STEM Year 7 Curriculum End Points and Key Vocabulary

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Ethos Links	**STEM** – Investigation process, significance of STEM in health and technology **Character** – Developing aspects of Respect, Responsibility, Kindness	**STEM** – Understanding how our actions can affect our own and others health **Character** - Respect, responsibility, and leadership	**STEM** – Investigation skills **Character** – Leadership and teamwork **Sustainability** – Making use of materials in an unusual way	**Character** – Listening respectfully and critically **STEM** – Applying STEM ideas to unusual scenarios	**STEM** – Coding skills **Character** – Considering personal safety on-line	**STEM** – Investigation skills **Character** – Leadership and teamwork
Learning End Points	**Augment Ourselves** *Can we change our bodies to enhance ourselves?* By the end of this unit, students will know and understand: ➢ How artificial limbs are used. ➢ How technology can be used to enhance mental health. ➢ Identify how eyesight can be tested. ➢ How ideas of design can be	**STEM in a Pandemic** *How can STEM help us in a pandemic?* By the end of this unit, students will know and understand: ➢ How diseases are spread. ➢ Use a simple mathematical model to predict the spread of a disease. ➢ How a vaccine protects an	**Science Fair Projects** *Can we develop an experiment and share it?* By the end of this unit, students will know and understand: ➢ The stages required in order to plan an investigation. ➢ Know the risks inherent in the use of practical substances	**Zombie Apocalypse** *How could we use STEM to survive in a survival situation?* By the end of this unit, students will know and understand: ➢ How to create a simple circuit. ➢ Use a mechanical device to launch a projectile. ➢ Make measurements using an	**Scratch Cyber Challenge** *Can we use technology to promote safer use of the internet?* By the end of this unit, students will know and understand: ➢ What is meant by on-line safety. ➢ How to use block coding to affect the display on a screen. ➢ How to use block coding	**Movies & Magic** *How real is what we see on the big screen?* By the end of this unit, students will know and understand: ➢ How to identify non-contact forces. ➢ How forces act. ➢ How static charge is created. ➢ Some of the effects of static charge.

	used to develop a product. ➢ Consider how technology can help us physically. ➢ Make simple measurements using simple equipment.	individual and a population. ➢ How face masks have been developed based on the properties of the materials.	and equipment. ➢ How to record practical data in an appropriate fashion. ➢ How to review data and analyse its reliability.	electronic device. ➢ Use mirrors and reflection to create a periscope. ➢ Use morse code in order to send and receive messages. ➢ How to investigate the sound proofing properties of materials.	to respond to inputs from a user. ➢ How to use loops within coding. ➢ How to use coding in order to alter graphics and sound. ➢ How to create an on-line game using Scratch.	➢ How magnets interact. ➢ Ways to find a magnetic field. ➢ How to apply ideas about magnetic levitation to transport solutions. ➢ The forces involved in rockets (link to newton's laws of motion). ➢ How stop gap motion is used to animate pictures.
Key Vocabulary	Augmentation Meditation 20:20 Vision Lever	Virus Pandemic Vector Vaccine Model Wind tunnel	Investigation Planning Risk assessment Analysis Evaluation	Circuit Morse code Reflection Periscope Sound intensity Sound proofing Materials Levers Pressure pad	Cyber Code Input Process Output Sprite Loop If-then	Static charge Force Contact force Non-contact force Magnetism Mag Lev Magnetic fields Balanced forces Animation Zoetrope