

1. Virus = nucleic acid + protein coat.
2. Virion = Complete virus particle able to infect a cell.
3. Capsid = The protective protein coat surrounding the nucleic acid.
4. Viruses can infect any living cell including human, animal, plant, bacterial and archaea cells.*
5. Phage = virus that infects bacteria.
6. General features of viruses are:
 - A. Virions have a single type of nucleic acid (either DNA or RNA).
 - B. Variability in size, host (human, animal, plant, bacteria), type of genome (DNA, RNA), structure, etc.
 - C. Unknown origin so far.
 - D. Unknown living status (inactive particles outside the host cells, living inside the cells).
7. Variability in genome is shown by the presence of DNA viruses and RNA viruses.
 - A. DNA viruses can be single-stranded (one strand) or double-stranded (two strands).
 - B. RNA viruses can be single-stranded or double-stranded.
 - C. Single stranded viruses can be positive-sense (acting like messenger RNA = it can be translated directly into proteins).
 - D. Single stranded viruses can be negative-sense (must be converted into positive-sense RNA before translation into proteins).
 - E. Single stranded viruses can be ambisense (part of it is positive-sense and the other part is negative-sense).

* NOTE: In this course, we are only interested in viruses that infect humans causing disease.