

Grade 7 Informational

A Man with a Dream

In 1811, a young man named Samuel Morse arrived in London, England, to study art. He wrote to his mother in Charlestown, Massachusetts, to tell her of his safe arrival. Morse was troubled because it would take four long weeks for the letter to reach her. Could this have been when he first began to dream of a way to send words flying across land and sea?

When he was very young, Morse had entered Yale University. He became interested in lectures and experiments having to do with electricity. However, he also showed great talent for art. He earned money for college by selling his small paintings for five dollars each. Then he went to England to study art, returning from England to the United States in 1815. He continued to paint for several more years but made barely enough money to live.

A friend was giving lectures on electricity at Columbia College in New York. Morse attended the lectures. His interest in electricity returned. Another time, he heard some scientists discussing new discoveries in electricity. One said that electricity could travel directly along a length of wire several miles long. Someone asked if the flow of electricity was slowed down by the length of wire. The scientist answered no. Samuel Morse's mind was filled with ideas. What if he could build a device to send a message instantly along a wire of any length? What if the wire reached across the United States? What if it went around Earth?

In 1835, Morse became professor of art at New York University. He also began work on a communication device. He developed a code—a combination of dots (short tones) and dashes (long tones)—for each letter of the alphabet. The codes would be sent from a transmitter through a length of wire to a receiver. A magnet on the receiver would move a marker on a strip of paper, writing out the coded message. An example of the now world-famous Morse code is the signal for distress: dot dot dot (S) dash dash dash (O) dot dot dot (S).

By 1837, Morse was ready to send his first message. He ran a 1,700-foot length of copper wire, almost the length of six football fields, around his workroom. Tapping a switch-like device called a key, he sent a message from the transmitter to the receiver. The experiment was a success. Morse named his device a “telegraph,” after the Greek word meaning “to write far.” He demonstrated the telegraph in 1838, at the Franklin Institute in Philadelphia. In 1844, Morse and some partners began construction of a forty-mile line of wire between Baltimore and Washington, D.C. In May 1844, it was time for the ultimate test. Morse set up the telegraph at the Supreme Court Building in Washington. He keyed a message over the forty-mile line to an associate in Baltimore. The associate received the message instantly and returned it instantly.

By 1851, there were fifty telegraph companies operating in the United States. Thirteen telegraph companies joined together in 1856 and became known as Western Union. In 1861, Western Union built the first transcontinental telegraph line. Since Morse's death in 1872, great improvements in communication technology have been made based on his invention.

Today a variation of the Morse code makes it possible for individuals with physical challenges to communicate. This computer-accessible, alternative communication method, called "Morse 2000," can be used by those who are paralyzed or cannot speak. Like the original Morse code, Morse 2000 is a series of signals. A person can blink an eye, push or pull, puff, or make other movements to work the program. Special software causes the computer to respond as if the person were typing on a keyboard. The computer converts the Morse movements into text and graphics. Dr. Thomas W. King, director of the Morse 2000 Outreach program at the University of Wisconsin, reports that the program is easier to learn than sign language. Dr. King believes that Morse 2000 may become the "manual language for the next millennium."

It all began with one man's determination and hard work. Years of living on very little money and without support did not discourage Samuel Morse. He worked until he made his dream come true.

Grade 7 Narrative

An Unforgettable Day

Kristen's day did not begin the way she had anticipated. Everyone in her family had overslept, and getting ready had been like sprinting toward the finish line in a mile relay. She had already missed her bus, and her brother, Steve, shouted that he would take her to school only if she could be ready quickly, because he had a physics test first period. She scrambled around her dark room in the cold, winter morning, searching for shoes and rummaging through drawers for something easy to put on. She snatched a banana on her way out the door while pulling on her jacket and grabbing her backpack.

Kristen opened the car door and settled into the seat before buckling the seat belt. She was beginning to think her day would be fine after all. She wasn't bouncing along in the cold school bus; instead, she was sitting comfortably in the back seat of the car. Steve would soon be dropping her off at the school's front door. Kristen's attitude began to change when her side of the car began to make a loud noise, and the ride abruptly turned bumpy. Steve slowly brought the car to a halt on the side of the road, stepped out, and noticed the flat tire.

Steve set out red warning flares behind the car and unhappily pulled the spare tire from the trunk. He had Kristen stand to the side of the road and direct the beam of a flashlight toward the flat tire so he could see better while changing it. Both Kristen and her brother were shivering silently in the icy breeze. Steve was concentrating on removing the flat tire and replacing it with the spare; Kristen was contemplating what would be happening at school when she arrived. She was hoping that Mr. Breyer had completed the lesson and that her classmates would be occupied working on their homework problems, so she could slip in unnoticed. Steve finished tightening the spare tire on the car and dropped Kristen off at school.

Kristen entered the school swiftly, went to the office, received a late slip, and hurried to class. She was relieved to see everyone hard at work. She slipped into the room and closed the door silently, only to have her backpack fall from her shoulder onto the floor with a resounding thud. Kristen handed Mr. Breyer her late slip and went to her seat to begin the assignment.

As Kristen extended her hand to reach for a pencil in her bag, she noticed that she was wearing two sneakers that didn't match. In her haste to get dressed quickly this morning, she had grabbed one that was brightly striped and another that was cherry red.

After class, Kristen went to her locker and changed into her gym shoes. She then reached in her backpack to retrieve her science homework only to discover she had left the completed assignment at home.

As Kristen and her friends strolled to the cafeteria for lunch, Kristen was hoping

that the afternoon would go more smoothly. She did not want the rest of her day to be like the morning.

At the lunch table, Kristen talked with her friends while drinking milk and eating the cafeteria's daily special—chili and cornbread. "With everything that has happened this morning, I will be happy when today is over," Kristen said. "I can't remember when I've had a day like this one has been so far."

Her friends tried to encourage Kristen to think positively. They all began to discuss the topic for a writing assignment they were to complete during language arts class that afternoon. During the previous day's class, they had read a short story titled "When Life Hands You Lemons, Make Lemonade." They had discussed the theme—Make the best of every situation. Today, they were supposed to incorporate that theme in an original narrative.

"Well," Kristen said to her friends, "I know exactly what I'm going to write about!"

Kristen stopped at her locker on the way to class. Smiling to herself, she took off her white gym shoes and put on the mismatched pair she had worn to school.

Today had been a good day after all.