

The Surprise

Sam's birthday was in two days. He was going to be seven years old. He wanted a PlayStation game. He also wanted a new bike. But most of all he wanted a dog.

His father went to look for a present. First, he went into the toy store. He saw the PlayStation that Sam wanted. But his father didn't have enough money. Then he saw a red bike that Sam would love! But that also cost too much.

He drove to the animal care center. It was hard to choose just one dog. All of them looked cute. Finally he sat down outside of a cage. A brown fuzzy puppy came up to him. The puppy put his paw on the cage. It seemed like he was saying, "Take me home!" Sam's father thought, "Ok, little pup, I'll take you home." He paid for the puppy and they put a HOLD note on his cage.

The next day Sam and his dad went for a ride. His father drove to the animal care center. Sam didn't understand why they were there. When they walked in there was the brown fuzzy puppy. The worker gave Sam the puppy and everyone sang, Happy Birthday. It was the best birthday ever!

The Family's First Trip

Thomas lived in a small town with only 2,000 people. It was June 12th and Thomas was excited. His family was planning a trip to Atlanta to visit his aunt. Unlike his hometown, Atlanta is a big city. Thomas had never traveled to a big city before. He had to decide what to bring. It was a two-day car trip. So he needed to take along things to keep him busy in the car. He was reading a book and decided to bring it. But he realized that he couldn't read all the time in the car. If he read too much he would get dizzy. He had to think of something that wouldn't use his eyes. He decided to bring his CD player and favorite CDs.

Thomas knew that they would be going out to dinner. Another night they were going to a country music show. He brought long pants and a shirt for going out to dinner. But the music show would be outside. He brought a pair of shorts and a tee shirt for that. He had enough clothes, books, and CDs. What else did he need? He almost forgot his toothbrush and pajamas! He would have been embarrassed if he had forgotten them!

The first day of driving went quickly for Thomas as he read and listened to his CDs. His parents were looking for a hotel to stay in. Thomas and his sister begged their parents to find a place with a swimming pool. Luckily they had remembered to pack their swimming suits. Their parents found a small hotel with a heated pool. Thomas and his sister got in their suits and spent an hour in the pool before dinner. The first part of their trip was fun. They looked forward to seeing their aunt the next day.

The Friend

Once upon a time there was a boy named Mark. Mark loved to go to the ocean and play his flute. One day he was playing his flute when a school of dolphins swam by. They leaped in the air every 30 seconds. Mark could almost predict when they would leap again. He watched them for a long time because he was so interested in their play. That day he decided that he wanted to learn more about dolphins. Mark went to the library.

The next weekend he took a boat and rowed out about as far as he had seen the dolphins before. He started playing his flute, trying to mimic the pulsed sounds he had heard on tapes of dolphin sounds. He had learned that they make two kinds of pulsed sounds. One kind is called sonar and is used to locate dolphins and objects. The other kind of sound is a burst pulse that tells the emotional state of the dolphin. Mark was trying to mimic sonar. Soon, about 400 yards away, he saw the roll of the dolphins. The boat bounced in the waves as the dolphins came closer. They seemed to be curious about the sounds coming from the boat. Suddenly, the boat tipped sharply and Mark fell out. Somehow he held on to his flute. Mark was a good swimmer, but he was too far from land to swim. The only thing to do was to try to mimic the sound of a dolphin in trouble. Maybe then the dolphins would help him to land. Kicking strongly, he kept himself up above the water. He blew high, burst pulse sounds. Just when he was about to go under water, he felt a push against his leg. Again and again a dolphin pushed him. She managed to keep his face above water as she gently pushed him to shore. Mark couldn't believe what was happening. He got safely to shore, although the boat was never seen again. As he sat on the beach, still shaking from fear, he realized that he had reached his goal. He had surely learned a lot about dolphins that day!

Johnny Appleseed

John Chapman was born in 1774 and grew up in Massachusetts. He became a farmer and learned how to grow different kinds of crops and trees. John especially liked to grow and eat apples. Many people were moving west at that time. They were heading for Ohio and Pennsylvania. John knew that apples were a good food for settlers to have. Apple trees were strong and easy to grow. Apples could be eaten raw and they could be cooked in many ways. They could also be dried for later use. So in 1797, John decided to go west. He wanted to plant apple trees for people who would build their new homes there.

John first gathered bags of apple seeds. He got many of his seeds from farmers who squeezed apples to make a drink called cider. Then, in the spring, he left for the western frontier. He planted seeds as he went along. Also, he gave them to people who knew how valuable apple trees were.

John walked many miles in all kinds of weather. He had to cross dangerous rivers and find his way through strange forests. Often he was hungry, cold, and wet. Sometimes he had to hide from unfriendly Indians. His clothes became ragged and torn. He used a sack for a shirt, and he cut out holes for the arms. He wore no shoes. But he never gave up. He guarded his precious seeds and carefully planted them where they had the best chance of growing into strong trees.

