

Half term	Unit Title	Description
Sept	B3 - Infection and response	This section will explore how we can avoid diseases by reducing contact with them, as well as how the body uses barriers against pathogens. Once inside the body our immune system is triggered which is usually strong enough to destroy the pathogen and prevent disease.
Oct	P3 - Particle model	The particle model is widely used to predict the behaviour of solids, liquids and gases and this has many applications in everyday life. It helps us to explain a wide range of observations and engineers use these principles when designing vessels to withstand high pressures and temperatures, such as submarines and spacecraft.
Nov	C3 - Quantitative Chemistry	Chemical reactions can be classified in various ways. Identifying different types of chemical reaction allows chemists to make sense of how different chemicals react together, to establish patterns and to make predictions about the behaviour of other chemicals.
Dec	B5 - Homeostasis	In this section we will explore the structure and function of the nervous system and how it can bring about fast responses. We will also explore the hormonal system which usually brings about much slower changes. Hormonal coordination is particularly important in reproduction since it controls the menstrual cycle.
Jan	P4 - Atomic Structure	Early researchers suffered from their exposure to ionising radiation. Rules for radiological protection were first introduced in the 1930s and subsequently improved. Today radioactive materials are widely used in medicine, industry, agriculture and electrical power generation.
Feb - March	C2 - Bonding, structure, and the properties of matter	Chemists use theories of structure and bonding to explain the physical and chemical properties of materials. Analysis of structures shows that atoms can be arranged in a variety of ways, some of which are molecular while others are giant structures. Theories of bonding, and properties of materials are explored along with applications in a range of different technologies.
March	C7 - Organic Chemistry	This branch of chemistry gets its name from the fact that the main sources of organic compounds are living, or once-living materials from plants and animals. These sources include fossil fuels which are a major source of feedstock for the petrochemical industry.

April	P5 - Forces 1	Engineers analyse forces when designing a great variety of machines and instruments, from road bridges and fairground rides to atomic force microscopes. Anything mechanical can be analysed in this way. Recent developments in artificial limbs use the analysis of forces to make movement possible.
May	B4 - Bioenergetics	In this section we will explore how plants harness the Sun's energy in photosynthesis in order to make food. This process liberates oxygen which has built up over millions of years in the Earth's atmosphere.
June - July	P7 - Magnetism	Electromagnetic effects are used in a wide variety of devices. Engineers make use of the fact that a magnet moving in a coil can produce electric current and also that when current flows around a magnet it can produce movement.