Dear Family Member:

This week we’re reading an article about someone who helped improve the lives of Latino farmworkers in California. In “Taking the Lead,” Dolores Huerta organized a group that helped transform the lives of farmworkers by helping to build affordable housing and encouraging farmers to increase the workers’ pay. I’ll take the facts I’m learning in this article and use them to form my own opinions.

This Week’s Skills

Comprehension: fact and opinion

Vocabulary: Latin, Greek and other Linguistic roots

Spelling/Phonics: prefixes mis, dis, non, and un

Name ________________________________
Can I Quote You?

Let’s read “Breakfast Club.” We can decide what are facts and what are opinions in the passage.

**Breakfast Club**

“I hate oatmeal,” Derek yelled. Derek was only three years old, so he yelled a lot.

“It doesn’t matter to me,” his brother Jake said. “But oatmeal is healthy; it’s good for you. If you don’t want to eat it, just be quiet, okay?”

Caroline, who was the boys’ sister, and knew everything, interrupted: “I guess it doesn’t matter, Derek. But if you don’t eat your oatmeal, you won’t grow. You’ll stay three feet tall for the rest of your life.”

Of course, that made Derek cry. The whole point of being three was to get bigger—as big as Jake.

Derek whispered to Jake, “Tell her I ate my oatmeal, okay?”

“I think you’re mean,” Jake glared at Caroline.

“No, I’m not,” said Caroline. “I just happen to know that eating food helps kids grow.”

“Wow, look at the time,” said Jake. “It’s already seven-thirty. We better run or the bus driver will have a fit.” Jake yelled at Caroline as he ran for his books.

“I go to school, too,” Derek wailed.

“Don’t worry. Nursery school doesn’t start until nine o’clock.” Caroline said. “Mom’s coming down the stairs right now.”

Derek whispered, “Tell her I ate my oatmeal, okay?”
Ejercicio de palabras

PALABRAS DE VOCABULARIO
- decades
- active
- transform
- volunteer
- violated

Tiempo de cambio Vamos a inventar un relato sobre cómo cambiar algo. Vamos a usar todas las palabras de la lista en el relato.

PALABRAS DE ORTOGRAFÍA
- unplug
- nonstop
- distrust
- unable
- misplace
- mislabel
- mislead
- uncover
- unclean
- disloyal
- nonfiction
- nonsense
- disbelief
- discourage
- uncertain
- uncomfortable
- misstep
- disappoint
- misnumber
- nonfat

¿Dónde está lo que falta? Voy a decir una de las palabras de ortografía sin el prefijo mis, dis, non o un. Dime el prefijo que corresponde y deletrea toda la palabra en voz alta.

Queridos familiares:

Esta semana estamos leyendo un artículo sobre alguien que ayudó a mejorar las vidas de los trabajadores agrícolas latinos en California. En “Taking the Lead” Dolores Huerta organizó un grupo que ayudó a transformar la vida de los trabajadores agrícolas ayudándolos a construir casas de acuerdo a sus ingresos y alentando a los granjeros a incrementar el pago a los trabajadores. Voy a tomar los hechos que estoy aprendiendo en este artículo para formar mi propia opinión.

Destrezas de la semana

Comprensión: hechos y opiniones
Vocabulario: raíces griegas, latinas y otros lingüístico
Ortografía/Fonética: prefijos mis, dis, non y un

Nombre __________________________________________________________________________
"I think you’re mean," Jake glared at Caroline. "No, I’m not," said Caroline. "I just happen to know that eating food helps kids grow.”

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Comprehension Check

**Summarize**

Use a Chart to record facts and opinions about Marie Curie and her work. Use the information in the chart to summarize the book.

<table>
<thead>
<tr>
<th>Fact</th>
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**Think and Compare**

1. Reread the Introduction on page 2. Find one opinion. Then find a fact. *(Fact and Opinion)*

2. Do you think Marie showed wisdom by experimenting with radium without knowing of its dangers? Explain your answer. *(Analyze)*

3. Marie served as a role model for women in her day. Who is an outstanding role model for women today? Explain your choice. *(Synthesize)*
Introduction

You may know people who like to talk about themselves. Marie Curie was not that kind of person. She went about her work quietly and cautiously. She didn’t brag about what she did, although she could have. She was a woman of great wisdom. Marie Curie made discoveries that transformed the world.

