

# Y7 Design & Technology

# TANGLED



|                 |  |                    |  |
|-----------------|--|--------------------|--|
| <b>Name</b>     |  |                    |  |
| <b>Teacher</b>  |  |                    |  |
| <b>DT Group</b> |  | <b>GCSE Target</b> |  |

| TOPIC   | GCSE 1-3   | GCSE 4-6  | GCSE 7-9   |
|---|--|---|--|
| <p><b>Identifying &amp; investigating design opportunities.</b></p> <p><i>(The design context &amp; consumer profile)</i></p>                                     | <ul style="list-style-type: none"> <li><input type="checkbox"/> Lists few problems or opportunities within the design brief.</li> <li><input type="checkbox"/> States a potential user with little consideration to their needs.</li> </ul>  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Describes some problems or opportunities within the design brief which has informed the development of possible design ideas.</li> <li><input type="checkbox"/> Identified a potential user with good consideration to their needs, values &amp; wants.</li> </ul>                                      | <ul style="list-style-type: none"> <li><input type="checkbox"/> Detailed analysis of several problems or opportunities within the design brief which has informed the development of unique design ideas.</li> <li><input type="checkbox"/> Analysed a potential user in detail with consideration of their needs, values &amp; wants, including reflection.</li> </ul>                                  |
| <p><b>Generating &amp; developing design ideas.</b></p> <p><i>(Design ideas, working drawing &amp; prototyping)</i></p>   | <ul style="list-style-type: none"> <li><input type="checkbox"/> Shows limited ability to communicate simple ideas to others.</li> <li><input type="checkbox"/> Limited details of materials, dimensions, production techniques mentioned.</li> <li><input type="checkbox"/> Basic or no use of testing to evolve ideas.</li> </ul>                     | <ul style="list-style-type: none"> <li><input type="checkbox"/> Demonstrates a good use of skills to communicate average ideas to others.</li> <li><input type="checkbox"/> Basic details of materials, dimensions, production techniques mentioned.</li> <li><input type="checkbox"/> Some testing with consideration completed to evolve ideas.</li> </ul>            | <ul style="list-style-type: none"> <li><input type="checkbox"/> Demonstrates a sophisticated use of skills to clearly communicate a range of ideas to others.</li> <li><input type="checkbox"/> Comprehensive range of details including materials, dimensions &amp; production techniques.</li> <li><input type="checkbox"/> Clear, detailed &amp; effective use of testing to evolve ideas.</li> </ul> |
| <p><b>Manufacturing a prototype.</b></p> <p><i>(Using CAD/CAM &amp; manufacturing diary)</i></p>  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Used basic making skills to produce a partially functioning prototype.</li> <li><input type="checkbox"/> Lists basic stages of production with limited detail.</li> <li><input type="checkbox"/> Used tools, equipment &amp; machinery with support &amp; limited accuracy.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Used appropriate making skills &amp; processes to produce a good quality functioning prototype.</li> <li><input type="checkbox"/> Describes some relevant stages of production in detail.</li> <li><input type="checkbox"/> Used tools, equipment &amp; machinery safely with some accuracy.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Used a range of making skills &amp; processes to produce a high quality functioning prototype.</li> <li><input type="checkbox"/> Clearly communicates relevant stages of production in detail.</li> <li><input type="checkbox"/> Used tools, equipment &amp; machinery safely with independence &amp; accuracy.</li> </ul>               |
| <p><b>Analysing &amp; evaluating design decisions &amp; prototypes.</b></p> <p><i>(Product analysis, evaluating ideas &amp; prototypes, final evaluation)</i></p> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Lists some modifications &amp; strengths of the final prototype.</li> <li><input type="checkbox"/> Limited evaluation of design ideas &amp; decisions.</li> <li><input type="checkbox"/> Basic or no responding to feedback from others.</li> </ul>                                    | <ul style="list-style-type: none"> <li><input type="checkbox"/> Identifies a variety of modifications &amp; strengths of the final prototype.</li> <li><input type="checkbox"/> Produced a basic evaluation of design ideas &amp; decisions.</li> <li><input type="checkbox"/> Good use of responding to feedback from others.</li> </ul>                               | <ul style="list-style-type: none"> <li><input type="checkbox"/> Responded to feedback from others &amp; clearly identifies opportunity for development of the final prototype.</li> <li><input type="checkbox"/> Undertaken critical analysis &amp; evaluation of designs &amp; prototypes throughout.</li> </ul>  |

