

Parent Reach - Send a Group Email Step 4 of 4 ()

Group Members -



Your Message Has Been Sent

Message:

Dear Parent/Guardian,

I hope that you are keeping safe and well.

Further to Mrs McIver-Wrens letter, I wanted to inform you that if your child is unwell at any time and therefore cannot attend school, it is very important now more than ever that your child keeps up with their school work. I have therefore provided a schedule of work for the Computer Science lessons, by Year group.

This information is available in their class on Teams. Links have been provided to either a series of online lessons with tasks to complete, or a link to subject videos together with a set of resources to complete whilst away.

I hope that you find this useful. Please feel free to email me if you have any questions with regards to the work that has been set.

Take care

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Key Stage 3: Year 7

Term	Topic	Covered in lessons	Intent	Links to lessons	Links to support materials
HT1	E-Safety	<ul style="list-style-type: none"> Login Creating folders Digital Literacy The Digital footprint Social Media 	Teach students the necessary skills to be safe active students in a digital world.	<p>Work through all 6 of the lessons</p> <p>in the Impact of Technology - Collaborating Online Respectfully: https://classroom.thenational.academy/units/impact-of-technology-collaborating-online-respectfully-35d0</p> <ul style="list-style-type: none"> ❖ (Adult required) Work through the Online Safety at Home - *New* Home activities ❖ (Adult required) Work through the Home Activity Packs Your Digital Footprint – Click on the blue links and read through about Digital Safety and CEOP Online Friends Online Safety Quiz 	<ul style="list-style-type: none"> Extra support material is available here Online Gaming Online Security
HT2	Computational Thinking	<ul style="list-style-type: none"> Decomposition Abstraction Pattern Recognition Algorithms 	Embed Computational Thinking skills which forms the basis of computer science so that students can approach real world problems logically.	<p>Work through the lessons :</p> <ul style="list-style-type: none"> CT Decomposition CT Pattern recognition CT Abstraction CT Algorithms (Flowcharts) 	Complete the booklet (see in TEAMS Shadow folder)



Key Stage 3: Year 8

Term	Topic	Covered in lessons	Intent	Links to lessons	Links to support materials
HT1	E-Safety with Computational Thinking	<ul style="list-style-type: none"> • Cyberbullying • Decomposition • Abstraction • Pattern Recognition • Algorithms 	Teach students the necessary skills to be safe active students in a digital world.	<p>Work through the lessons :</p> <ul style="list-style-type: none"> • CT Decomposition • CT Pattern recognition • CT Abstraction • CT Algorithms (Flowcharts) • Cyberbullying • Digital Footprint • Online Safety Quiz • E-Safety 	Complete the booklet in the Shadow folder
HT2	Algorithms/Problem Solving	<ul style="list-style-type: none"> • Flowcharts 	<p>Recognise and use the basic building blocks of programming: sequence, selection and repetition</p> <p>By considering a number of different algorithms, students will begin to develop pattern recognition so that the next time a similar problem arises, they are better able to solve it.</p> <p>This will lead to understanding the precise steps the computer takes to solve a problem and the use of inputs outputs.</p>	<p>Work through the lessons :</p> <ul style="list-style-type: none"> • CT Algorithms (Flowcharts) • CT Pseudocode 	Work through the tasks in the videos



Key Stage 4: Year 9

Term	Topic	Covered in lessons	Intent	Links to lessons	Materials	Revision
HT1	Computational Thinking	<ul style="list-style-type: none"> Decomposition Abstraction Pattern Recognition Algorithms 	Computational Thinking forms the foundation for the entire course. Embedding these skills will allow students to be able to approach real world problems logically	Work through the lessons : <ul style="list-style-type: none"> CT Decomposition CT Pattern recognition CT Abstraction CT Algorithms (Flowcharts) 	Work through the following: <ul style="list-style-type: none"> LightBots 	<ul style="list-style-type: none"> Computational Thinking
	Systems Architecture	<ul style="list-style-type: none"> Systems Architecture Purpose of the CPU Von Neuman Components/characteristic FDE RAM/ROM 	Computational Thinking forms the foundation for the entire course. Embedding these skills will allow students to be able to approach real world problems logically	Watch the Craig n Dave videos: <ul style="list-style-type: none"> The purpose of the CPU (FDE) CPU Components and their functions The Von Neumann Architecture Embedded Systems Common Characteristics of the CPU and how they affect the Performance RAM/ROM 	Watch the videos and Complete the workbook in TEAMS	<ul style="list-style-type: none"> Intro Von Neumann Factors affecting CPU performance Exam Style Questions
HT2	Intro to Programming Physical	<ul style="list-style-type: none"> Variables Lists Selection Iteration-FOR and WHILE Loops Algorithms Designing, Creating and refining algorithms - Flowcharts - Pseudocode 	Introduce students to programming techniques through gamification	https://www.learnpython.org/ <ul style="list-style-type: none"> Hello World - Hello%2C_World%21">https://www.learnpython.org/en/Hello%2C_World%21 Variables and types - https://www.learnpython.org/en/Variables_and_Types Lists - https://www.learnpython.org/en/Lists Basic Operators - https://www.learnpython.org/en/Basic_Operators String formatting - https://www.learnpython.org/en/String_Formatting String Operations - https://www.learnpython.org/en/Basic_String_Operations Conditions - https://www.learnpython.org/en/Conditions Loops - https://www.learnpython.org/en/Loops Functions - https://www.learnpython.org/en/Functions Classes and objects - https://www.learnpython.org/en/Classes_and_Objects Dictionaries - https://www.learnpython.org/en/Dictionaries Modules - https://www.learnpython.org/en/Modules_and_Packages 	Read through each section and complete the Exercises using the Python Shell window provided. Run your program to see it working. The program will tell you if there is an Error with your code so that you can correct it.	



