





Lesson 1

Leading Scientists & Experts

SUB-SECTION	NAME	BORN - DIED	NOBEL PRIZE	MAIN EXPERTISE	IMAGE
1.3	Antonie van Leeuwenhoek	1632 - 1723		<ul style="list-style-type: none"> ▪ Antonie van Leeuwenhoek was the first person to see microbes! ▪ A cloth trader by profession, he had a passion for lens-making and microscopy. ▪ Using his unique lenses, Leeuwenhoek was able to examine the microbial world at magnifications as high as 250x. ▪ He described the world of bacteria, microbes and even sperm and referred to these microscopic creatures as "animalcules". 	

SUB-SECTION	NAME	BORN - DIED	NOBEL PRIZE	MAIN EXPERTISE	IMAGE
1.3	Robert Hooke	1635 - 1703		<ul style="list-style-type: none"> ▪ Robert Hooke was an English philosopher, architect and a scientist. ▪ Using compound microscopes he described minute biological structures and organisms published in his book - "Micrographia: or Some Physiological Descriptions of Minute Bodies... [1665]". ▪ In his observation of the microscopic structure of cork he was the first to coin the term "CELL". ▪ Hooke's achievements also include the formulation of "Hooke's Law" in physics that measures elasticity. 	

SUB-SECTION	NAME	BORN - DIED	NOBEL PRIZE	MAIN EXPERTISE	IMAGE
1.3	Theodor Schwann	1810 - 1882		<ul style="list-style-type: none"> ▪ Theodor Schwann, a German animal physiologist, discovered the digestive enzyme – Pepsin. ▪ He also demonstrated that fermentation is dependent on yeast. His microscopic studies of animal tissues led him in collaboration with Matthias Schleiden to formulate the "Cell Doctrine" (See Schleiden). 	
1.3	Matthias Jacob Schleiden	1804 - 1881		<ul style="list-style-type: none"> ▪ Born in Hamburg and studied at the University of Jena, Matthias Jacob Schleiden started his life as a law practitioner in Heidelberg. ▪ Schleiden's love for botany quickly became the focus of his life and as a botany professor, he published a book in which he stated that the various parts of the plant are comprised of nucleated cells [1838]. 	



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				<ul style="list-style-type: none">▪ Following this publication and in collaboration with Theodor Schwann they formulated the "Cell Doctrine[1838]" which states that:<ol style="list-style-type: none">1. all living organisms were made of CELLS2. CELLS were themselves ALIVE!	

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1.5	Michael Levitt	9 May 1947	2013	<ul style="list-style-type: none"> ▪ Michael Levitt is a biophysicist and a Professor for structural biology at the University of Stanford. ▪ Born in South Africa, Levitt moved to England where he studied mathematics and later on graduated with a Bachelor of Science degree in Physics [1967]. ▪ During his PhD, Levitt successfully developed computational programs for studying the conformations of molecules. This was the beginning of his work on computational modeling of the dynamics of macromolecules in water solutions. ▪ In 2013, Levitt together with two of his colleges, received the Nobel Prize in chemistry for "the development of multiscale models for complex chemical systems". 	