

Medicine topic 3a knowledge organiser: How did knowledge of illness and disease and hospital care improve during the Enlightenment? (1700-1900)

Lesson 1: What was germ theory and why was it an important discovery?

Key words for this lesson:

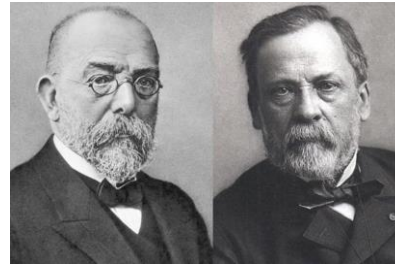
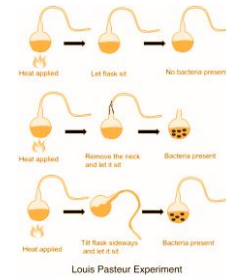
The Enlightenment: A time period where people started thinking for themselves.

Microbes: Living things (including bacteria that) are so small they can only be seen under a microscope.

Decaying Matter: Material like animals or vegetables that is rotting.

Spontaneous Generation: Belief rotting matter created microbes

Scientists thought microbes were caused by disease and appeared because of illness. This was the theory of **spontaneous generation**. Instead of blaming microbes, people looked for miasmas. Louis Pasteur was employed in 1857 to find out why liquids like wine and vinegar go bad. His answer was to blame germs in the air. He proved there are germs in the air by **sterilising** water and keeping it in a **Swan neck flask** that didn't allow airborne particles to enter. This stayed sterile – but sterilised water kept in an open flask bred **microbes** again. Dr Henry Bastian defended the belief of spontaneous generation. In Calcutta the British did not believe his theory and blamed cholera on miasma in the soil.



Lesson 3: Why was there rapid change in the understanding of illness and disease?

Key words for this lesson:

Rapid: Fast/ quick

Laissez Faire: Do nothing/ leave it be

Institutions: Groups that controlled ideas/ society: The government

The British government became more aware of the need to find solutions to problems as more and more people could vote. They slowly moved away from laissez faire attitudes. Communication was important as Tyndall's work in germs causing diseases was based on the ideas of Lister and Pasteur. Clearer images under more powerful microscopes also made it easier to make discoveries. Koch developed ways to grow microbes and Joseph Petri developed the petri dish. Pasteur was also important as his germ theory, however it took until 1880 for this to be accepted as fact.

Lesson 2: Why was Robert Koch important?

Key words for this lesson:

Culture: Bacteria grown under controlled conditions

Bacteriology: The study of bacteria

Petri dish: Made it easier to look at bacteria under a microscope



Robert Koch: A German scientist. He began linking diseases to the microbe that caused that specific disease. Koch used **dyeing techniques** to colour microbes, which he viewed through high-powered microscopes. He identified anthrax spores and the bacteria that cause septicemia, tuberculosis and cholera. Used agar jelly, petri dish and microscopes.

Lesson 4: How and why had hospitals changed by 1900?

Key words for this lesson:

Crimea: A region in Russia where a war had broken out

Pavilion Plan: Nightingale's hospital design

Ventilation: Opening windows to allow air through

Florence Nightingale brought discipline and professionalism to Nursing. She Went out to the Crimean War to sort out nursing care in the English camp. She made huge improvements in the death rate, due to improvements in ward hygiene. When she returned home, she wrote '**Notes on Nursing**' and '**Notes on Hospitals.**' She also set up a hospital in London called the **Nightingale hospital**. She said surfaces should be clean and encouraged **ventilation** through a **pavilion plan**.

