DT KNOWLEDGE & SKILLS PROGRESSION - TECHNICAL KNOWLEDGE

"Design for the present with an awareness of the past for a future that is essentially unknown."
~ Sir Norman Foster

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Shows an interest in technological toys with knobs or pulleys. (20-50 months) Shows understanding of how to transport and store equipment safely (40-60months) Constructs with a purpose in mind, using a variety of resources. • Uses simple tools and techniques competently and appropriately. • Selects appropriate resources and adapts work where necessary. • Selects tools and techniques needed to shape, assemble and join materials they are using (40-60months)	Pupils will be taught to explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. Build frames/ structures, exploring how they can be made stronger, stiffer and more stable		Pupils will be taught to understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] They will understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]		Pupils will apply their understanding of computing to program, monitor and control their products. They will understand and use mechanical systems in their products [for example, gears, pulleys, drive belts, cams, levers and linkages]	
	I can discuss how levers and sliders work. I can make a model which incorporates a switch/lever to provide a movement/change to occur. I can talk about ways to make my structure stronger. I can combine components to make a frame I can use existing frames/ structures to construct a model.	I can discuss how levers and sliders work. I can make a model which incorporates a switch/lever to provide a movement/change to occur. I can make a functional product with axels and wheels. I can explore how structures can be made stronger, stiffer and more stable. I can combine components to make a frame I can use existing frames/ structures to construct a model.	I can discuss how levers and sliders work. I can make a model which incorporates a switch/lever to provide a movement/change to occur. I can make a functional product with axels and wheels. I can incorporate moving parts e.g. steering. I can use electrical systems – incorporating bulbs, etc. I can identify what makes a circuit complete. I can follow instructions to set up circuits. I can identify complete and incomplete circuits.	I can discuss how levers and sliders work. I can make a model which incorporates a switch/lever to provide a movement/change to occur. I can make a functional product with axels and wheels. I can incorporate moving parts e.g. steering. I can explain how electrical systems work. I can use electrical systems – incorporating bulbs, I can identify what makes a circuit complete. I can follow instructions to set up circuits. I can identify complete and incomplete circuits.	I can discuss and explain how structures can be made stronger and stiffer. I can produce a working model that harnesses the rotational movement created by a pulley system. I can explain how a working model harness the movement created by a gear system. I can produce a working model that can rotate at different speeds. I can make a product made by a CAM. I can incorporate an appropriate size and shaped CAM.	I can discuss and explain how structures can be made stronger, stiffer and more stable with examples. I can produce a working model that harnesses the rotational movement created by a pulley system. I can explain how a working model harness the movement created by a gear system. I can produce a working model that can rotate at different speeds. I can make a product made by a CAM. I can incorporate an appropriate size and shaped CAM.