



Current Level of Knowledge / Skill (write one grade only):

4 Little or No Secure Knowledge.

3 Basic Personal Knowledge up to GCSE level, however you are not fully aware of possible misconceptions and how to address them and you may inadvertently reinforce misconceptions.

2 Secure knowledge / skill up to GCSE that would enable you to teach this to pupils. You would be aware of the common misconceptions in this skill area and you would be able to address these in a lesson.

1 Secure knowledge / skill up to A Level standard.

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| **Name:** | **Date:** |

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| **Area** | **Skill / Knowledge** | **Source N/G/A/D/P/W** | **Level 1/2/3/4** |
| Fundamental Principles in Chemistry | Atoms |  |  |
| Periodic Table |  |  |
| Chemical Reactions |  |  |
| Structure and Bonding |  |  |
| Analysing Substances |  |  |
| Quantitative Chemistry |  |  |
| The Early Periodic Table |  |  |
| The Modern Periodic Table |  |  |
| Trends in the Periodic Table |  |  |
| Properties and uses of substances | Limestone and Building Materials - Calcium Carbonate |  |  |
| Molecules |  |  |
| Ionic Compounds |  |  |
| Covalent Structures |  |  |
| Metals |  |  |
| Polymers |  |  |
| Nanoscience |  |  |
| Hard and Soft Water |  |  |
| Purifying Water |  |  |
| Alcohols |  |  |
| Carboxylic Acids |  |  |
| Esters |  |  |
| Metals and their Uses | Extraction of Metal |  |  |
| Alloys |  |  |
| Properties and use of metals |  |  |
| Crude Oil | Crude Oil |  |  |
| Hydrocarbons |  |  |
| Hydrocarbon Fuels |  |  |
| Obtaining useful substances from Crude Oil |  |  |
| Polymers |  |  |
| Ethanol |  |  |
| Reactions | Rates of Reaction |  |  |
| Endothermic and Exothermic Reactions |  |  |
| Making Salts |  |  |
| Acids and Bases |  |  |
| Electrolysis |  |  |
| Energy from Reactions |  |  |
| Making Ammonia |  |  |

Additional relevant information (optional):

**SCIENCE**

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| **Area** | **Skill / Knowledge** | **Source N/G/A/D/P/W** | **Level 1/2/3/4** |
| Cell Activity | Plant and Animal cells |  |  |
| Transport across boundaries  e.g. osmosis |  |  |
| Cell Division |  |  |
| Humans As Organisms | Nutrition |  |  |
| Mammalian Circulation |  |  |
| Breathing |  |  |
| Respiration |  |  |
| Nervous System |  |  |
| Hormones |  |  |
| Homeostasis |  |  |
| Disease |  |  |
| Drugs |  |  |
| Green Plants As Organisms | Plant nutrition |  |  |
| Plant hormones |  |  |
| Transport in and water relations |  |  |
| Variation, Inheritance And Evolution | Variation |  |  |
| Genetics and DNA |  |  |
| Genetic Engineering |  |  |
| Controlling Inheritance |  |  |
| Evolution |  |  |
| Living Things In Their Environment | Adaptation and Competition |  |  |
| Human Impact on the Environment |  |  |
| Energy and Nutrient Transfer |  |  |
| Nutrient Cycles |  |  |
| Classifying Materials | Atomic structure |  |  |
| Bonding |  |  |
| Changing Materials | Useful products from Oil |  |  |
| Useful products from Metal Ores |  |  |
| Useful products from Rocks |  |  |
| Useful products from Air |  |  |
| Representing Reactions |  |  |
| Quantitative Chemistry |  |  |
| Changes to the Earth and Atmosphere |  |  |
| The Rock Record |  |  |
| Patterns Of Behaviour | The Periodic Table |  |  |
| Chemical Reactions |  |  |
| Rates of Reactions |  |  |
| Reactions involving enzymes |  |  |
| Reversible Reactions |  |  |
| Energy Transfer in Reactions |  |  |
| Electricity | Energy in circuits |  |  |
| Mains Electricity |  |  |
| The Cost of using Electrical Appliances |  |  |
| Electrical change |  |  |
| Forces And Motion | Representing and measuring motion |  |  |
| Forces and Acceleration |  |  |
| Frictional Forces and non-uniform motion |  |  |
| Waves | Characteristics of Waves |  |  |
| The Electromagnetic Spectrum |  |  |
| Sound and Ultrasound |  |  |
| Seismic Waves |  |  |
| Tectonics |  |  |
| The Earth And Beyond | The Solar System |  |  |
| The Universe |  |  |
| Energy Resources And Energy Transfer | Thermal Energy Transfer |  |  |
| Efficiency |  |  |
| Energy Resources |  |  |
| Work Power and Energy |  |  |
| Electromagnetic Forces |  |  |
| Electromagnetic Induction |  |  |
| Radioactivity | Types, Properties and uses of Radioactivity |  |  |
| Atomic Structure and Nuclear Fissions |  |  |

Additional relevant information (optional):