# Assess the impact of technology on the development of cell

Technology

Assess the impact of technology on the development of cell theory. In particular, include the development of the microscope and give evidence where possible. By sashimi Since Galileo began using a rudimentary compound microscope in 1609, whole new ranges of objects not known to even exist were discovered from that basic piece of technology. The microscope played the key role in discovering cells, and as it advanced with technology, so too did the cell theory. In 1665, scientist Robert Hooked used a microscope to look at slices of cork.

He noticed hat the cork was divided up into hundreds of tiny little compartments that he named cells. Hooked was the first person to acknowledge cells, and this was when the cell theory began. In 1758 a spectacle manufacturer John Dollar, patented an almost completely achromatic lens that made color-free refracting telescopes possible. Later on in 1821 Giovanni Battista Mica attempted to increase the resolution of the microscope, and invented the oil immersion techniques that brought microscopes to their greatest resolution, allowing far more detailed scientific work to progress.

A French microscopic Henry Trochee in 1824, proposed that all organisms are made of cells. There was general support of this theory in the scientific community, as experiments undertaken seemed to point towards this. However, a lot of people still believed in spontaneous generation. It wasn't until 1864 that Louis Pasteur dispelled the theory of spontaneous generation through an experiment with microbes on dust particles becoming lodged in swan necked flasks. Air entered the flask but no microbes grew in the boiled broth inside he flasks.

Pasteur developed heat sterilization techniques and used the most powerful sort of compound microscope of the day to look at the bacteria. Although difficult to see, Pasteur could see that they were multiplying. His discovery was important in disproving the spontaneous generation theory of cells, in which cells were created out of nothing. In 1831 a British botanist Robert Brown noticed what he named the cell nucleus, which biologist Matthias Schlemiel suggested might be important for cell division, but loud find no evidence to back it up.

Schlemiel, in 1838, then proposed that all plant tissues were made up of cells, or things made by cells. A friend of his, Theodore Schuman worked with animals, and concluded that all animals were made of cells. He brought his and Children's work together in 1839 to form the cell theory we know today: that all organisms are made of cells, cells are the fundamental units of life and all cells are created from other cells. The modern cell theory as we know it today was mound using the most technologically advanced microscope, developed in 1880.

This microscope showed not Just the shapes in cell, but the detail also, and is the sort of microscope that is used in senior schools. Schlemiel and Schuman thought that cells reproduced by budding to make new cells, but a German physician called Rudolf L. C Birch introduced the idea that they reproduce by dividing. This was confirmed in 1879, and the process was named mitosis, the final discovery that completed the basic cell theory we know today.