Computing and Technology

The areas of development are:	Solutions
Computing	
• Understanding phishing scams and the potential threats these cause to security	• Explore Internet and Communication techniques using BBC Bitseize
• Describing the terms cyberbullying and trolling	• Explore Think U Know website for advice and support as well as definitions of cyberbullying and trolling • Research the STOP, SPEAK, SUPPORT campaign on BBC Own It website
• Describing the positive and negative effect of social media on how we communicate	• Watch the video on BBC Own It and consider all of the top tips for healthy use of social media
• Recognising the impact of censorship and surveillance	• OCR revision guide for Computer Science: Censorship and Surveillance – Page 26
• Explaining how to keep information private on the internet	• OCR revision guides for Computer Science: Internet Privacy – Page 26
• Describing the various types of business and business ownership	• Explore the range of Business ownership types by looking at Business Ownership on BBC Bitesize
• Understanding this links between technology and business and the importance of this as a communication tool	• Revise and study effective communication within an organisation and externally. Looking at Communication through BBC Bitesize
• Being able to use spreadsheet to use a range of formulae in order to present data	• Study Spreadsheets on BBC Bitesize

• Being able to use presentation software in order to graphically present information and data to other users	• Revise Graphics Software by studying further information on BBC Bitesize
• Recognising the various types of networks (local area networks and wide area networks) including wired and wireless network types	• Revise and study networks focussing on Introduction to Networks on BBC Bitesize
• Recalling and selecting appropriate network topologies	• BBC Bitesize: Network Types and Topologies
• Understand the principles of Binary numbers and Denary numbers, knowing how to convert these (Binary to Denary and Denary to Binary)	• Learn how to text, images and sound are converted into Binary so they can be processed by a computer and how images and sound are compressed to create smaller file: Representing text, images and sounds
• Describing how binary is used to represent data in computers	• BBC Bitesize: Introducing Binary
• Converting 8-bit binary numbers to denary numbers	• Revise Binary and Conversions using the following quizzes and worksheets: Understanding Binary Presentation; Converting to Binary document; Binary and Hexadecimal mini quiz
• Converting denary numbers to 8-bit binary numbers	• Revise Binary and Conversions using the following quizzes and worksheets: Understanding Binary Presentation; Converting to Binary document; Binary and Hexadecimal mini quiz
• Understanding Logic gates (NOT, AND, OR) and the building blocks of these	• Study and revise Logic Gates and how to create a Truth Table understanding the differences between them
• Explaining the four cornerstones of computational thinking; algorithms, abstraction, decomposition and pattern recognition	• Revise and study Computational Thinking in relation to algorithms, abstraction, decomposition and patter recognition
• Being able to identify the different data types and explain what each represents (String, Integer, Float, Boolean)	• Revise and Develop your understanding of Boolean logic using BBC Bitesize: Understanding Boolean
• Understanding 3 of the 4 main constructs of programming; Sequence, Selection and Iteration (if statements and loops)	• Revise and study Programming Constructs relating to Sequence, Selection and Iteration (if statements and loops)
• Creating variables in Python	• Explore Python website to revise variables types • Explore the Python tutorials on Codeacademy website
• Identifying and correcting syntax errors in Python	• Revise basic syntax errors on Tutorials Point website • Explore the Python tutorials on Codeacademy website

Food Technology	
• Demonstrating safe working practices in food technology	• Build knowledge at home by helping prepare and cook meals
• Selecting and using a variety of equipment when manufacturing dishes	• Build knowledge at home by using different equipment and follow on practical lessons to familiarise yourself with different equipment and their uses
• Being aware of all hygiene practices necessary for the safe production of food products	• Watch the video link: Food Safety – Good Food Hygiene
• Being aware of the different food poisoning bacteria and their sources	• revise on BBC teach and using the lesson saved on teams
• Understand the function of ingredients commonly used in cooking	• review by using the lesson saved on teams and completing any quizzes
• Understand how raising agents work	• watch fun kitchen investigates how raising agents work on YouTube
• Appreciating the current guidelines for a healthy diet and applying knowledge to create balanced meals using the eat well guide	• Explore the NHS website: The Eatwell Guide • BBC Bitesize
• Understand the different macronutrients, their function, sources and the consequences of deficiency and excess	• Explore The British Heart Foundation website: Sugar, Salt and Fat • Explore the Health, Care, Beauty and Fashion Blog: Side Effects of too much Sugar, Salt, Fats and Trans Fats in Diet
• Suggesting adaptations to dishes/diet to meet specific dietary needs and meet current guidelines for a healthy diet	• Explore Healthy Kids Association website: Macronutrients • BBC Bitesize
• Identifying and understanding the labelling information found on commercially produced food products	• Explore The British Heart Foundation: Sugar, Salt and Fat
• Appreciating where and how ingredients are grown or reared and describing what environmental issues are associated with food production	• BBC Bitesize: Environmental and Ethical factors

• Understanding the functional and chemical properties of food and the scientific principles that alter the working characteristics during the manufacture of dishes	• Watch a selection of PowerPoint presentations on Teams • Complete student worksheets on the website: Food a Fact of Life: Functional properties of food

Design and Technology

• Demonstrating a broad knowledge, the industrial revolution and how this has impacted the developments of products and commercial production methods	• Read Industrial revolution and Technology on the National Geographic Website
• Demonstrating knowledge of how the steam engine works and how this is applied to current energy generation	• Revise from Technologystudent.com - steam power
• Confidently using key terminology related to, designing, innovation, materials and technologies, manufacture and production, critiquing, values and ethics	• Revise from Technologystudent.com - Key terminology • Look back through lessons on MS Teams to identify key terminology used in D&T
• Demonstrating knowledge and understanding of different manufacturing processes suitable for the different material areas	• Watch: Product design classroom videos 'Designing and making a plastic chair' on BBC bitesize KS3.
• Demonstrating knowledge and understanding of automation in the manufacturing process	• Watch: Product design classroom videos 'An automated production process - bottling soft drinks on BBC bitesize KS3.
• Demonstrating knowledge and understanding of how CAD and CAM are used in school and in industry	• Watch: Product design classroom videos 'CAD in action - walking with dinosaurs' on BBC bitesize KS3.
• Demonstrating knowledge and understanding of how forces stresses, and motion and stresses can impact upon different materials	• Revise from studyrocket.co.uk forces and stresses
• Demonstrating a working knowledge of material properties	• Revise from technologystudent.com properties of materials
• Demonstrating knowledge and understanding of how and why smart, modern, and composite materials are used.	• Revise from BBC bitesize: Developments in new materials
• Demonstrating knowledge and understanding of sustainability and its related issues in Design and technology	• Watch sustainability by design on TED.com

• Demonstrating a knowledge and understanding of the electronics components and how they operate within a circuit	• Watch: electronics classroom videos 'How does a loudspeaker work' & The use of resistors and transistors within an electronic circuit' on BBC bitesize Ks3.
• Beginning to communicate subject-specific ideas in written tasks	• Technology Worksheet: Design and Technology Project Booklet
• Beginning to write in full sentences	• Technology Worksheet: Design and Technology Project Booklet
• Beginning to use a range of subject-specific vocabulary in written tasks	• Technology Worksheet: Design and Technology Project Booklet
• Understanding simple subject-specific written information in English	• Technology Worksheet: Design and Technology Project Booklet
• Recognising the purpose of a subject-specific piece of writing	• Technology Worksheet: Design and Technology Project Booklet
• Identifying subject-specific key words in a text	• Technology Worksheet: Design and Technology Project Booklet