**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 LiquidActivity 3: Changing a Liquid to a Gas | Ch 6.1 p204-213Ch 4.1 p62-63Ch 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 MatterActivity 4: Iced BananasActivity 5: Elements and Atoms | 10 Weird Elements (video)Ch 6.2 p214-220Ch 4.3 p66-67Ch 4.4p68-69Ch 4.5 p70-71Ch 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 ElementsActivity 7: The Periodic TableActivity 8: MoleculesActivity 9: Mixtures & CompoundsActivity 10: Review of Elements, Mixtures & Compounds | Ch 4.6 p72-73Ch 7.1 p246-256Ch 4.7 p74-78Ch 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 ShortActivity 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 ChangesActivity 15: Observing Some Chemical ReactionsActivity 16: Changing Partners! | Ch 6.4 p231-241Ch 5.1 p80-81Ch 5.2 p82-83Ch5.3 p84-85Ch 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 DioxideActivity 18: Preparation of Oxygen GasActivity 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% |