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| *Human Perspectives ATAR Units 3 & 4* |

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Worksheet 6.2 Homeostasis of gas concentrations

Using Chapter 6 of *Human Perspectives ATAR Units 3 & 4*, complete the following activities.

**1** Draw and label a diagram of the respiratory system. Using red, trace the pathway of air going into the lungs. Using blue, trace the pathway of air being expired from the lungs.

**2** The table below lists structures involved in the exchange of gases and in the regulation of breathing. Complete the table by describing each structure and its function.

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| **Structure** | **Description** | **Function** |
| Lungs |  |  |
| Alveoli |  |  |
| Diaphragm |  |  |
| Intercostal muscles |  |  |
| Phrenic nerve |  |  |
| Intercostal nerve |  |  |
| Respiratory centre |  |  |
| Trachea |  |  |
| Bronchi |  |  |
| Bronchioles |  |  |
| Aortic body |  |  |
| Carotid body |  |  |

**3** Explain how oxygen, carbon dioxide and hydrogen ion concentrations influence breathing rate. Use steady state models to illustrate your answer.

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