Marie Curie’s work opened up a new field of medicine called radiology. Her experiments led to better ways of treating people with cancer and other diseases.

She was the first woman ever to win a Nobel Prize. This is a special prize given each year to people who do important work. Years later Marie won a second Nobel Prize. She was the first person ever to do so.

Marie Curie lived at a time when few women were able to be scientists. She was born poor and was often ill. Yet she rose above all that to become a hero to the world. Her story has inspired millions of people. It is sure to inspire you too.

Glossary

atom (AT-uhm) the smallest particle of a chemical element that has all the properties of that element (page 10)

element (EL-uh-muhnt) one of the materials from which all other materials are made. There are more than 100 known elements, including iron, oxygen, and gold. (page 10)

physics (FIZ-iks) the science that deals with matter and energy and the laws governing them (page 8)

radiation (ray-dee-AY-shuhn) energy given off in the form of waves or very tiny particles (page 10)

radioactivity (ray-dee-oh-ak-TIV-i-tee) the giving off of energy in the form of rays. The rays are given off during a process in which atoms of one element split apart. (page 10)

radium (RAY-dee-uhm) a white metal that is highly radioactive. It is used to treat cancer. (page 10)

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Radium Institute, 14, 16
Sorbonne, 6, 8, 14, 16, 18
Today the entire world owes much to Marie Curie. Thanks to her, millions of cancer patients now live with new treatments and new hope for the future.

Marie Curie Time Line

- 1867: Maria Sklodowska is born.
- 1886: Maria becomes a governess.
- 1891: Maria enters the Sorbonne; changes name to Marie.
- 1895: Marie marries Pierre Curie.
- 1903: The Curies win the Nobel Prize in Physics.
- 1906: Pierre dies; Marie becomes professor at the Sorbonne.
- 1911: Marie wins the Nobel Prize in Chemistry.
- 1934: Marie Curie dies.

Marie Curie led the way for women to become accepted as serious scientists.
Chapter 1
A Difficult Childhood

Marie Curie was born in Warsaw, Poland, in 1867, as Maria Sklodowska (skluh-DAWF-skuh). She was the youngest of five children.

Maria's parents were both teachers. Her father taught science in a boys school. Her mother was the head of a girls school. They raised their children to study and work hard. Maria had an active mind and learned quickly. She became the top student in her class.
Marie Curie worked hard during the war. She was now in her fifties. Her work with radium left her even more pained and tired than before. Yet Marie couldn't relax. She traveled to the United States twice—in 1921 and 1928. Each time she raised funds for the Radium Institute. She returned to France feeling ill and worn out.

Thanks to Marie, important work continued at the lab. It had more radioactive material than any other lab in the world. Scientists found new ways to kill cancer cells with radiation.

Over time, Marie grew weaker. Her eyes began to fail her. Finally, in 1934, her body could take no more. Marie died of a blood disease caused by her many years of working directly with radium.

The world was very sad when Marie died. She had done great things to help others. She was buried near the Sorbonne. People in Poland also honored Marie, a hero from their country.

Maria grew up in a loving home. Yet she had to deal with many painful losses. Her oldest sister, Sofía, died of typhus when Maria was only eight. Two years later, Maria's mother died of tuberculosis. Maria had been very close to both of them. While playing, she often pretended to be a doctor. She dreamed of finding a cure for all sicknesses. Little did Maria know that one day a small part of her dream would come true.

Throughout high school Maria remained a top student. She finished first in her class. She wanted to go to college to study science and medicine. Yet she knew that was impossible. Women in Poland were not allowed to attend college. This did not violate the law of that time.
Maria’s dream of college didn’t fade, however. She planned to leave Poland and attend the Sorbonne, a university in Paris, France. To get ready, she attended a school in Warsaw for women only. It was called “The Floating University.” The daring students met secretly in people’s homes to study.

Maria faced another problem. She needed money to pay for the Sorbonne. At age 18, she took a job in Warsaw as a governess. She took care of young children and was responsible for teaching them in their homes. Maria worked as a governess for seven years.

