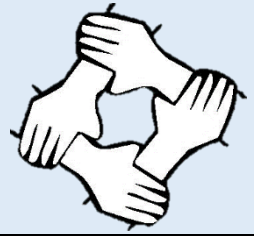
Year 3 – Term 3

What does it mean to be strong?

COMPUTING



National Curriculum Links:
Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

Essential Prior Learning:
Be able to log onto the computer, understand basic keyboard functions, e.g. shift, enter and delete keys. Have mouse control in order to select. Be able to save work, log off and shut down appropriately.

Progression in Skill:
Problem Solving Design and write a program using a block language, without user interaction. Explore simulations of physical systems on screen. Plan a project. **Programming** Use sequence in programs. Write a program to produce output on screen. **Logical Thinking** Explain a simple, sequence-based algorithm in their own words. Use logical reasoning to detect errors in programs.

Understand that computer networks transmit information in a digital (binary) form. **Online Safety** Use digital technology safely and show respect for others when working alone. Recognise unacceptable behaviour when using digital technology. Know who to talk to about concerns and inappropriate behaviour in school.

Long-term Memory Knowledge:
Know that making a program involves a series of broken-down steps put together in a logical sequence. Graphics, text and sound can all be combined in one animation. Using the blocks of code, the sprite can be made to move and 'speak.' 'Motion' blocks create movement; 'looks' and 'sound' create dialogue and sound effects.

Key Vocabulary	
command	an instruction, written in a particular programming language, for the computer to carry out
algorithms	a detailed step-by-step instruction set or formula for solving a problem or completing a task
block language	a programming language in which blocks are used to program the computer
repetition	using the same section of computer code more than once in the same program
input	information given to a computer system, e.g. by typing on a keyboard, clicking with the mouse, speaking into a microphone, using the camera to take a picture, etc.
output	the information the computer produces in response to the input, e.g. words on a screen, sound from the speakers, something being printed, etc.

Progression in Resources:
Use of tutorials and step by step guides. Less reliance on these, able to add to programs independently. J2e: J2code, visual (level 1/2)

Relevance	
Now	Children know that a set of instructions are needed to program a computer to do what you want it to. Changing the input will change the output; if the computer doesn't do what you want it to, you need to look back through the instructions you've given it.
Future	Children have enough understanding of computer systems to identify why programs they are familiar with are not working as they would expect and correct this.
Aspiration	Develop programs that can be used in the wider worlds of industry, gaming, etc.