**Year 8 Chemical Sciences Program**

| **Week** | **Outcomes** | **Activities** | **Pearson Science 8**  **Oxford Science 8** | **Assessments** |
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| **1**  **Feb 12** | * Describe the properties of the states of matter * Give names for the changes between states of matter | Activity 2: Changing a Solid to a Liquid  Activity 3: Changing a Liquid to a Gas | Ch 6.1 p204-213  Ch 4.1 p62-63  Ch 4.2 p64-65 |  |
| **2**  **Feb**  **19** | Using the kinetic theory of matter:   * Draw diagrams representing the states of matter * Explain the properties of the states of matter by describing behaviour of the particles * Explain what happens to the energy of the particles when heating and cooling occurs * Describe an element as being a substance composed of a single type of atom | Chemical Science Booklet: Kinetic Theory of Matter  Activity 4: Iced Bananas  Activity 5: Elements and Atoms | 10 Weird Elements (video)  Ch 6.2 p214-220  Ch 4.3 p66-67  Ch 4.4p68-69  Ch 4.5 p70-71  Ch 7.1 p246-256 | Element Research Task (hand out) |
| **3**  **Feb 26** | * Know the name and symbol for the elements in activity 6. * Identify the group and period of an element on the periodic table * Describe a compound as two or more different atoms joined chemically * Describe the difference between molecules and compounds | Activity 6: Symbols for the Elements  Activity 7: The Periodic Table  Activity 8: Molecules  Activity 9: Mixtures & Compounds  Activity 10: Review of Elements, Mixtures & Compounds | Ch 4.6 p72-73  Ch 7.1 p246-256  Ch 4.7 p74-78  Ch 7.2 p257-265 | Element Research Task (hand in and class test) |
| **4**  **Mar**  **6** | * Name and number the different atoms within simple compound formulae * Draw diagrams to represent the molecules of elements and simple compounds (eg: He, H2, CO­2, H2O) * Name ionic compounds comprised of elements in activity 6 (extend to covalent but won’t be assessed) | Activity 11: Chemistry in Short  Activity 12: Rules for Naming Ionic Compounds | Ch 7.2 p257-265 | Element Symbols Quiz  (Mon - Labour Day) |
| **5**  **Mar**  **12** | * Describe the difference between a physical and chemical change (particle rearrangement and properties of materials) * Explain that properties of mixtures differ from compounds made from the same atoms * Write chemical reactions from word descriptions and identify products and reactants from chemical reactions | Activity 14: Physical and Chemical Changes  Activity 15: Observing Some Chemical Reactions  Activity 16: Changing Partners! | Ch 6.4 p231-241  Ch 5.1 p80-81  Ch 5.2 p82-83  Ch5.3 p84-85  Ch 5.4 p86-87 | Mid Topic Test  (Fri - School Development Day) |
| **6**  **Mar**  **19** | * Explain how to produce and collect oxygen, carbon dioxide and hydrogen from other substances | Activity 17: Preparation of Carbon Dioxide  Activity 18: Preparation of Oxygen Gas  Activity 19: Preparation of Hydrogen Gas |  |  |
| **7/8**  **Mar**  **26/ Apr**  **3** | * Investigation | Investigation: Speedy CO2   * Plan experiment * Conduct experiment * In class test |  | Investigation Test  (Fri - Good Friday)  (Mon & Tues – Easter) |
| **9**  **Apr**  **9** | * Make connections between a substance’s chemical properties and its use (helium instead of hydrogen for balloons, carbon dioxide in fire extinguishers, painting over steel to avoid rust) |  |  | Topic Test |

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| **Assessment Item** | **Week (Due)** | **Weighting** |
| Element Research Task | Week 2 (2 Mar) | 15 % |
| Element Symbol Quiz | 9 March | 5% |
| Mid topic test | 15 March | 40% |
| Investigation | Week 7-8 (test 6 April) | Contributes towards Investigating grade |
| Topic Test | 13 Apr | 40% |