

| Topic | Student Checklist | R | A | G |
|--|---|---|---|---|
| 5.9.1 The composition and evolution of the Earth's | Describe the composition of gases in the Earth's atmosphere using percentages, fractions or ratios | | | |
| | Describe how early intense volcanic activity may have helped form the early atmosphere and how the oceans formed | | | |
| | Explain why the levels of carbon dioxide in the atmosphere changes as the oceans were formed | | | |
| | State the approximate time in Earth's history when algae started producing oxygen and describe the effects of a gradually increasing oxygen level | | | |
| | Explain the ways that atmospheric carbon dioxide levels decreased | | | |
| 5.9.2 Carbon dioxide and methane as greenhouse | Name some greenhouse gases and describe how they cause an increase in Earth's temperature | | | |
| | List some human activities that produce greenhouse gases | | | |
| | Evaluate arguments for and against the idea that human activities cause a rise in temperature that results in global climate change | | | |
| | State some potential side effects of global climate change, including discussing scale, risk and environmental implications | | | |
| | Define the term carbon footprint and list some actions that could reduce the carbon footprint | | | |
| 5.9.3 Common atmospheric pollutants | Describe the combustion of fuels as a major source of atmospheric pollutants and name the different gases that are released when a fuel is burned | | | |
| | Predict the products of combustion of a fuel given appropriate information about the composition of the fuel and the conditions in which it is used | | | |
| | Describe the properties and effects of carbon monoxide, sulfur dioxide and particulates in the atmosphere | | | |
| | Describe and explain the problems caused by increased amounts of these pollutants in the air | | | |