Key Stage 4: Year 10

Term	Topic	Covered in lessons	Intent	Links to lessons	Materials	Revision
HT1	Computational Thinking	<ul style="list-style-type: none"> Decomposition Abstraction Pattern Recognition Algorithms 	<p>Computational Thinking forms the foundation for the entire course. Embedding these skills will allow students to be able to approach real world problems logically. Understand the term and processes in computational thinking and be able to use the skills of abstraction, decomposition and algorithmic thinking.</p>	<ul style="list-style-type: none"> CT Decomposition CT Pattern recognition CT Abstraction CT Algorithms (Flowcharts) 	<p>Work through the following:</p> <ul style="list-style-type: none"> LightBots 	<ul style="list-style-type: none"> Computational Thinking
	Systems Architecture	<ul style="list-style-type: none"> Systems Architecture Purpose of the CPU Von Neuman Components/characteristic FDE RAM/ROM 	<p>Understand the term and processes in computational thinking and be able to use the skills of abstraction, decomposition and algorithmic thinking.</p>	<ul style="list-style-type: none"> The purpose of the CPU (FDE) CPU Components and their functions The Von Neumann Architecture Embedded Systems Common Characteristics of the CPU and how they affect the Performance 	<p>Watch the videos and Complete the workbook in TEAMS</p>	<ul style="list-style-type: none"> Intro Von Neumann Factors affecting CPU performance Exam Style Questions



Key Stage 4: Year 10

Term	Topic	Covered in lessons	Intent	Links to lessons	Materials	Revision
HT2	Algorithms	<ul style="list-style-type: none"> Designing, creating & refining algorithms: Flowcharts Pseudocode Searching and sorting algorithms 	Students are taught how computers use algorithms to search and sort data. Students are taught how	<ul style="list-style-type: none"> Abstraction Decomposition Algorithmic Thinking Flowcharts and Pseudocode Binary Search Linear Search Bubble sort Merge sort Insertion sort 	Watch the videos and Complete the workbook in TEAMS	<ul style="list-style-type: none"> Pseudocode and Flowcharts Interpreting Algorithms Searching Sorting Exam Style Questions
	Boolean Logic	<ul style="list-style-type: none"> AND/OR/NOT Gates Truth tables 	to create algorithms using	<ul style="list-style-type: none"> Boolean operators Logic Gates Truth tables Combining Boolean operators Applying logic in truth tables 		<ul style="list-style-type: none"> Logic Boolean Logic Boolean Logic 2
	Programming Lang / IDE	High Level / Low Level	flowcharts and Pseudocode learn why data needs to be in binary form and how transistors in computers are used to make decisions	<ul style="list-style-type: none"> High level/Low level programming languages 		<ul style="list-style-type: none"> Languages



Key Stage 4: Year 11

Term	Topic	Covered in lessons	Intent	Links to lessons	Materials	Revision
HT1	Ethical, Legal, Cultural and Environmental impacts of digital technology	<ul style="list-style-type: none"> Ethical Legal Cultural Environmental 	As technology increases students are taught about the laws concerning the use of technology	<ul style="list-style-type: none"> Discussing Technologies Privacy Issues Legislation relevant to Computer Science Cultural Implications of Computer Science Environmental Implications of Computer Science Stakeholders Open source Vs Proprietary Software 	Watch the videos and Complete the workbook in TEAMS	Open source Vs Proprietary Software Ethical Issues Ethical Issues 2 Exam Style Questions Legal Issues Legal Issues 2 Cultural Environmental Privacy Stakeholders End of Topic Test
HT2	Programming Languages and IDE Programming fundamentals	<ul style="list-style-type: none"> Languages IDE Programming fundamentals Data types Additional programming techniques 	Students go over the basic fundamentals of Programming and learn the skills required for the Programming project task	<ul style="list-style-type: none"> Fundamentals – Variables/constants/inputs/outputs Programming constructs Arithmetic operators Data types and casting String manipulation File handling Records SQL Arrays Sub programs Random number generation <p style="text-align: center;">Programming Project</p>	Watch the videos and prepare for the Programming project task	<p>All sections within 4.2:</p> <ul style="list-style-type: none"> Programming Fundamentals