GERMAIN

Nant to Be a Mathematician Lician Lician Lician

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What would you do if you loved math but weren't allowed to learn about it?

This is the story of Sophie Germain (jur-MANE) who lived over two hundred years ago in France. She was born in 1776, a time when many people thought women could not study.



Sophie loved to read. One day she read about the great mathematician Archimedes (ahr-kuh-MEE-deez). She wanted to know as much about numbers and shapes as he did.



Sophie read about math all day and all night.

Her parents started to worry about her. They thought that too much studying would make her sick, so they told her to stop. But, secretly, Sophie still studied at night. When the house was dark, she bundled up in her quilt and worked on math problems by candlelight. She knew Archimedes would not let anything keep him from mathematics.

Many mornings her parents would find her asleep at her desk.





"Sophie," said her parents, "all this studying will make you sick!" "I'll get sick if I can't study!" Sophie said. "Please, I love mathematics so much!"

At last they agreed to let her learn at home. Over the years, she read every mathematics book in her house.

But Sophie still wanted to learn more.



Then she heard about a new school for math and science. But it was only for men. Sophie's friends shared what they learned in class. The things that she learned gave her ideas for new ways to solve problems.





She wrote to the teacher to share her ideas, but she always signed her letters with a man's name. No one would believe that a woman could know so much about math.



Sophie entered a math contest. The problem she had to solve was very hard. After five years of work, she was able to show why vibrating sand grains always move to form the same patterns. She won the contest. Sophie Germain spent her whole life doing what she loved studying math. Sophie was one of the first women to be given a medal for mathematics. Her story helped people understand that both boys and girls can become mathematicians.





For Teachers and Parents

SOPHIE GERMAIN 1776–1831

H. J. Mozans, a historian and author of Women in Science, said of Germain: "All things considered, she was probably the most profoundly intellectual woman that France has ever produced."

Scholar

In her teens, Sophie Germain taught herself Latin, Greek, and mathematics.

She learned advanced mathematics at home, using borrowed lecture notes.

She corresponded with leading mathematicians of her time, often using a man's name.

When a German mathematician was trapped by the French occupation of his city, she used her influence to keep him safe.



Mathematician

In 1815, Sophie Germain won a gold medal for her theories involving elastic surfaces and work on Fermat's Last Theorem.

She became the first woman invited to attend lectures at the Academy of Sciences.

Math & Science

Mathematician

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