Coast. Producers wanted bigger spaces in which to make their movies and better weather. Electric light bulbs were still new and didn’t provide enough light at the time, so directors needed a lot of natural light to film their movies. Southern California could provide warm weather for filming outside in addition to a lot of sunlight. California also has a lot of geographical features that are well suited for filming movies in different settings without ever having to leave the state. As filming techniques improved, directors could film outdoors in deserts, on beaches, and in the mountains and thick forests—all within a few hours’ drive of their studios. Filmmakers decided to move the industry to Los Angeles, giving birth to the Hollywood movie industry!

The next stop on the tour is...adding sound to pictures.

Movie Fact

The famous Hollywood sign was built in 1923 and originally said, “Hollywoodland.” The sign was built to advertise a new neighborhood, but it became a symbol for the movie industry. In 2010, celebrities and organizations contributed money to buy the land around the sign and preserve it as a cultural landmark.

Did you know?

Hollywood’s name has influenced movie industries around the world! The Hindi film industry of India is popularly known as Bollywood because of its location in the city of Bombay, now called Mumbai. When Wellington, New Zealand, saw growth in its film industry, people began calling it Wellywood.
Talkies make a big noise!

We are now approaching the end of the silent era and the birth of talkies! Silent films were popular, but producers always looked ahead. Synchronized sound, or sound that played along with the movie, was the next improvement to film. The first talkie, The Jazz Singer, was produced in 1927. The movie was still mostly silent, but the star, Al Jolson, spoke some dialogue and performed six songs in the film. Movie audiences heard real music and voices from a movie for the first time.

Change doesn’t come easy in Hollywood, and the change from silent movies to talkies was rough. Talkies required all new equipment and people, such as scriptwriters, sound mixers, and boom operators, to work on sets. Silent movies had scripts, but they mostly told actors where and how to move on the set. Now actors had to know what to say, and good dialogue became important. Then directors had to record the actors’ voices but make sure that they didn’t record other noises. Cameras were too noisy and had to have big soundproofing boxes built around them. Sound now became as important to the artistic expression of the film as the camera, and people who understood sound and acoustics became very valuable to directors. Movie studios also had to wire all of their movie theaters to play sound. It took awhile for theaters across the country to play talkies.

Another problem was with actors and sound. Just about anyone could be an actor in a silent movie because it didn’t matter if his or her voice were pretty or he or she could sing well. But it mattered in a talkie. A lot of silent actors left Hollywood as talkies became more popular because many had thick foreign accents or didn’t speak English at all. Movie studios looked elsewhere for acting talent and hired actors from Broadway plays in New York City because their voices were pleasing.
and they were used to acting with their voices. The addition of Broadway actors with singing and dancing talent also led to a new genre of film: the musical.

When adding sound, directors had to figure out where to hide microphones on the set. Sometimes they hid them in costumes, and other times they hid them in the scenery. Then actors had to figure out how to act in relation to the microphones. If the actors moved too far away from the hidden microphone, their voices became too quiet. Sometimes the actors spoke too loudly because that’s how they spoke on-stage.

The acting in a lot of the early talkies seemed awkward while actors and directors learned to adapt to making movies with sound. The creation of boom microphones allowed actors to move around the set freely. New microphones were also better at picking up sounds from many directions, eliminating the problem of actors sounding too loud or quiet as they moved around.

The last major silent film was released in 1935 as talkies became dominant in Hollywood. Silent films are still made today, but they are usually independent pictures that are not widely released in movie theaters.

A boom is a long pole with a microphone attached to the end of it. A boom operator holds the microphone over the actors’ heads.

**Movie Fact**

The 1952 film *Singin’ in the Rain* shows the humorous side of the problems movie studios experienced when they switched to talkies!
A Splash of COLOR

OUR NEXT STOP is the vibrant world of color pictures. If we sat in a movie theater today and watched every movie made before 1930, we would only see a handful of movies that contained splashes of color. Most movies were filmed in black and white because it was practical. Color photography existed, but the process was time consuming and expensive. You could also hand paint color onto film, but that took a long time since some rolls of film could be 5,000 feet long. It took skilled artists a long time to paint each frame of a movie film.

In 1915, a company called the Technicolor Motion Picture Company came up with a slightly easier way to make color movies. Special cameras used red and green filters to create two separate film strips—one colored red and the other green. The two strips of film were then cemented together to form a single roll of colored movie film. Sometimes the colors looked a little unnatural. A bright blue sky often looked a little green or turquoise, and skin had a reddish glow. The process was also expensive, so a lot of directors only colored important scenes in their films and filmed the rest of the movie in black and white.

Color pictures really broke out in 1932 when the Technicolor Motion Picture Company introduced a new color process. It used red, green, and blue filters to create more realistic colors. A short cartoon made by Walt Disney, called The Flowers and the Trees, was the first film shown that used this new process. The bright, vibrant colors in the cartoon amazed audiences!

Black and white or color?

