B3.1 Gas exchange (HL)

What the Cell · DP Biology · note-taking sheet · HL statements B3.1.11–13

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. 292–294) where you want more detail.

Guiding questions. What adaptations let multicellular organisms exchange gases? How do flowering plants and mammals differ, and resemble each other, in gas exchange?

B3.1.13 Oxygen dissociation curves

What is partial pressure? Typical pO_2 in the lungs and in tissues:

Sketch the curve for adult haemoglobin. Label the axes, the lungs and the tissues.

Why is the curve S-shaped? (cooperative binding)

B3.1.11 Foetal and adult haemoglobin

Add the foetal curve to your sketch. Why does the foetus need it? What is the role of allosteric CO_2?

B3.1.12 The Bohr shift

Flow chart from CO_2 to oxygen release. Add a high-CO_2 curve to your sketch.

Benefit to actively respiring tissue:

Before you finish

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

- ☐ Partial pressure
- ☐ Reading the curve
- ☐ S shape
- ☐ Cooperative binding
- ☐ Foetal haemoglobin
- ☐ Allosteric CO_2
- ☐ Bohr shift
- ☐ Left and right shifts