Subject:

Computing

HECKMONDWIKE GRAMMAR SCHOOL

KS5 - Year 12 Curriculum Overview

Autumn Term

	Topics being taught	What you will be assessed on	How you can support at home
Term 1	**Theory of Computation** Finite state machines Regular expressions BNF/RPN Big O **Fundamentals of Programming** **Fundamentals of Data structures** **Fundamentals of algorithms**	Programming and algorithm design	Practice designing algorithms Note checking and organisation
Term 2		Programming Data structures Computation	Setup programming environment at home Practice programming – Challenges and problem solving

CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS

Spring Term

	Topics being taught	What you will be assessed on	How you can support at home
Term 3	Subroutines Files and exception handling Number systems Data representation Social legal and cultural issues Turing machines Hardware and software Classifications of programming languages	Finite state machines Regular expressions Big O Structured programming Queues, Stacks and Graphs	Practice questions Practice programming
Term 4		Number systems Programming Hardware and software	Reading about computers in society Programming challenges

EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS

Summer Term

	Topics being taught	What you will be assessed on	How you can support at home
Term 5	SQL and Databases Boolean Logic The Non-Exam Assessment (NEA)	Programming Data structures Algorithms Computation	Practice database questions Revision of topics from year 12
Term 6		All topics from Year 12	Research problems for the NEA Programming challenges