



NHSG Key Stage 3 Unit Overview for 9S1: Understanding Computers



Scheme of Learning	9:S1 – Understanding Computers What makes a computer?				Autumn – Spring Term
End Product i.e. the learning outcome.	In this unit students will learn about the physical components of a computer and learn to judge which specifications are appropriate for a given situation, enabling them to be able to make appropriate choices in the future.				
Key Question	What do each of the specifications of a computer mean with regards to what we need to use it for and how do we know what the most appropriate computer is to buy?				
Knowledge	<p>Key Concepts:</p> <ul style="list-style-type: none">• What is inside a computer• Physical Main memory – temporary working memory• The CPU – where the processes are carried out• Secondary storage – long term storage• Different types of secondary storage• Graphics cards and how they differ• Monitor resolution vs size• Laptops vs Desktops <p>Key Skills:</p> <ul style="list-style-type: none">• Research Skills• Use of Digital Artifacts• Application of knowledge to a specific situation		<p>Terminology:</p> <ul style="list-style-type: none">• Component• Primary/main memory• Random Access Memory (RAM)• Read-Only Memory (ROM)• Central Processing Unit (CPU) / Processor• Storage media• Secondary storage• Volatile / non-volatile• Hard Disk Drive• Solid State Drive• Cloud Storage• Expansion slots• Graphical Processing Unit (GPU) Vs Graphics Cards• Monitor / Screen• Laptop• Desktop• Peripherals• Pixel• Resolution		

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Ongoing Assessment i.e. formative

Student progress will be monitored throughout the exercises and a general mark given for this. Recall exercises at the start of each lesson will be used to assess learning. Answers are expected to be in the student's own words and not paraphrased or directly copied from online resources. These marks will combine to creating a working grade for the unit.

Students will be assessed on their ability to think beyond their own experiences and assumptions of other people and apply the same criteria to other situations that may be unfamiliar to them.

You will have access the resources used via SharePoint/Teams and will be expected to continue with the work for 30 minutes outside of class. Working documents will be assigned via Teams and should be worked on live to enable monitoring outside of lessons.

End Product Assessment i.e. summative

This unit ends with a 40 -minute computer-based test in the final lesson. It is a common assessment that the whole year group will be taking. The assessment has different levels of understanding and grasp of the skills. These sections are focused on knowledge (multiple choice questions), Skills and Application (short answer questions) and understanding (long answers with context).

The gradings will be calculated once all results are in. The gradings follow the report ratios:

Percentage of students	Number of students (out of 210)	Grading colour
Top 5-10%	10-21	Purple
Higher 20-30%	42-63	Blue
Middle 45-50%	94-105	Green
Lower 8-12%	16-25	Yellow
Lowest 3-6%	6-12	Orange

The assessment marks are combined with other unit grades to form each student's Best Fit grade in report seasons.

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Clear sequencing of content	<p>Builds on the theory of 8S1 and applies a lot of it to the physical computer. Starting from the computer itself, the knowledge then extends to the peripherals that students usually consider to just be “the computer”.</p> <p>This unit aims to give students a life skill that they can make use of even if they do not take GCSE Computer Science but also leads into GCSE Unit 4 – Hardware</p>
Links to Careers	Computer Sales, technical support, Project Management, Graphic Designers, Gamers, vbloggers
Diversity and Inclusion	People used in examples use a range of names from different cultures. Situations used are conscious of the students’ own experiences.
Intervention support	<ul style="list-style-type: none"> • SharePoint pages (text based, images and videos) • Knowledge organisers or handouts • Step by step tick sheet guides are provided where we determine that the Cognitive load is too high due to working with more than two windows open • Weekly drop-in lunchtime peer mentor help sessions – please ask your teacher for more information. We have a set of Year 8 and 9 mentors who volunteer to help students out. They have either been through the unit previously themselves or have been brought up to date to be able to help explain and demonstrate the unit content. • https://www.bbc.co.uk/bitesize/guides/zxb72hv/revision/1
Challenge	<p>Going Beyond SharePoint Page</p> <p>https://uk.pcmag.com/monitors/9527/the-best-computer-monitors</p> <p>https://uk.pcmag.com/hard-drives/7890/the-best-external-hard-drives</p> <p>https://uk.pcmag.com/desktops/73/the-best-desktop-computers</p> <p>https://uk.pcmag.com/ssd/17645/the-best-external-ssds</p> <p>https://uk.pcmag.com/laptops/158/the-best-laptops</p>