Pentecost 2 Design & Technology – Electrical Systems: Y3			
Scripture Link:			
National Curriculum Objective: •			
Design, make and evaluate a _____ (product) for _____ (user) for _____ (purpose)			
	Lesson 1	Lesson 2	Lesson 3
Learning intention for each lesson	I can talk about what electricity is and what it is used for.	I can understand the purpose of information design.	I can research a set topic to develop a range of initial ideas.
Recall and Retrieval		• I can list examples of common electric products (kettle, remote control etc.) • I know that an electrical system is a group of parts (components) that work together to transport electricity around a circuit. • I know the common features of an electric product (switch, battery or plug, dials, buttons etc.)	• I can name examples of information design. • I can explain the purpose of information design. • I know that an electric product uses an electrical system to work (function). • I know the name and appearance of a bulb, battery, battery holder and crocodile wire to build simple circuits.
Sequence of substantive knowledge throughout the lesson	**Evaluate:** • I know that an electrical system is a group of parts (components) that work together to transport electricity around a circuit. • I know the common features of an electric product (switch, battery or plug, dials, buttons etc.) • I know that an electric product uses an electrical system to work (function). I know the name and appearance of a bulb, battery, battery holder and crocodile wire to build simple circuits.		**Design:** • I know how to carry out research based on a given topic (e.g. The Romans) to develop a range of initial ideas.
Key Skills/disciplinary knowledge	**Evaluate:** • I can list examples of common electric products (kettle, remote control etc.)	**Design:** • I can name examples of information design. • I can explain the purpose of information design. • I can describe or explain the importance of information design.	**Design:** • I can research and select a topic to inform my design ideas. • I can write a paragraph about my chosen topic. • I can sketch initial ideas for my electric poster that meet my design criteria.

Key Vocabulary		Design, information, information design, public	Bulb, design criteria, information design, initial ideas, research, sketch
Main teaching activity ***If the school has another short term planning format, this does not need to be included.***			
Scaffolding		Pupils needing extra support: • could have fewer examples of information design and focus on one or two; • could be asked to think about how these examples are used in everyday life; • could compare a variety of good and bad examples of posters, signs (etc.) for a direct visual correlation to what makes information design successful and unsuccessful	Pupils needing extra support: • could focus on a particular aspect of the topic; • could work in pairs or groups, basing their posters on one aspect of Ancient Rome and add more than one circuit to highlight more areas.
Challenge		Pupils working at greater depth: • should discuss their own experiences of information design and any good or bad examples they may have observed; • should be encouraged to be critical in analysing examples observed and to suggest ways they could be improved; • could be prompted to consider inclusive design for those with additional needs, e.g. braille, visual impairment.	Pupils working at greater depth: • should have greater freedom when choosing the aspect of the topic they wish to focus on.
Diversity Links			
Catholic Social Teaching Principles			
British Values			
Wider links			

Pentecost 2 Design & Technology – Electrical Systems: Y3			
	Lesson 4	Lesson 5	Lesson 6
Learning intention for each lesson	I can develop an initial idea.	I can develop my initial idea into my final design.	I can assemble my final product, incorporate a simple circuit and evaluate it.
Recall and Retrieval	• I can describe or explain the importance of information design. • I can name examples of information design. • I can explain the purpose of information design.	• I know how to test the success of initial ideas against the design criteria and justifying opinions. • I can review my initial ideas against the design criteria. • I can provide and respond to peer feedback.	• I know how to measure and mark materials out using a template or ruler. • I know how to give and accept constructive criticism on own work and the work of others. • I know how to revisit the requirements of the client to review developing design ideas and check that they fulfil their needs.
Sequence of substantive knowledge throughout the lesson	**Make:** • I know how to test the success of initial ideas against the design criteria and justifying opinions.	**Make:** • I know how to measure and mark materials out using a template or ruler. • I know how to give and accept constructive criticism on own work and the work of others. • I know how to revisit the requirements of the client to review developing design ideas and check that they fulfil their needs.	**Evaluate:** • I know how to generate a final design for the electric poster with consideration for the client's needs and design criteria. • I know how to plan the positioning of the bulb (circuit component) and its purpose. • I know how to mount the poster onto corrugated card to improve its strength and withstand the weight of the circuit on the rear. • I know how to fit an electrical component (bulb). • I know how to learn ways to give the final product a higher quality finish (e.g. framing to conceal a roughly cut edge).
Key Skills/disciplinary knowledge	Make: • I can review my initial ideas against the design criteria. • I can provide and respond to peer feedback.	**Make:** • I can develop an initial idea into a final design. • I can evaluate my final design against the design criteria.	**Evaluate:** • I can mount the final design to make it stiffer and stronger. • I can build a simple circuit that includes a bulb. • I can test and evaluate my electric display board. • I can name and identify simple circuit components (bulb, battery and wires).

Key Vocabulary	Develop, feedback, final design, initial ideas, peer-assessment, self-assessment	Develop, feedback, final design, initial ideas, peer-assessment, self-assessment	Battery, bulb, circuit, circuit component, crocodile wire, electric, product, electrical system
Main teaching activity ***If the school has another short term planning format, this does not need to be included.***			
Scaffolding	Pupils needing extra support: • could be provided with a checklist or a visual representation (e.g. emoticons or traffic lights) when self and peer-assessing before writing a few words or a sentence about each criteria point; • should discuss the example design on slide 3 of the Presentation: Design development and use it to guide ideas; • could be given a copy of the Activity: Supporting Roman images (see Print in advance) to support them in creating their final design or for reference when drawing.	Pupils needing extra support: • could be provided with a checklist or a visual representation (e.g. emoticons or traffic lights) when self and peer-assessing before writing a few words or a sentence about each criteria point; • should discuss the example design on slide 3 of the Presentation: Design development and use it to guide ideas; • could be given a copy of the Activity: Supporting Roman images (see Print in advance) to support them in creating their final design or for reference when drawing.	Pupils needing extra support: • could be grouped into pairs to support each other during the assembly process; • could see the process modelled again; • could temporarily attach the A4 paper to the corrugated card with paper clips to keep it stable as the edges are marked.
Challenge	Pupils working at greater depth: • encouraged to give constructive feedback to their peers and justify their responses; • should provide greater detail when reviewing their initial ideas against the design criteria; • should include annotations on each initial and final design idea.	Pupils working at greater depth: • encouraged to give constructive feedback to their peers and justify their responses; • should provide greater detail when reviewing their initial ideas against the design criteria; should include annotations on each initial and final design idea.	Pupils working at greater depth: • should be encouraged to carry out all aspects of the making and evaluating processes with greater independence; • could support their peers once they have finished, including troubleshooting if problems occur; • should be asked to explain and justify why they made particular points in their letter to Gus (final evaluation).
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