This has been a long debate in Hollywood. Which format do you think directors should use? Most movie studios think color is best. They have even colorized some black-and-white films.
Directors began using color more often when they realized it helped them show off beautiful costumes, sets, and locations. Two notable early color movies were *The Adventures of Robin Hood* (1937) and *The Wizard of Oz* (1939). Audiences could see vivid colors bringing life to wonderful characters. *The Wizard of Oz* even used black-and-white film at the beginning and end of the movie just to make the color seem even brighter.

The change from black and white to color was much slower than the change from silent film to talkie. Filming in color was expensive, and movie studios saved it for big blockbuster movies. Some directors took this opportunity to remake their silent, black-and-white films as talkies with color. When color televisions became available in the 1960s, black-and-white productions finally started to fade away. Now only a handful of black-and-white movies are made, and some directors use black and white only for special scenes. It is as if black-and-white and color technologies have switched roles.

The next stop on our tour is coming up.
Rising Stars

Let’s take a moment to think about stars—not the stars in the sky, but movie stars! The first movies were more like documentaries. They captured images of average people doing everyday activities. When silent movies began to tell stories, directors looked for actors, and it didn’t take long for actors to become famous people.

Silent actor Mary Pickford was perhaps the first big movie star. She was the first millionaire film actor and started a trend when she and her actor husband, Douglas Fairbanks, Sr., moved to a mansion outside Los Angeles. Now movie stars make millions of dollars just for appearing in one film, and they may have a Los Angeles mansion and another mansion somewhere else.

Celebrities didn’t always live on Easy Street. Before the mid-1930s, there was a studio system in place. Stars had to sign long-term contracts with movie studios, giving the studios the right to tell the actors how long they had to work and how many movies they made in a year. Actors may have appeared in more than ten movies in a year. That’s a lot of work! Today really busy actors might appear in two movies in one year, but they have the freedom to appear in as many, or as few, movies as they want. Movie stars are a lot more independent now, and some own their own production companies so they can make films that they think are important.

Movie Fact

Many actresses prefer to be called actors! The word actor originally applied to both men and women.

If you watch a lot of old movies, you might notice the same stars appearing together in several films. Movie studios liked casting the same actors together in a lot of films. Some actors and directors also enjoyed working together often.
There are two famous landmarks in Hollywood that honor the stars. One features the handprints, footprints, and signatures of stars in the sidewalk outside Grauman’s Chinese Theatre. Movie stars have been putting their prints in cement at the theater since 1927. If you get a chance, it is fun to walk around and see how your hands and feet measure up to those of your favorite stars.

The other landmark is the Hollywood Walk of Fame. This is a stretch of sidewalk along Hollywood Boulevard and Vine Street that has special blocks in it. Each block is embedded with the name of a celebrity inside a star. The star also has an icon that shows whether the celebrity worked in movies, radio, music, television, or theater. The walk of fame even includes some fictional stars such as Mickey Mouse and Bugs Bunny. Some celebrities have multiple stars on the walk of fame because they entertained people in many different ways.

**Movie Fact**

Some stars have more than just handprints and footprints in their sidewalk stones. Jimmy Durante, a famous theater, radio, television, and movie star, was known for his big nose. His cement block includes a print of his nose.
Awarding **Greatness**

**While we’re talking** about stars, let’s turn our attention to the awards actors receive. Every spring, we can tune into the biggest and most glamorous awards show on television, the Academy Awards. But these awards have much humbler beginnings.

In 1927, a group of movie-studio owners, directors, and actors agreed to form an organization called the Academy of Motion Picture Arts and Sciences (AMPAS). They created this organization to help the film industry. Its mission is to advance the art and science of making movies, recognize achievements, and provide a forum where members of the academy can meet to discuss their work, ideas, and opinions. The academy has done a lot for the film industry, from collecting and preserving films to creating educational programs for people interested in the film business.

Each year, the academy recognizes great achievements in movies. Shortly after the organization was created, its members decided to recognize the efforts of directors and actors who made movies between 1927 and 1928. The dinner event had 270 guests, and the names of winners weren’t the big secrets they are today. Everyone already knew who would be receiving an award for his or her work.

**Hey, Oscar!**

The statuette is officially called the Academy Award of Merit, but it has a shorter nickname. According to the popular story, an AMPAS librarian said the statuette resembled her Uncle Oscar, and the name caught on with directors and actors!

**Movie Fact**

The academy doesn’t really know how many people will receive statuettes at the awards ceremony, so there are plenty of extras. Any unused statuettes are saved for the next year’s ceremony.
The next year, the ceremony was broadcast over the radio so the public could hear who won as the awards were given out. The academy also thought it would be more fun to keep the winners’ names secret until the night of the ceremony. The academy gave newspapers a list of winners, but the newspapers had to promise not to publish the list until after 11 p.m. Today the list is secret. Do you know why? In 1940, a newspaper decided to break its promise and publish the list early. Now the academy keeps the names of winners in sealed envelopes so no one knows a winner’s name until it is announced.

