Bishop Heber High School

Subject	Year	Term
Computer Science	8	1

Topic

Data Representation, Computational Thinking

Content (Intent)

Prior Learning (Topic)

Data Representation. Students will learn how computers use binary to represent numbers, text and images. They will learn the binary and hexadecimal number system, how to convert between number systems and how to do binary addition. Students will lean how images are represented using binary and hexadecimal.

Computational Thinking 2. Students will learn how to approach problems in a systematic way, using abstraction, decomposition and algorithmic thinking. They will learn the basic logic gates of AND, OR, NOT and how they can be used to describe circuits and logic as well as what a truth table is.

Future Learning (Topic)

What Knowledge and Skills will be taught (Implementation)	How will your understanding be assessed & recorded (Impact)
Students ill learn how to: -Convert from denary to binary and vice versa -How add two binary numbers together -How to convert to and from hexadecimal -How images are stored using a computer and how to calculate image file sizes.	S1 Assessment will be in 2 parts. Part 1 Online assessment: -Key terms for both units. -Binary Maths Part 2 Written Paper with 2-6 mark questions on computational thinking including drawing logic gates and truth tables. Homework will be completed using Seneca and Teams for Key Terms.
Students will learn how to abstract problems, the purpose of abstraction. They will learn how to decompose problems and the purpose of decomposition. They will learn the basic logic gates AND, OR, NOT and their truth tables and how they can make circuits.	

How can parents help at home?

Ensure students engage with their Seneca homework.

Helpful further reading/discussion (including Reading and Vocabulary Lists)

Reading

Vocabulary Lists

Binary
Denary
Hexadecimal
Bit map
Colour Depth
Abstraction
Decomposition
Logic Gates
AND, OR, NOT