A1.2 Nucleic acids

What the Cell · DP Biology · note-taking sheet · SL statements A1.2.1–10

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. 14–24) where you want more detail.

Guiding questions. How do nucleic acids store information that can be inherited? Which features of DNA allow it to be copied accurately?

A1.2.1–4 Building blocks

Draw a nucleotide, using a circle, a pentagon and a rectangle. Label all three parts.

What makes the backbone strong? List the bases in DNA and in RNA.

A1.2.5 RNA

Draw a section of RNA that is three nucleotides long. Then state how the nucleotides join.

A1.2.6 The DNA double helix

Draw a section of DNA with four base pairs. Show antiparallel strands, and label a covalent bond and a hydrogen bond.

A1.2.7 Differences between DNA and RNA

	DNA	RNA
Strands		
Sugar		
Bases		

Sketch ribose and deoxyribose, and circle the difference.

A1.2.8–10 Using the structure

How does base pairing allow information to be copied and used?

Why does DNA have an almost limitless capacity for information? Why is the genetic code evidence of common ancestry?

Before you finish

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

- ☐ Drawing a nucleotide
- ☐ The backbone
- ☐ Condensation
- ☐ Antiparallel strands
- ☐ Base pairs
- ☐ DNA and RNA
- ☐ Ribose and deoxyribose
- ☐ Storage capacity
- ☐ Common ancestry