

Lesson 3 - Main Terms

UNIT	TERM	EXPLANATION	REFERENCE IMAGE / LINK
3.1	NCD - Non-communicable Disease	a chronic disease such as cancer, heart-disease and diabetes. These diseases are not contagious.	
3.1	Proteasome	a large enzyme complex tasked with degrading and recycling cellular proteins into their amino-acid building blocks.	https://pdb101.rcsb.org/motm/166 https://www.youtube.com/watch?v=-GwI-UrhpEo
3.2	Pathogen	a disease-causing agent such as bacteria, parasites, fungi and viruses. Derived from the Greek - <i>pathos</i> (suffering) and <i>genes</i> (the producer of),	
3.2	Agar	a jelly-like material obtained from algae and originally used in Far East cooking. Agar revolutionized microbiology by providing a stable solid surface on which bacterial colonies can be cultured.	
3.3	Viral plaque	areas in continuous cell cultures devoid of cell growth due to viral infection and spread	https://www.youtube.com/watch?v=er2dwOPwSRo http://www.virology.ws/2009/07/06/detecting-viruses-the-plaque-assay/
3.4	Communicable disease	infectious diseases spread by pathogens.	

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3.4	Viral capsid (capsomere)	a protein shell comprised of subunits called capsomers and functions to protect the viral DNA or RNA.	
3.4	Enveloped/ non enveloped virus	some viruses have a lipid envelope that covers and coats the capsid.	
3.6	Bacteriophage	viruses that infect bacteria.	https://www.youtube.com/watch?v=i9L-RoQ1frc
3.6	Cell line	an established pure cell culture, able to divide indefinitely.	
3.6	Cell culture	a method of growing cells outside of their organism of origin.	https://www.youtube.com/watch?v=RpDke-Sadzo
3.6	HeLa cells	a cell line used extensively in biological research. This cell line was derived from the cervical cancer of the patient Henrietta Lacks [1951].	https://www.youtube.com/watch?v=sXY6-wLesYY https://www.youtube.com/watch?v=22IGbAVWhro
3.6	Susceptible	cells that express the receptor for a given virus and consequently can be infected by that corresponding virus.	
3.6	Ubiquitin	a regulatory protein that tags and targets cellular proteins for degradation by the proteasome.	https://www.youtube.com/watch?v=u9EGAAys7ZU https://pdb101.rcsb.org/motm/60

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3.6	Cytopathic Effect - CPE	destructive structural effects on cells that can be caused by viral infections.	
3.6	Syncytium	syncytium (plural: syncytia) is a multinucleated cell that results from the fusion of several cells.	http://viralzone.expasy.org/all_by_species/5957.html
3.6	Structural Proteins	proteins that construct the virus, such as capsomers and spike proteins.	
3.7	Non-Structural Proteins	all the proteins coded for by the viral genome that do not contribute to the structure of the virus, such as viral polymerase.	