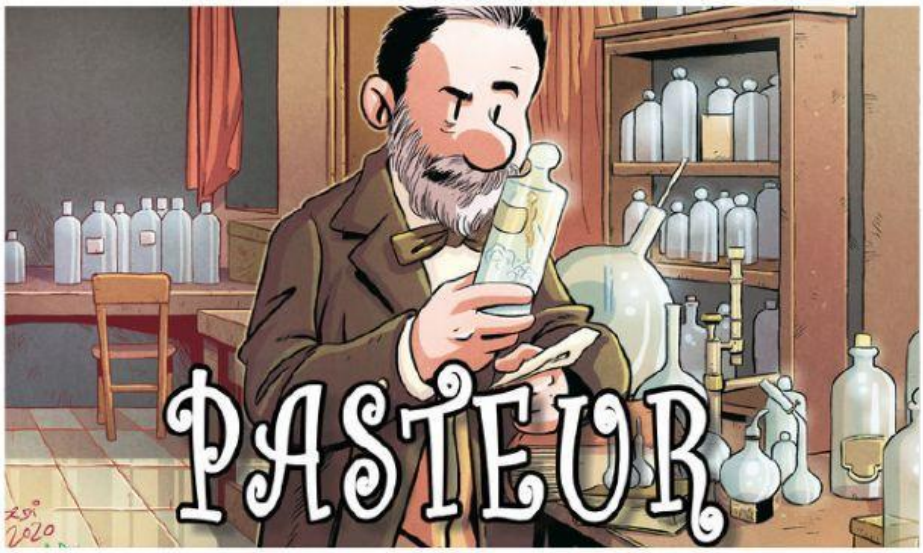
LOUIS PASTEUR



- **Occupation:** Chemist and microbiologist
- **Born:** December 27, 1822 in Dole, France
- **Died:** September 28, 1895 in Marnes-la-Coquette, France
- **Best known for:** The discovery of vaccinations, pasteurization, and proving that germs cause disease.
- His family was poor and during his early education he was an average student who enjoyed art and singing. However, when Louis was exposed to science as a teenager, he knew he had found his calling.

In 1838, Louis _____ (GO) to college to become a science teacher. He _____ (EARN)degrees in mathematics, physics, and chemistry. He _____ (BECOME) then a chemistry professor at the University of Strasbourg.

While at the University he _____ (FALL) in love with the daughter of the university's rector, Marie Laurent. He and Marie _____ (MARRY) in 1849. They _____ (HAVE)

five children, however, three _____ (DIE) young from typhoid fever. It _____ (BE) the deaths of his children that _____ (DRIVE) Louis to investigate infectious diseases in order to find a cure.

Bacteria and Germ Theory

During Pasteur's time, people _____ (BELIEVE) that microbes such as bacteria _____ (APPEAR) due to "spontaneous generation." They_____ (THINK) that the bacteria just _____ (APPEAR) out of nowhere. Through his experiments he _____ (PROVE) that germs (bacteria) _____ (BE) living things that _____ (COME) from other living things. They didn't just spontaneously appear. This was a major discovery in the study of biology and earned Pasteur the nickname the "Father of Germ Theory."

Pasteurization

Pasteur _____ (USE) his knowledge of germs to investigate how beverages such as wine and milk were spoiled by microbes such as bacteria and molds. He _____ (FIND) that heating up the liquids would kill most of the microbes and allow the beverages to last longer and be safer to drink. This process _____ (BECOME) known as pasteurization and is still done on many foods such as milk, vinegar, wines, cheese, and juices.

Silk Worms

As Pasteur _____ (LEARN) more and more about bacteria, he _____ (BEGIN) to think they may be the cause of disease in humans. Pasteur _____ (DECIDE) to investigate. He _____ (DISCOVER)that this disease was caused by microbes. By eliminating the microbes from the silkworm farms, he

_____ (BE) able to end the disease and save the French silk business.

Vaccinations

Pasteur _____ (CONTINUE) to investigate with diseases. He _____ (FIND) that he _____ (CAN) make a weak form of a disease that would cause people to become immune to the stronger form of the disease. He _____ (CALL) this weak form a "vaccine." He first _____ (DISCOVER) this by working with cattle on the disease anthrax. The first vaccine he _____ (GIVE) to a human was the rabies vaccine. He _____ (ADMINISTER) it to a nine year old boy name Joseph Meister in 1885.

LEGACY

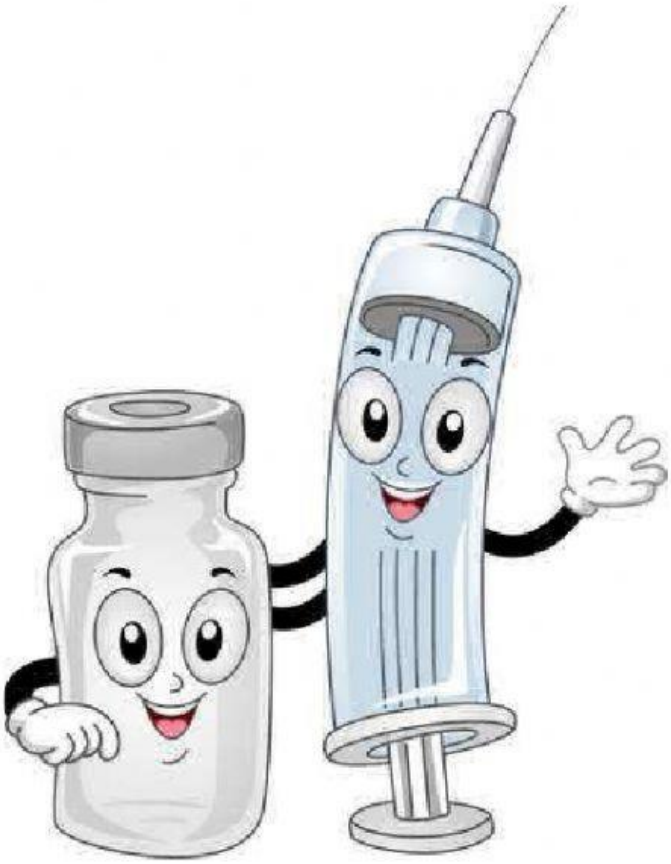
Today Louis Pasteur is known as one of the most important scientists in history. His discoveries led to an understanding of microbes and diseases that has helped to save millions and millions of lives.

Pasteur is most remembered by the Pasteur Institute which he established in 1887. Today the Pasteur Institute is one of the world leaders in battling infectious diseases.

Louis Pasteur died in 1895 from a stroke. He was buried in the Cathedral of Notre Dame in Paris, France.

Interesting Facts about Louis Pasteur

- Early on in his career Pasteur studied crystals and discovered why some crystals bend light while others do not.

- He was a deeply religious Christian throughout his life.
- Pasteur's ideas on micro-organisms causing disease eventually led to the boiling of surgical instruments helping to prevent infections and causing many people to survive surgery.

He once said that "In the field of observation, chance favors the prepared mind."