DISCOVERED BY CHANCE

The microwave



In 1946 Percy Spencer, an engineer for the Raytheon Corporation, was working on a radar-related project when he made the discovery. While he was testing a new vacuum tube, he discovered that a chocolate bar he had in his pocket melted more quickly than he could expect.

He became intrigued and started experimenting by aiming the tube at other items, such as eggs and popcorn kernels. Spencer concluded that the heat the objects experienced was from the microwave energy.

Soon after, on October 8, 1945, Raytheon patented the first microwave.

The first microwave weighed 750 pounds (340 kg) and stood 5' 6" (168 cm) tall. The first countertop microwave was introduced in 1965 and cost US$500.

X-rays

In 1895, a German physicist named Wilhelm Roentgen was working with a cathode ray tube when he made the discovery.



Despite the fact that the tube was covered, he saw that a nearby fluorescent screen would glow when the tube was on and the room was dark. The rays were somehow illuminating the screen.

Roentgen was trying to block the rays, but most things that he placed in front of them didn't seem to make a difference.

When he was placing his hand in front of the tube, he noticed he could see his bones in the image that was projected on the screen.

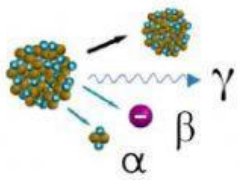
He replaced the tube with a photographic plate to capture the images. In this way he created the first X-rays.

Soon after, medical institutions and research departments adopted this technology - unfortunately, some other years passed by, before people understood the risk of X-ray radiation.

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Radioactivity

In 1896, intrigued by the discovery of X-rays, Henri Becquerel decided to investigate the connection between them and phosphorescence, a natural property of certain substances that makes them give off light.



Radioactivity

Becquerel tried to expose photographic plates using uranium salts that he hoped they could absorb "x-ray" energy from the sun. He thought he needed sunlight to complete his experiment, but the sky was overcast.

Yet even though the experiment couldn't be completed, while he was developing the plates, he found that the images showed up clear anyway – the uranium emitted radioactive rays. He theorized and later showed that the rays came from the radioactive uranium salts.

Insulin

The discovery that later allowed researchers to find insulin was an accident.



In 1889, two doctors at the University of Strasbourg, Oscar Minkowski and Josef von Mering, were trying to understand how the pancreas affected digestion, so they removed the organ from a healthy dog.

A few days later, they noticed that flies were swarming around the dog's urine - something abnormal, and unexpected.

They tested the urine and found sugar in it. They realized that by removing the pancreas, they made the dog develop diabetes.

Those two never figured out what the pancreas produced that regulated blood sugar. But, while researchers were making a series of experiments that between 1920 and 1922, they could isolate a pancreatic secretion that they called insulin.

Their team was awarded the Nobel prize, and within a year, the pharmaceutical company Eli Lilly was making and selling insulin.

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Coca Cola



The inventor of the Coca-Cola wasn't a shrewd businessman, John Pemberton just wanted to cure headaches. A pharmacist by profession, Pemberton used two main ingredients in his hopeful headache cure: coca leaves and cola nuts. When his lab assistant was working on this mixture, he accidentally mixed the two with carbonated water, the world's first Coke was the result. Over the years, nowadays recipe is secret. But sadly, Pemberton died two years later and never saw his simple mixture give birth to a soft drink empire.

Newton and gravity



In his book, Roberts recounts Sir Isaac Newton's discovery of gravity (using Newton's own descriptions and notes). Newton was sitting in his yard when he noticed an apple that fell from a tree. The apple fell straight down, perpendicular to the ground, and Newton found himself wondering why the apple never falls upward or off to a side. Newton soon realized that it was a property of all matter to have an attractive force, including the apple, and even the moon. There were other 20 years before Newton published his detailed theory of gravity, but he later visited the tree that helped him provoke the idea.[1] Newton had the opportunity to elaborate this gravity theory because of the time he was locked down home due to the bubonic plague

Taken and adapted from

https://www.sciencealert.com/these-eighteen-accidental-scientific-discoveries-changed-the-world

https://en.wikipedia.org/wiki/List_of_discoveries_influenced_by_chance_circumstances

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Comprehension questions:

What were these people doing when they discovered such inventions?

Use a complete idea using when/while or as.

Percy Spencer	*While he was testing a new vacuum tube during his project, he discovered that some food heated from the microwaves.*
Wilhelm Roentgen	
Henri Becquerel	
Oscar Minkowski and Josef Von Mering	
John Pemberton	
Isaac Newton	

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2. Answer the questions below according to the reading above. Use short answers in this case, one or 2 words.

How much did one of the first microwaves cost? $500

What did the X-rays project in the screen when they were discovered?

According to Becquerel, what element emitted rays?

During the insulin discovery, what kind of illness did the dog develop?

What did Coke creator do for a living before Coca cola?

What kind of plague was Newton running away from, when he discovered gravity?

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