A3.1 Diversity of organisms

What the Cell · DP Biology · note-taking sheet · SL statements A3.1.1–11

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. 102–117) where you want more detail.

Guiding questions. How do we define a species? What patterns of genome diversity appear within and between species?

A3.1.1–3 Variation, shared traits and names

Why is shape alone not always enough to identify a species?

Write out the rules for a binomial name, with an example.

A3.1.4–5 Species and populations

State the biological species concept, and give two situations in which it cannot be applied.

Why is it difficult to decide when two diverging populations have become separate species?

A3.1.6–7 Chromosomes

State the diploid number in humans and chimpanzees. What does a karyogram show, and how are chromosomes arranged in one?

Outline the evidence that human chromosome 2 arose by fusion.

A3.1.8–10 Genomes

	Within a species	Between species
How much variation?		
Type of variation		

Does genome size match complexity? Give evidence.

A3.1.11 Sequencing

How have speed and cost changed? Give one current use and one possible future use.

Before you finish

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

- ☐ Variation
- ☐ Binomial rules
- ☐ Species concept and limits
- ☐ Populations and speciation
- ☐ 46 and 48
- ☐ Karyograms
- ☐ Chromosome 2
- ☐ SNPs
- ☐ Genome size
- ☐ Sequencing uses