Westfield Academy - Curriculum Information

In year 8 your child will build on the foundational knowledge from year 7. They will also develop their working scientifically skills.

Science

Head of Department	Ms Zainab Khan & Mr Benjamin Waite
Head of Department email	ZKH@westfield.academy BWA@westfield.academy
Lessons per 2 week cycle	7 lessons
Specification/Board details/Key stage	KS3 – Springboard science curriculum

Term by term

Autumn 1	Autumn 2	Spring 1
Yr8 – Bioenergetics + Pressure in fluids	Yr8 – Healthy diet & nutrition & Periodic table & Bonding	Yr8 – Genetics and inheritance
Spring 2	**Summer 1**	**Summer 2**
Yr8 – Chemical reactions & Reproduction	Yr8 – Electricity & Electromagnetism	Yr8 – Atomic structure radiation & Speed

Key Skills developed	Biology: Students develop an appreciation of how the body digests the food we eat, explain enzymes and their role in digestion, recall the structure of the breathing system, how our lungs get oxygen into the blood stream and carbon dioxide out. Students will study reproduction. They will learn the structure of a typical male and female reproductive system, explain the importance of the menstrual cycle for fertility. Students will study genetics. They will learn how genes are passed from organism to organism. They will show inheritance using Punnett squares. They will also learn how organisms evolve over time and how biodiversity is important for life on earth.

	Chemistry: Students learn what chemical reactions are and how to represent them in word or symbol equations, describe thermal decomposition of a substance, the importance of energy in getting a reaction started, calculating the energy in bonds and the examples of exothermic and endothermic reactions. Students will also describe bonding between elements (ionic, covalent and metallic) Physics: students learn how pressure occurs in liquids and gases, calculate moments and how simple machines can help us overcome difficulties in moving objects, students learn what electricity is. They will draw circuits and understand components as well as the difference between series and parallel. Students will also study atomic structure as it relates to radiation. They will learn that some atoms are unstable and how they gain stability.
Useful Websites	Senecalearning.com BBCbitesize.co.uk
Reading/Literacy requirements /Key Words	In our curriculum we have powerpoints for year 8. Keywords or phrases are emphasised in lessons.
Homework requirements	Teacher will post weekly homework tasks using *seneca-learning* or *carousel-learning* websites
Personal Development Links	An example of how Science contributes to Personal Development is by encouraging our students to have a growth mindset and attempt all tasks to the best of their ability. We also have a number of schemes of learning linking to topics on the PD curriculum; one example is when we study reproduction, we look at the female menstrual cycle and how offspring are created. In the nutrition topic we discuss what constitutes a healthy diet and discuss consequences to heath of poor diets. We promote equality and diversity by exposing students to famous scientists of different genders and ethnicities throughout our curriculum.
Trips/Visits (If applicable)	Faraday project