Computing	Year 4
Algorithms and programming– selection in physical computing	
Age related computing vocabulary	

Scenarios- **foreseeable interactions of types of users and the system**	Logical reasoning- **explain why something happens**. We can use it to work out exactly what a program or computer system will do	Solution- a **way in which a problem or task is solved or otherwise addressed using electronic computers**

Key Knowledge

- a microcontroller is a programmable device that can control outputs and respond to inputs (crumble)
- an algorithm is a precise set of ordered steps, which can be followed by a human or a computer in order to do a task
- algorithms can be presented in different ways
- 'conditions' can be used as inputs to control the crumble
- Conditions are always true or false statements
- Actions can either stop or start when conditions are met
- Selection follows an 'if… then…' structure
- Selection is where tasks are controlled by devices that have been programmed to carry out actions when a condition has been met.

Computing	Carlton Assessment Grid		
Success Criteria	Pupil Reflection		Teacher Assessment
I can experiment with variables to control a simple circuit connected to a computer	Before ☐	After ☐	
I can write a basic program that includes count-controlled loops	Before ☐	After ☐	
I can predict and explain why a loop can stop when a condition is met	Before ☐	After ☐	
I understand that a loop can be used to repeatedly check whether a condition has been met	Before ☐	After ☐	
I can design a simple physical project that includes selection	Before ☐	After ☐	
I can select and use software to create a simple program that controls a physical computing project and debug where appropriate	Before ☐	After ☐	