



KEY STAGE 5 POTENTIAL HIGH ACHIEVERS READING LIST

For CHEMISTRY

<p>OXYGEN</p> <p>NICK LANE</p>	<p>The strange and profound effects that oxygen has had on the evolution of life pose a riddle, which this book sets out to answer. Oxygen is a toxic gas. Divers breathing pure oxygen at depth suffer from convulsions and lung injury. Reactive forms of oxygen, known as free radicals, are thought to cause ageing in people. Oxygen offers fresh perspectives on our own lives and deaths, explaining modern killer diseases, why we age, and what we can do about it. Advancing revelatory new ideas, following chains of evidence, the book ranges from environmental sciences to molecular medicine. The result is a captivating vision of contemporary science and a humane synthesis of our place in nature.</p>
<p>THE PERIODIC TAABLE</p> <p>PRIMO LEVI</p>	<p>Primo Levi's The Periodic Table is a collection of short stories that elegantly interlace the author's experiences in Fascist Italy, and later in Auschwitz, with his passion for scientific knowledge and discovery. A chemist by training, Primo Levi became one of the supreme witnesses to twentieth-century atrocity. In these haunting reflections inspired by the elements of the periodic table, he ranges from young love to political savagery; from the inert gas argon - and 'inert' relatives like the uncle who stayed in bed for twenty-two years - to life-giving carbon. 'Iron' honours the mountain-climbing resistance hero who put iron in Levi's student soul, while 'Cerium' recalls the improvised cigarette lighters which saved his life in Auschwitz</p>
<p>SUPERHEAVY - MAKING AND BREAKING THE PERIODIC TAABLE</p> <p>KIT CHAPMAN</p>	<p>Creating an element is no easy feat. It's the equivalent of firing six trillion bullets a second at a needle in a haystack, hoping the bullet and needle somehow fuse together, then catching it in less than a thousandth of a</p>

	<p>second - after which it's gone forever. Welcome to the world of the superheavy elements: a realm where scientists use giant machines and spend years trying to make a single atom of mysterious artefacts that have never existed on Earth. Superheavy will reveal the hidden stories lurking at the edges of the periodic table. Why did the US Air Force fly planes into mushroom clouds? Who won the transactinoid wars? How did an earthquake help give Japan its first element? And what happened when Superman almost spilled nuclear secrets?</p>
<p>THE ELEMENTS <i>THEODORE GRAY</i></p>	<p>The Elements by Theodore Gray has become an international sensation, with over one million copies in-print worldwide. The elements are what we, and everything around us, are made of. This is an eye-opening, original collection of gorgeous, never-before-seen photographic representations of the 118 elements in the periodic table. Also included are fascinating facts, figures, and stories of the elements as well as data on the properties of each, including atomic weight, density, melting and boiling point, valence, electronegativity, and the year and location in which it was discovered.</p>