John's fame spread. He was nicknamed Johnny Appleseed. New settlers welcomed him and gratefully accepted a gift of apple seeds. Many legends grew up about Johnny Appleseed that were not always true. However, one thing is true. Thanks to Johnny Appleseed, apple trees now grow in parts of America where they once never did.

Margaret Mead

Margaret Mead had always been interested in the ways of life of people from other lands. When Mead went to college, she took a class in anthropology. This is the study of how different people live. Mead decided to make this her career. She wanted to study primitive people before modern ways of living destroyed their culture.

Mead realized that living with a people is the only effective way to learn about them. She chose a village in Samoa to investigate. Several islands make up Samoa, which is in the Pacific Ocean. Mead worked hard to prepare for Samoa. She studied languages like the Samoan language. She read everything she could about the Samoan people. She read about their food and how they built their homes. She read about their ceremonies, their past history, and their taboos. But she wanted to learn much more.

Finally Mead arrived in Samoa. At first life was difficult for her. She was alone. She was not fluent in the Samoan language. She lived in a house with no walls and no electricity or gas. It had no running water and no bathroom. One day she said to herself, "I can't go on" in Samoan. Then she thought that maybe she could continue after all. Mead became fluent in the Samoan language, and the people soon regarded her as one of the village. She listened to their talk, their jokes, and their gossip. They told her their problems. Mead felt that being a woman assisted her in learning more about the lives of these people. Instead of having to go on hunts with the men, Mead stayed with the women. She observed the children play and learned how food was prepared. She made efforts to get the older people to recount tales of the past.

Mead learned many things from the Samoan people. She always took notes and kept careful records. These notes were used to write her first book, which was called *Coming of Age in Samoa*. It made her famous. Mead spent the rest of her life studying and writing about primitive ways of life that no longer exist today.

The Early Life of Lois Lowry

Lois Lowry, author of two Newbery Award-winning books, *Number the Stars* and *The Giver*, was born in Hawaii in 1937. Like many authors she uses childhood events and her feelings about them as ideas for her books. Because her father was an army dentist, the family moved often, rarely settling in one place for more than a few years. Perhaps because of the many moves and Lois's shy personality, making friends was difficult, and Lois became very close with her older sister, Helen.

By the time she was 3 years old Lois could read, and books became a central part of her life. Already a keen observer of the world around her, books fed her active imagination. Lois's mother fostered the love of books by reading to the children frequently. When Lois was 9 and her sister, Helen, was 12, their mother read *The Yearling* to them. The life of one of the characters, Jody, made Lois want to be a boy. She wanted a life like Jody's, to be poor, living in a swamp, having animals as friends. Jody was only one of the characters who filled Lois's life with adventure. Her love of books drew her to the public library. When she was 10 years old, she found a book called *A Tree Grows in Brooklyn*. The title piqued her curiosity and she decided to check it out. The librarian told her it was not a book for children, but Lois was insistent. Before Lois arrived home the librarian had called to warn her mother that Lois had checked out a book that was not suitable for children. Her mother was polite but not concerned. She had read the book herself and recalled nothing that would harm her 10-year-old daughter. Lois loved the book and wanted to be like Francie, making a better life for herself through grit and determination. Lois was drawn to characters with lives of adventure, and given the right opportunity Lois would explore the world herself.

Malcolm X

It was because of my letters that I happened to stumble upon starting to acquire some kind of homemade education.

I became increasingly frustrated at not being able to express what I wanted to convey in letters that I wrote, especially those to Mr. Elijah Muhammad. In the street, I had been the most articulate hustler out there. I had commanded attention when I said something. But now, trying to write simple English, I not only wasn't articulate, I wasn't even functional. How would I sound writing in slang, the way I would *say* it, something such as, "Look, daddy, let me pull your coat about a cat, Elijah Muhammad."

Many who today hear me somewhere in person, or on television, or those who read something I've said, will think I went to school far beyond the eighth grade. This impression is due entirely to my prison studies.

It had really begun back in the Charlestown Prison, when Bimbi first made me feel envy of his stock of knowledge. Bimbi had always taken charge of any conversation he was in, and I had tried to emulate him. But every book I picked up had few sentences which didn't contain anywhere from one to nearly all of the words that might as well have been in Chinese. When I just skipped those words, of course, I really ended up with little idea of what the book said. So I had come to the Norfolk Prison Colony still going through only book-reading motions. Pretty soon, I would have quit even these motions, unless I had received the motivation that I did.

I saw that the best thing I could do was get hold of a dictionary to study, to learn some words. I was lucky enough to reason also that I should try to improve my penmanship. It was sad. I couldn't even write in a straight line. It was both ideas together that moved me to request a dictionary along with some tablets and pencils from the Norfolk Prison Colony School.

