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| **Consolidation checklist (Lessons 15–24)** | | | | | | | |
| Look at the points in each topic. Decide if you fully understand ( ) partly understand ( ), or do not understand ( ) each point and tick (✓) the relevant column. This will show you the areas that you need to work on after this lesson. | | | | | | | |
| **Topic** | **Specification reference** | |  |  |  | **Lesson number** | **Student Book pages** |
| **Movement of substances** | **A** | understand the processes of diffusion, osmosis and active transport by which substances move into and out of cells |  |  |  | 15, 17, 19 | 16−18 |
| **B** | understand how factors affect the rate of movement of substances into and out of cells, including the effects of surface area to volume ratio, distance, temperature and concentration gradient |  |  |  | 16, 17, 18, 19 | 16−18, 156 |
| **C** | *practical: investigate diffusion and osmosis using living and non-living systems* |  |  |  | 16, 18 | 157–158  Lab Book  13–24 |
| Problems with **Movement of substances**? Try questions 8 and 10 on page 24 of the **Student Book**. | | | | | | | |
| **Respiration** | **A** | understand how the process of respiration produces ATP in living organisms |  |  |  | 20 | 12−13 |
| **B** | know that ATP provides energy for cells |  |  |  | 20 | 12−13 |
| **C** | describe the differences between aerobic and anaerobic respiration |  |  |  | 21 | 12−15 |
| **D** | know the word equation and the balanced chemical symbol equation for aerobic respiration in living organisms |  |  |  | 21 | 12−15 |
| **E** | know the word equation for anaerobic respiration in plants and in animals |  |  |  | 21 | 12−15 |
| **F** | *practical: investigate the evolution of carbon dioxide and heat from respiring seeds or other suitable living organisms* |  |  |  | 21, 22 | 14–15  Lab Book  34–37 |

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| Problems with **Respiration**? Try questions 6 and 9 on pages 35−36 of the **Student Book**. | | | | | | | |
| **Using microorganisms** | **A** | understand the role of yeast in the production of food including bread |  |  |  | 23 | 282−284 |
| **B** | *practical: investigate the role of anaerobic respiration by yeast in different conditions* |  |  |  | 23 | 282–284  Lab Book  68–70 |
| **C** | understand the role of bacteria (*Lactobacillus*) in the production of yoghurt |  |  |  | 24 | 282−284 |
| **D** | understand the use of an industrial fermenter and explain the need to provide suitable conditions in the fermenter, including aseptic precautions, nutrients, optimum temperature and pH, oxygenation and agitation, for the growth of microorganisms |  |  |  | 24 | 284−286 |
| Problems with **Using microorganisms**? Try questions 1–5 on pages 287–288 of the **Student Book**. | | | | | | | |

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| **NEXT STEPS?** |
| Which areas do you feel confident about? |
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| Write down any specific areas that you need to improve and what you might do. |
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