

Name: \_\_\_\_\_

Class: \_\_\_\_\_

**ACTIVITY SHEET**

# Chapter 6 Revision

Use this revision sheet to check your understanding and guide your revision. Identify any concepts, models or other content that require more study, and then plan your study approach.

By the end of this chapter **you should know:**

|  | Revise | Complete |
|--|--------|----------|
| Geological time periods                                      |        |          |
| The age of Earth   |        |          |
| The landmasses created at different times; continental drift |        |          |
| When major biological events occurred                        |        |          |
| Changes in sea levels and temperature                        |        |          |
| Evidence for evolution: fossilisation and the fossil record  |        |          |
| Fossil dating: comparative and absolute dating techniques    |        |          |
| Evidence for evolution: biogeography                         |        |          |
| The creation of new species: divergent evolution             |        |          |
| The creation of analogous structures: convergent evolution   |        |          |
| Evidence for evolution: comparative anatomy                  |        |          |
| The molecular evidence for evolution                         |        |          |

By the end of this chapter **you should be able to:**

|   | Revise | Complete |
|---|--------|----------|
| List the geological time periods in order   |        |          |
| Summarise the major changes in land mass from the Palaeozoic to present; explain these changes in terms of continental drift; include the formation and break-up of Pangaea |        |          |
| List the major biological events including the first life, first multicellular organisms, first plants and first animals  |        |          |
| Explain how scientists know that sea levels and temperatures have changed over time   |        |          |
| List the conditions necessary for fossil formation  |        |          |
| Explain why there are gaps in the fossil record; include the theories of gradualism and punctuated equilibrium  |        |          |
| Describe comparative dating, including the law of superposition   |        |          |
| Summarise the absolute dating techniques: radiometric dating, electron spin resonance and luminescence techniques   |        |          |
| Explain how biogeography provides evidence for evolution; include an example and an explanation of Wallace's line   |        |          |
| Compare the terms 'speciation', 'divergent evolution' and 'adaptive radiation'  |        |          |
| Illustrate the process of adaptive radiation by using an example  |        |          |
| Contrast divergent and convergent evolution, including an explanation of analogous structures   |        |          |

|   | Revise | Complete |
|---|--------|----------|
| Summarise the types of comparative anatomy that are used as evidence for evolution: embryology and homologous structures      |        |          |
| Explain what vestigial structures are; include an example   |        |          |
| Describe the types of molecular homologies: nucleic acids, protein conservation, genetic comparisons and comparative genomics |        |          |