Holy Trinity Progression Map of Key Concepts for Design & Technology (Engineering)

Unit 1: using tools & equipment

Unit 1: interpreting drawings

Exam

Revision & consolidation

Unit 1 implementing processes

Unit 1: planningoperations

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Unit 3: Solving Engineering problems

Unit 2: Designing engineering products – understanding function & meeting requirements

Unit 2: Designing engineering products – proposing design solutions

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Unit 3 understanding methods of preparation, forming, joining & finishing

Unit 3: Solving Engineering Problem – understanding the properties of engineering materials

Unit 3: Solving Engineering Problem – understanding the effects of engineering acievements

Evaluating: Have I made a sustainable product?

9

Design Influences: How do products impact the environment?

Generating Ideas: Which materials can be recycled or reused to make my product?

Making: How could I incorporate electronic systems into my product to make It work?

Evaluating: How could I develop my product further in order to improve it?

Making: How could I make a high quality product?

Generating Ideas: How would the properties of woods contribute to my design?

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Making: How can I create a high quality finish on my product?

Evaluating: Does my product meet my design brief?

Design Influences: Can I design and make a sweet dispenser to solve a design problem?

7

Generating Ideas: How can I design a product to fit a design brief?

Design Influences: What makes a product accessible to all?

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Evaluating:
1. What features of my design made my labyrinth successful?
2. Does my model represent a real WW1 trench?

Making:
1. Can I successfully select, measure, cut and join materials?
2. Have I chosen appropriate materials?

Generating Ideas:
1. What features make a successful labyrinth?
2. What materials are needed to create a strong trench?

Design Influences:
1. What was the role of the labyrinth in Greek mythology?
2. What was the purpose of trenched in WW1?

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Design Influences:
1. How do cars move?

Generating Ideas:
1. Do my designs include common features of a car?

Making:
1. How will I cut, shape, join and finish my car?

Evaluating:
1. How could I develop my design to make it suitable for different terrains?

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Design Influences:
1. How do levers & mechanisms work?
2. What does George Carradine's work consist of?:
3. What are the different components of a shoe?

Making:
1. Does my dragon move?
2. How will I make the light in my model light up?
3. How do I measure, cut and join materials accurately?

Generating Ideas:
1. How can I make my dragon move?
2. How can I incorporate George Carradine's work into my design?
3. What materials would be most appropriate for a sandal?

Evaluating:
1. How could I improve my dragon?
2. Was the circuit I used successful in lighting up my model?
3. How can I evaluate my product against my design criteria?

3

Design Influences:
1. What makes an effective shadow puppet character?
2. What makes a purse fit for purpose?

Generating Ideas:
1. How can my research inform my designs?
2. What fastening will be most appropriate for my purse?

Evaluating:
1. Does my product meet the design criteria?
2. Is the stitching and fastening neat and accurate?

Making:
1. Which tools and materials will I need?
2. What type of stitch will I use to join the fabric?

2

Generating Ideas:
1. Can I design my rainforest animal based on Henri Rousseau's work?
2. What are the main features of a lighthouse, can I include these in my design?

Making
1. How will my animal move and stand?
2. How can I create a hinge and a working light in my lighthouse?

Evaluating:
1. What could I improve next time?
2. Does the lightbulb work?

Design Influences:
1. What influenced Henri Rousseau's work?
2. What is the purpose of a lighthouse?

1

Making:
1. Which materials and techniques could I use?
2. How will my weather vane move?
3. How can I join materials to make a house?

Evaluating:
1. Is my puppet appealing to others?
2. Does my weather vane work?
3. Is my house sturdy and well made?

Generating Ideas:
1. What makes a good sock puppet?
2. What does a good design include?
3. What materials can I use to create a junk model house?

Design Influences:
1. What features does a good toy have?
2. Why are weather vanes used?
3. What did houses look like in the 17th Century?