X-Rays
Marie Curie used X-rays, but she did not discover them. That credit goes to Wilhelm Roentgen (RENT-guhn), a German scientist. He first noticed the strange rays in 1895. Not knowing what they were, he called them “X”-rays. They could pass through flesh, but not through bone. That made them perfect for seeing inside the human body.

X-rays of a child’s hands show that there is room for bone growth. Adult hand bones are closer together.
After Pierre’s death Marie did her best to stay strong. She hid her pain and buried herself in work. Marie became the Sorbonne’s first woman professor. She also became head of the school’s new physics lab, the Radium Institute.

Marie needed workers to help her. She knew how hard it was for women to find jobs as scientists. So she hired many women to assist in the lab. Marie continued to study how radium affects diseased cells. She wanted to make an even purer form of radium. In time Marie did just that. In 1911 she won the Nobel Prize in Chemistry for her work.

In 1914 World War I began. Marie volunteered to help the French soldiers. She came up with a wise idea. She raised money to buy about 200 X-ray machines. She had each machine placed in its own truck. Marie then taught teams of women how to take X-rays. The trucks crisscrossed the battlefield and drove to injured soldiers. X-rays showed exactly where the soldiers were injured. Doctors could then operate on the soldiers at once. Marie’s invention saved both time and lives.
Chapter 2
A Pursuit of Science

Think of how you feel when a dream comes true. That’s how Maria felt in 1891. She was finally going to the Sorbonne. She was 24 years old. She changed her named from the Polish “Maria” to the French “Marie.”

At the Sorbonne, Marie spent long hours studying. She studied math and physics. She proved to be a wizard at both subjects. In 1893 she finished college first in her class. She continued her studies and got higher degrees in math and physics.

Marie spent long hours in her lab. Often she felt tired. Sometimes she got burns on her skin. She was suffering from the radium’s powerful rays. But Marie didn’t want to think about radium’s possible harm. She thought only about its power to cure.

Sadly, Marie soon faced tragedy. In 1906 Pierre died in an accident. He had been walking by himself on a rainy afternoon. He stepped off a curb to cross the street and was hit by a horse and wagon. He was killed instantly.

The Sorbonne was founded in the thirteenth century.
Chapter 3
More Science Breakthroughs

Marie continued to study radium in her lab. She wanted to learn how this new element might be used to fight illness.

As Marie worked she found out how strong radiation really was. She saw that it could kill healthy human cells. That was a bad thing. Yet, Marie had a more hopeful thought: perhaps radium could also kill diseased cells.

After college, Marie took a job in a science lab. There she met Pierre Curie, a college physics teacher. The two shared the same interests. They married in 1895.

Marie and Pierre began to work together. Their friend Henri Becquerel (ah-REE be-kuh-REL) was interested in a mineral called uranium (yoo-RAY-nee-uhm). Becquerel asked Marie to study this mineral.

What's in a Name?
Uranium is a hard, heavy, silver-white metal. It was discovered in 1789 by German scientist Martin Klaproth (KLAHP-roht). He named it after the planet Uranus, which had been discovered eight years earlier.

Marie spent one hour each day teaching her children, Irene (at left) and Eve. Then she returned to her laboratory to work.
Marie studied the faint rays, or **radiation**, that uranium produced. She wanted to learn what caused the rays. She performed chemical tests on the mineral. She also tested other minerals that gave off similar rays. Soon Marie formed an idea. She believed the rays came from inside uranium’s **atoms**. She invented a new word to describe the process: **radioactivity**.

By 1898, Pierre began to help Marie in the lab. They worked to separate the radioactivity from uranium and other minerals. After a year of work, Marie reached her goal. She discovered a new **element**. She called it polonium, in honor of her homeland, Poland. Later, Marie discovered a second new element. She named it **radium**, from the Latin word for “ray.”

News of the discoveries spread around the world. The Curies became famous. In 1903 they were honored for their work on radioactivity. They and their friend Henri Becquerel shared the Nobel Prize in Physics.

**Tiny Little Things**

It was not easy for Marie Curie to study the atoms inside uranium. An atom is a tiny particle. It is so small that the tiniest speck of dirt has more than ten billion atoms in it. Marie Curie studied how the parts of an atom can create radioactivity, which produces powerful energy.

An atom has three parts to it: electrons, protons, and neutrons.