The awards ceremony began as a dinner party, but as the movie industry got bigger, more and more people attended the event. In 1942, the academy had to start holding the ceremony in a theater instead of in a restaurant. The ceremony was first broadcast on television in 1953 and was first shown in color in 1966. Now it is one of the biggest television events of the year, with people in more than 200 countries tuning in to see the red-carpet glamour and whether their favorite actors, directors, and movies will win!

**Movie Fact**

There were twelve award categories at the first Academy Awards ceremony. Today there are twenty-five categories! Why do you think this number has more than doubled?
Let’s finish up our tour of the history of moviemaking with a look at how special effects have really created some magic moments on film. We are so used to amazing special effects created by computers that the special effects in older films may seem laughable to us now. Back then, a lot of those special effects were groundbreaking! Directors used a lot of tricks to fool people into seeing things like ghosts and monsters on the big screen.

Stop-motion animation was really popular at one time. It was famously used in the movie *King Kong* (1933) to make it look as if a giant gorilla were stomping around New York City. King Kong was actually a small model with a moveable head, arms, and legs. Filmmakers moved the model inch by inch, taking a picture between each movement. When the film was played at a normal speed, it looked as though King Kong were climbing the Empire State Building. Director Ray Harryhausen was inspired by *King Kong*, and he used stop-motion animation to create fantastic beasts, aliens, an army of skeleton soldiers, and mythological creatures in his science fiction and fantasy films.

Some directors used animatronics rather than stop-motion animation. Animatronics are robotic puppets that are controlled by computers and remote controls. Sometimes directors create whole animatronic figures, and sometimes only a part of a figure is animatronic. In a lot of movies, animatronics are used as a part of costumes. The actor in the costume can control the movements of the eyes, ears, tail, or other body parts of the costume with special controls. A lot of directors like animatronic figures because they are realistic and can interact with other actors on a set. The big monsters in *Where the Wild Things Are* (2009) were animatronic costumes.

Three-dimensional (3D) technology is used in a lot of modern movies to make things appear to pop out of the screen. This isn’t new! Many movies in the 1950s were filmed using 3D technology. Just like today, moviegoers wore special glasses to see the effects.
Matting and blue- or green-screen technology has helped create a lot of special effects in movies. Both of these techniques allow directors to film actors on a set and then add an image to the background to make it appear that the actors are somewhere else. For example, a director may have actors in a rowboat on a set that is covered in blue or green material. The director films the actors in front of the blue or green screen. Later, the director films a rushing river where he wants the actors and rowboat to appear to be. Using computers, the director can replace the blue or green background behind the actors with images of the river. When it’s done well, it really looks as if the actors are in a rowboat on the water! This is one of the most widely used special effects because it saves a lot of time and money. Directors can film their movies inside a studio in California but make the actors look as though they are anywhere in the world, or universe. You can also send an actor to a cartoon world or bring cartoons into the real world, as in the film *Who Framed Roger Rabbit?* (1988).

A lot of modern movies use computer-generated images (CGI) to create even more amazing special effects. Computers can create monsters more quickly and less expensively than can be done with stop-motion animation and animatronics. Computers can create impressive battles on land or in space without using miniatures or crowds of people without hundreds of actors. They can turn a regular actor into a monster without makeup by digitally changing his or her face and body. Live-action actors appear to interact seamlessly with CGI backgrounds and characters. Some movie directors have even used computers to clean up the special effects in older movies! The 2009 blockbuster *Avatar* used CGI to create an exotic planet full of colorful life and turn live actors into its alien inhabitants.

**Movie Fact**

You can see blue- or green-screen technology used every day just by watching your local weather forecast. The maps and other images that the weather anchor uses are projected on a blue screen.
Thanks for joining us!

THANK YOU FOR JOINING me on this tour through movie history! If you paid attention as we traveled through time, you might have noticed how movie studios and directors are always looking to improve their films and attract people to theaters. From silent films to talkies, color, and amazing special effects, directors are always looking for the next big thing.

But they also don’t forget the past. Directors still use a lot of old techniques when making movies today. Some directors still like to film in black and white. Some experiment with sound in new ways. Some still use old-fashioned special effects instead of computers. The next time you watch a movie, see if you can tell the difference between an animatronic and CGI character.

And don’t forget movie stars! The American public has had favorite stars since the early days of silent film. We love seeing these stars’ movies and reading about their lives just as much as people did in the past. Sometimes we feel as if we know a star because we’ve seen him or her on the big screen so many times.

So go out there, and put your knowledge to good use—watch some movies! Watch some silent films, some early talkies, and a few modern ones. Pick out movies that were filmed in black and white, and compare them to ones filmed in color. Discover actors from older movies, and let them become new favorites. Think about the hard work people put into special effects before computers became popular. Most importantly, sit back and enjoy the show!
Works Consulted:

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