I spent two days just riffling uncertainly, through the dictionary's pages. I'd never realized so many words existed! I didn't know *which* words I needed to learn. Finally, just to start some kind of action, I began copying. In my slow, painstaking, ragged handwriting, I copied into my tablet everything printed on that first page, down to the punctuation marks.

World War 1 2/3

In the fall of 1918, German military leaders realized they could not win. One by one Germany's allies quit. On November 3, German sailors mutinied at Kiel, a city and port in northwest Germany. Four days later a revolution broke out in Germany. A republic was founded, and the kaiser fled to Holland.

Leaders of the new German government agreed to an armistice, which is an agreement to stop fighting. They asked that the peace settlement be based on President Wilson's Fourteen Points, which he had described in a speech to Congress in 1918. The Fourteen Points outlined the president's ideas for solving the problems that led to the war. Wilson wanted an end to secret agreements, freedom of the seas in peace and war, the reduction of armaments, the right of nationality groups to form their own nations, and an association of nations to keep the peace. In other speeches Wilson called for a negotiated peace with reasonable demands made on the losers. The Allies agreed to model the peace settlement on the Fourteen Points.

Early in the morning of November 11, 1918, the war ended. In a railroad car in the Compiègne Forest in northern France, two German delegates met Allied officials to sign the armistice. The guns were silent.

The Victors Tried to Build a Lasting Peace

No previous war had caused such widespread horror. More than 10 million troops were killed in battle, and 20 million more were wounded. Thirteen million civilians died from war-related famine, disease, and injuries. The cost of the war was estimated at more than \$350 billion. Destruction was everywhere.

Three Leaders Dominated the Paris Peace Conference

After the armistice had been signed, the Allied nations met in Paris to discuss peace terms. Contrary to Wilson's wishes, the defeated countries were not allowed to send representatives to the peace conference. Thus, the so-called Big Three dominated the meeting: President Wilson; David Lloyd George, prime minister of Great Britain; and Georges Clemenceau, premier of France. At the conference Wilson pushed his Fourteen Points. Above all, he wanted to see a League of Nations, an international association established to keep the peace. To get the others to agree, however, he had to make compromises.

Georges Clemenceau, known as the "Old Tiger," had led France during the darkest hours of the war. He wanted Germany to pay war damages because almost all of the fighting on the western front had been on French soil. Most of all he insisted that France be made safe from attack by Germany in the future. He wanted German power destroyed even at the cost of permanently taking much of Germany's western territories from her. Clemenceau placed little faith in Wilson's proposed "League of Nations."

Lloyd George in turn wanted Germany's colonies for Britain. He also wanted the German navy destroyed. During the peace talks, he mediated between the idealism of Wilson and the severe terms of Clemenceau. In the resulting compromise, Wilson gave in on many details and agreed to form an alliance with Britain and France against future German attacks. Clemenceau and Lloyd George agreed to make the creation of the League of Nations part of the peace agreement, which was called the Versailles Treaty.

Viruses

Diversity of Viruses: An Unending Supply

Classifying viruses is difficult because they are so diverse. As a result, biologists have developed several different ways of organizing viruses. Sometimes they are organized by shape, sometimes by the host they infect. Viruses may also be classified according to the way they function inside a cell.

Shape. The arrangement of proteins in capsids determines the shape of the viruses.

Host. Viruses can be organized according to the type of host they infect. There are animal viruses, plant viruses, and bacterial viruses. Viruses that infect only bacterial cells are referred to as bacteriophages.

Many but not all viruses invade only a specific type of organism. For example, the virus that causes polio replicates only inside human host cells. The virus that causes rabies infects only the cells of a particular animal species, such as dogs and humans.

You may wonder how viruses can be so specific. Earlier you learned that capsids and envelopes contain specific proteins. Receptor sites on host cells also contain specific proteins. If the outer proteins in a virus do not fit with the outer proteins of a cell, the virus will not attach to the cell. Without attachment, the viral nucleic acid cannot enter the host cell to replicate.

Function. Some viruses, such as retroviruses, can also be classified based on how they function in a host. A retrovirus is a virus that contains an RNA code that replicates by first transcribing its RNA into DNA. The prefix “retro-” means “reverse.” What do you think might work in reverse in this group of viruses?

Most viruses and all organisms make RNA from DNA in the process of transcription. Retroviruses are able to make nucleic acids in reverse order from the usual process. In retroviruses DNA is made from RNA. As you can see in the figure on the next page, retroviruses have an enzyme called reverse transcriptase, which transcribes viral RNA into viral DNA inside the host cell. You can study the figure to better understand the replication of a human immunodeficiency virus. The retrovirus causes acquired immunodeficiency syndrome.