A2.3 Viruses (HL)

What the Cell · DP Biology · note-taking sheet · HL statements A2.3.1–6

Name _____ **Date** _____

How to use this sheet: go through the slides and videos with it, then close them and write from memory. Use your own words and add page numbers from the book (pp. 88–99) where you want more detail.

Guiding questions. How do viruses manage with so few genes? How do viruses differ from one another?

A2.3.1 Features shared by all viruses

The five features that all viruses share:

	Virus	**Bacterium**
Size		
Nucleic acid		
Ribosomes		
Outer surface		
Reproduction		

A2.3.2 Diversity of viruses

	Bacteriophage lambda	**Coronavirus**	**HIV**
Nucleic acid			
Strands			
Envelope?			
Host			

Three capsid shapes, with an example of each. How does a virus get an envelope?

A2.3.3–4 Lytic and lysogenic cycles

Draw the lytic cycle of phage lambda as a labelled cycle of five stages. Note what the virus takes from the host at each stage.

How does the lysogenic cycle differ? What is a prophage, and what can switch it into the lytic cycle?

A2.3.5–6 Origins and rapid evolution

Hypothesis	Idea	Evidence or example
Progressive		
Regressive		
Virus first		

Why are viruses thought to have several origins?

Three reasons viruses evolve fast. Antigenic drift and antigenic shift in influenza. Why HIV needs combination therapy.

Before you finish

Tick the ones you can explain without notes. Circle anything to ask about.

- ☐ Common features
- ☐ Virus vs bacterium
- ☐ Genome types
- ☐ Capsids
- ☐ Envelopes
- ☐ Lytic cycle
- ☐ Lysogenic cycle
- ☐ Prophage
- ☐ Origins
- ☐ Convergent evolution
- ☐ Antigenic drift and shift
- ☐ HIV variants