

Pioneer Federation
Medium term plan
UPKS2 Cycle 2, Term 1
D.T



Subject: D.T			
Key Concept/ Theme: What Makes a War?			
Prior Learning links: Cycle 2 How has Electricity Changed Our Lives? Structures. Cycle 1 Energising Engineers and Incredible Inventions- Technical design.			
Vocabulary: prototypes, innovative, shelter, inventor, designer, canopy, frame, adaptations			
School specific areas to cover (Add in any local areas of study, trips and people)			
CP	EH	SMV	PM
1.	<p>Why are shelters important in everyday life?</p> <p>Prior learning reconnection (year group, cycle & term): 3/4 Cycle 1 Term 1</p> <p>LO: Today I am learning the process of using market research to inform designs.</p> <p>Activity: Introduce the history of the Anderson shelters and why they were needed. In Pairs, ask the children to discuss what types of shelters they have come across in modern life including e.g. bus shelters, playground shelters, tents, garden shelters, gazebos, canopies, umbrellas and historic shelters. Next, the children can choose three examples to research further. They should select examples constructed in different ways e.g. with a framework inside, a framework outside and shell structures.</p> <p>Get the children to think about-</p> <ul style="list-style-type: none"> - What materials have been used to build the shelter? - How has the shelter been made? - Why has the shelter been made this way? - What are the different parts called? e.g. frame, canopy - What do the different parts do? - Who will use the shelter? - Who needs shelter? - Which constructions are the strongest? <p>Then-</p>		

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	<p>In pairs, they will need to research the 3 different shelters and produce an A4 fact file (no bigger). This fact file must contain a picture of each shelter, and should be annotated with information about them. At the bottom of the page, there needs to be a short discussion – they should state which shelter they would have preferred to have been in AND WHY.</p> <p>Future learning links: What effects do eating different foods have on the body?</p>
2 and 3	<p>Reconnection: What shelter from last week do you think has the best design and why? LO: Today I am designing my air-raid shelter Activity: Draw two different product designs. Consider the elements they would want to use.</p> <p>Once the children have designed their shelter they can use paper and masking tape to create their own prototype of their shelter.</p> <p>The children could also do some testing of other materials:</p> <p>The children could test how the use of a textiles cover can strengthen a structure.</p> <p>The children could try different techniques for attaching textiles to a frame. Discuss the impact of the technique chosen on water resistance, strength and appearance.</p> <p>The children could experiment with different methods of joining material e.g. plastic and paper straws, square and rectangular sections of wood, solid paper straws, doweling.</p> <p>They could test how weather proof it is by pouring water onto it.</p>
4 and 5	<p>Reconnection: Which materials worked well when tested and why? LO: Today I am creating my own WW2 air-raid shelter from my design. Activity: Children to make their own shelters using the materials they planned in their designs. Tell them they do not need to rush as they have two lessons to do this. It might be worth blocking out a day for the project which could then include the evaluation lesson too.</p>
6	<p>Reconnection: recap previous learning LO: Today I am creating my own WW2 air-raid shelter from my design Activity: Each child to have a post it note on their original design, giving a short evaluation of their product. Provide model questions to answer:</p> <p>What do I like about my project?</p> <p>What did I have to change from my original plan?</p>

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Which part do I think worked particularly well?

Are there any areas I would change?

What might I do differently if I were to do this project again?

End of unit quiz

End points:

To know the process of using market research to inform designs.

To know what a prototype and how to evaluate and make effective adaptations.

To know inventors and designers of shelters and how effective their work was for the brief of design.

To know the process needed for strengthening and stiffening a structure.