

ADVENT TERM 2
DESIGN AND TECHNOLOGY – Year 1 - Medium Term Planning – Structure

<u>LESSON 1</u>	<u>LESSON 2</u>	<u>LESSON 3</u>
Structures / Materials LEARNING INTENTION: To know that materials have properties which make them fit for different purposes. Disciplinary Knowledge: <ul style="list-style-type: none"> Describe differences in materials. Aim: Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.	Structures / Materials LEARNING INTENTION: To know that a shelter is a structure that provides protection. Disciplinary Knowledge: <ul style="list-style-type: none"> Suggest ways to make material/product stronger. Aim: Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.	Design LEARNING INTENTION: To know that design criteria are explicit goals that a product must achieve. Disciplinary Knowledge: <ul style="list-style-type: none"> Design a product for themselves following design criteria. Aim: Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.
Key Vocabulary: strong, waterproof, flexible, properties, wood, plastic, glass, metal, water, rock, brick, paper, fabric, materials, properties.	Key Vocabulary: permanent, temporary, shelter, protection, strong, sturdy, differences	Key Vocabulary: waterproof, strong, sturdy, materials, fit for purpose, shelter, design
Recap & retrieval	Recall & retrieval <ul style="list-style-type: none"> Different materials have different properties. 	Recall & retrieval – <ul style="list-style-type: none"> Different materials have different properties. A shelter is a structure designed to give protection from weather or danger.

<p>Key Knowledge:</p> <p>Child:</p> <ul style="list-style-type: none"> • Different materials have different properties. • Some are strong, absorbent, waterproof and transparent, flexible, brittle, etc. <p>Teacher:</p> <ul style="list-style-type: none"> • Everyday materials include wood, plastic, glass, metal, water, rock, brick, paper and fabric. • A material's properties can influence whether it is fit for purpose. 	<p>Key Knowledge:</p> <p>Child:</p> <ul style="list-style-type: none"> • A shelter is a structure designed to give protection from weather or danger. • Permanent means that it cannot be moved or taken down. • Temporary means that it can only stay for a short amount of time. <p>Teacher:</p> <ul style="list-style-type: none"> • A bus shelter, office block, garage, carport, tent, bird table, shed, conservatory, house, kennel and caravan are all examples of shelters. • A shelter can be permanent, like a house or garage, or temporary, like a tent or gazebo. • Everyday products are objects that are used routinely at home and school, such as a toothbrush, cup or pencil. • All products are designed for a specific purpose. 	<p>Key Knowledge:</p> <p>Child:</p> <ul style="list-style-type: none"> • A successful product must match the design criteria. <p>Teacher:</p> <ul style="list-style-type: none"> • A shelter needs to be waterproof. • A shelter needs to be strong and sturdy. • A shelter needs to be the right size for its purpose.
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<u>LESSON 4</u>	<u>LESSON 5</u>	<u>LESSON 6</u>
<p>Make</p> <p>LEARNING INTENTION: To know that the properties of materials impact their effectiveness in different practices.</p> <p>Disciplinary Knowledge:</p> <ul style="list-style-type: none"> Choose suitable materials and explain choices. <p>Aim: Develop the creative, technical and practical expertise needed to perform everyday tasks confidently.</p>	<p>Make</p> <p>LEARNING INTENTION: To know that previous design criteria can be used for other projects.</p> <p>Disciplinary Knowledge:</p> <ul style="list-style-type: none"> Select tools/equipment to cut, shape, join, finish and explain choices. <p>Aim: Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.</p>	<p>Evaluate</p> <p>LEARNING INTENTION: To know that a product can be improved by using others' ideas.</p> <p>Disciplinary Knowledge:</p> <ul style="list-style-type: none"> Talk about existing products, and say what is and isn't good. <p>Aim: Critique, evaluate and test their ideas and products and the work of others.</p>
<p>Key Vocabulary: suitable, shelter, purpose, properties, structure, measurements, clay, plastic, glass</p>	<p>Key Vocabulary: design criteria, analyse, join, fix, collaborate</p>	<p>Key Vocabulary: evaluate, improve, positives, negatives, strength, weakness</p>
<p>Recall & retrieval –</p> <ul style="list-style-type: none"> Different materials have different properties. A shelter is a structure designed to give protection from weather or danger. A successful product must match the design criteria. 	<p>Recall & retrieval</p> <ul style="list-style-type: none"> Different materials have different properties. A shelter is a structure designed to give protection from weather or danger. A successful product must match the design criteria. Different materials can be used for different purposes, depending on their properties. 	<p>Recall & retrieval</p> <ul style="list-style-type: none"> Different materials have different properties. A shelter is a structure designed to give protection from weather or danger. A successful product must match the design criteria. Different materials can be used for different purposes, depending on their properties. When designing a product, the choice of materials will affective the outcome of the product.

<p>Key Knowledge:</p> <p>Child:</p> <ul style="list-style-type: none"> • Different materials can be used for different purposes, depending on their properties. • A play den is a shelter, usually built outside. • It is a temporary structure made from found or readily available materials. • It can be used for imaginative play or to provide protection from the weather. <p>Teacher:</p> <ul style="list-style-type: none"> • Cardboard is a stronger building material than paper. • Plastic is light and can float. • Clay is heavy and will sink. • Glass is transparent, so it is suitable to be used for windows. 	<p>Key Knowledge:</p> <p>Child:</p> <ul style="list-style-type: none"> • When designing a product, the choice of materials will affect the outcome of the product. • Rules are made to keep people safe from danger. <p>Teacher:</p> <ul style="list-style-type: none"> • Different materials may not be suitable for different products because of their properties. 	<p>Key Knowledge:</p> <p>Child:</p> <ul style="list-style-type: none"> • Testing a product can support the finding of improvements. • A strength is a good quality of a piece of work. • A weakness is an area that could be improved. <p>Teacher:</p> <ul style="list-style-type: none"> • Safety rules include always listening carefully and following instructions, using equipment only as and when directed, wearing protective clothing if appropriate and washing hands before touching food. • Different materials can be used for different purposes, depending on their properties.
<p>Assessment</p> <p>Cumulative quiz. Retrieval practice.</p>		