Year 7 – Autumn Term

	What? **When?** **Why?**			
	BIOLOGY 7A – Life processes and Multicellular Organisms	**CHEMISTRY** 7E – Separating Mixtures	**PHYSICS** 7I - Energy	**BIOLOGY** 7B - Reproduction
Introduction Lesson	Introduction to the lab – rules and safety. How science works, etc			
Lesson 1 Learning intentions (what can a student do at the end of the lesson)	To understand how to use life processes to justify if something is an organism or non-living.	To be able to group materials using their states of matter as justification.	To be able to explain the differing energy needs of people of different ages and activity levels.	To be able to compare the amount of care of offspring in fish, birds and mammals; and to be able to compare the sexual reproduction of fish, birds and mammals
Lesson 2 Learning intentions	To be able to describe the functions of a large range of human, animal and plant organs.	To understand how to classify mixtures as suspensions, colloids and solutions, based on what they look like and whether they separate on standing.	To be able to carry out a practical to assess the level of energy in different types of dried food.	To be able to describe the functions of the human reproductive systems
Lesson 3 Learning intentions	To be able to describe the functions of different tissues in a human organ.	To be able to describe what is seen when a solid dissolve, and correctly use the terms:	To be able to describe what conservation of energy is and relate it to real life examples.	To be able to explain how sperm and egg cells are specialised for their function To be able to describe how the

		soluble, solute, solvent, solution.		fusing of gametes and their nuclei during fertilisation forms a fertilised egg cell.
Lesson 4 Learning intentions	To be able to describe the functions of different tissues in a plant organ	To be able to understand what happens when a liquid will not dissolve any more of a solid and use correctly the terms: solubility, saturated solution.	To be able to describe advantages and disadvantages of different energy resources and what happens in a fuel cell.	To be able to describe what happens following the fertilisation of an egg cell including cell division To be able to describe the supply and removal of materials from and to the foetus To be able to describe the effects of some substances that may harm a developing foetus.
Lesson 5 Learning intentions	To be able to describe how to use a light microscope to examine a slide. And calculate total microscope magnification using correct formula	To be able to describe how you would use evaporation in order to separate a solvent from a solute	To be able to understand what the factors that make up a good fuel are and compare the temperature rise of water when some fuels are burnt.	To be able to identify stages of growth from embryo to newborn baby and recall how these stages can be checked. To be able to describe what happens during labour and birth in humans. To be able to explain why breast milk is best for newborn babies.

Lesson 6 Learning intentions	To be able to describe how to prepare a microscope slide	To be able to give examples of where chromatography is used, and describe how chromatography is used to separate mixtures.	To be able to describe advantages and disadvantages of different renewable, energy resources.	To be able to identify the role of sex hormones in puberty. To be able to describe what happens to parts of the body during puberty and adolescence.
Lesson 7 Learning intentions	To be able to identify cells as plant or animal and describe the functions of different cell features	To be able to give examples of where distillation is used, and describe how distillation can separate mixtures.		To be able to explain the purpose of the menstrual cycle. To be able to use knowledge of the menstrual cycle to predict timings (e.g. of menstruation, ovulation, fertile period).
Lesson 8 Learning intentions	To be able to describe how mineral salts and water are absorbed and moved around a plant. Measure plant water loss			
Lesson 9 Learning intentions	To be able to describe the functions of the digestive, circulatory, breathing, urinary and nervous systems			
Lesson 10 Learning intentions	To be able to recall and revise all content from the topic and to			

	outline key concepts			