Castle Hills Primary Academy

Progression of Learning

Design and Technology Spring Cycle B

Design and Technology			
KS1	Vehicles-Axels/Wheels		
	Design Cycle	**Sticky Knowledge**	
	Research	Can children identify a variety of different types of vehicles? Can children identify the main features of a variety of vehicles? Can children identify the uses for a variety of vehicles? Do children know what wheels/axels and chassis are? Can children experiment with a range of materials and techniques to combined wheels, axles and chassis?	
	Design	Can children design a vehicle to include wheels, axels, chassis and bodies? Can children describe which materials and tools they will need to make their vehicle? Can children discuss their designs and say what they think and feel about them?	
	Make	Can children follow a design to create a vehicle? Can children use a variety of materials and tools safely and effectively to create a vehicle? Can children identify ways in which they could improve their product and amend accordingly?	
	Evaluate	Can children identify a finished product by identifying what went well? Can children identify a finished product by identifying what could be improved? Can children identify ways in which they could improve their work with DT in the future?	
	Prior Learning	**Vocabulary**	**Technical Skills and Knowledge**
	Threading and fine motor Making an appealing product Joining together	Investigate Vehicles Axel Wheel Chassis Body Modelling Techniques Success criteria Explaining and improving Safety	Children will investigate a variety of vehicles their uses and features Children will investigate wheels axels and chassis Children will be able to understand ways of creating and decorating the body of a vehicle Children will be able to design a vehicle Children will be able to make a vehicle based on a design Children will be able to evaluate a finished product
LKS2	Electrical systems (torches)		
	Design Cycle	**Sticky Knowledge**	
	Research	Can children identify the main features of torches? Can children explain how a torch work? Are children able to explain how torches design matches its purpose?	
	Design	Can children create a simple circuit? Do children know that a variety of metal components conduct electricity Can children design a switch to use in a torch? Can children design and describe what their torch casing will to like? Can children generate ideas for their torch design? Can children create a torch casing using a 3D net? Can children design a torch using what they have leant, ensuring that it meets a specific design criteria.	
	Make	Can children follow a design to create a torch? Can children work accurately with a range of materials and components?	
	Evaluate	Can children explain how their completed torch works? Can children evaluate their product against a design criteria? Can children explain what has been successful and why? Can children explain what they would do differently if they were to make torches again?	
	Prior Learning	**Vocabulary**	**Technical Skills and Knowledge**
	Threading and fine motor Making an appealing product Joining together The DT cycle Children will investigate how to make an electrical circuit using different materials for switches. evaluate the finished product	Torch Design criteria Materials Components Products Differently Materials Circuit Nets/3D shapes Switch Circuit Features Purpose Electricity	Children will identify the features of torches and investigate their uses Children will investigate how to make an electrical circuit using different materials for switches. Children will investigate casings for a torch. Children will design a torch for a particular purpose Children will make a torch to meet the design criteria To evaluate the finished product

UKS2	**Electrical systems- steady hand games.**		
	Design Cycle	**Sticky Knowledge**	
	Research	Can children identify the main features of a steady hand game? Can children explain how a steady hand game works? Are children able to explain how a steady hand game design matches its purpose?	
	Design	Can children create a simple circuit? Do children know that a variety of metal components conduct electricity Can children design a switch to use in a steady hand game? Can children design and describe what their steady hand game will look like? Can children generate ideas for their steady hand game design? Can children design a steady hand game using what they have leant, ensuring that it meets a specific design criteria.	
	Make	Can children follow a design to create a steady hand game? Can children work accurately with a range of materials and components?	
	Evaluate	Can children explain how their completed steady hand game works? Can children evaluate their product against a design criteria? Can children explain what has been successful and why? Can children explain what they would do differently if they were to make a steady hand game again?	
	Prior Learning	**Vocabulary**	**Technical Skills and Knowledge**
	Threading and fine motor Making an appealing product Joining together The DT cycle Children will investigate how to make an electrical circuit using different materials for switches. evaluate the finished product	Assemble Electronics Criteria Switch Current Analyse Evaluate Circuit Construct Base Research Test Component Conductor Insulator	Children will research and analyse a range of children's toys. Children will identify and name components in steady hand games. Children will make and test a circuit. Children will design a steady hand game. Children will share and discuss their ideas with peers. Children will accurately cut and assemble a net. Children will construct a steady base. Children will assemble electronics and complete their game. Children will evaluate their product against the criteria.