# Product Analysis

| Unit                        | 2-3   | 4-6   | 7-9  |
|-----------------------------|---|---|--|
| Analysing existing products | <input type="checkbox"/> I can analyse 1-3 product using ACCESS FM.                       | <input type="checkbox"/> I can analyse 3-4 products using ACCESS FMM. I can explain and justify each the design decisions made by both the designer and manufacturer.     | <input type="checkbox"/> I can analyse 3-4 products using ACCESSFM. I can explain and justify each of the design decisions made both designer and manufacturer and explain how this will impact on my designs.     |
|                             | <input type="checkbox"/> I can identify the needs and wants of the user. 5Ws              | <input type="checkbox"/> I can identify the needs and wants of the user and have described the cultural and socio-economic factors of the user.                           | <input type="checkbox"/> I can explain the needs and wants of the user in relation to cultural and socio-economic factors of the user and how this will impact on my design decisions.                             |
|                             | <input type="checkbox"/> I can identify the advantages and disadvantages of each product. | <input type="checkbox"/> I can evaluate each product in relation to the needs and wants of the user.  | <input type="checkbox"/> I can evaluate each product in relation to the user, the materials and components.  |
|                             | <input type="checkbox"/> I can suggest how the product could be improved.                 | <input type="checkbox"/> I can suggest several improvements for each of the products in relation to the user. I can explain how and why these improvements could be made. | <input type="checkbox"/> I can suggest several improvements for each product in relation to the user. I can explain how and why these improvements could be made using materials and components subject knowledge. |

| Target | Below (R) | Emerging (A) | On (G) | Exceeding (E) |
|--------|-----------|--------------|--------|---------------|
|        |           |              |        |               |

# Wood And Boards

|                         | 2-3   | 4-6  | 7-9  |
|-------------------------|---|--|--|
| <b>Woods and Boards</b> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Identify what a softwood and hardwood is.</li> <li><input type="checkbox"/> Identify the differences between natural and manufactured boards.</li> <li><input type="checkbox"/> Identify a range of natural and manufactured boards</li> <li><input type="checkbox"/> Identify the advantages and disadvantages of a range of natural and manufactured boards.</li> <li><input type="checkbox"/> Identify the positive and negative impact of using natural and manufactured boards.</li> <li><input type="checkbox"/> Create a design that applies a good knowledge of natural and manufactured boards.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Describe what a softwood and hardwood is.</li> <li><input type="checkbox"/> Describe the differences between natural and manufactured boards.</li> <li><input type="checkbox"/> Describe the properties of a range of natural and manufactured boards</li> <li><input type="checkbox"/> Describe the advantages and disadvantages of a range of natural and manufactured boards.</li> <li><input type="checkbox"/> Describe the positive and negative impact of using natural and manufactured boards.</li> <li><input type="checkbox"/> Create a design that applies a good knowledge of natural and manufactured boards and their properties.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Explain what a softwood and hardwood is.</li> <li><input type="checkbox"/> Explain the difference between natural and manufactured boards.</li> <li><input type="checkbox"/> Explain the properties of a range of natural and manufactured boards</li> <li><input type="checkbox"/> Explain the advantages and disadvantages of a range of natural and manufactured boards.</li> <li><input type="checkbox"/> Explain the positive and negative impact of using natural and manufactured boards.</li> <li><input type="checkbox"/> Create a design that applies a good knowledge of natural and manufactured boards and their properties with clear justifications for material decisions stated.</li> </ul> |

| Target | Below (R) | Emerging (A) | On (G) | Exceeding (E) |
|--------|-----------|--------------|--------|---------------|
|        |           |              |        |               |

# Design Specification

| Unit                 | 2-3   | 4-6   | 7-9   |
|----------------------|---|---|---|
| Design Specification | <ul style="list-style-type: none"> <li><input type="checkbox"/> I can write a design specification based on ACCESS FM.</li> <li><input type="checkbox"/> I can identify measurable criteria to inform my design.</li> <li><input type="checkbox"/> I can explain <b>how</b> I will meet each of my specification points.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> I can write a design specification based on ACCESS FMM and the end users needs and wants being met.</li> <li><input type="checkbox"/> I can identify measurable criteria such as ergonomics how the product could be manufactured in industry in terms of quantities.</li> <li><input type="checkbox"/> I can explain <b>how</b> I will meet each of my specification points.</li> <li><input type="checkbox"/> I can <b>justify</b> and give reasons for each of my design specification points linking to my research.</li> <li><input type="checkbox"/> I can identify how each of my points meet the needs of my user.</li> <li><input type="checkbox"/> I can prioritise each of my specification points.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> I can write a detailed design specification based on ACCESS FMM and the end users needs and wants being met.</li> <li><input type="checkbox"/> I can identify measurable criteria such as ergonomics how the product could be manufactured in industry in terms of quantities and its impact on cost and the environment.</li> <li><input type="checkbox"/> I can explain <b>how</b> I will meet each of my specification points.</li> <li><input type="checkbox"/> I can <b>justify</b> and give reasons for each of my design specification points linking to my research.</li> <li><input type="checkbox"/> I can explain how each of my points meet the needs of my user</li> <li><input type="checkbox"/> I can prioritise each of my specification points and explain why I have put them in this order of importance.</li> </ul> |

| Target | Below (R) | Emerging (A) | On (G) | Exceeding (E) |
|--------|-----------|--------------|--------|---------------|
|        |           |              |        |               |

# DESIGN IDEAS

| 2-3  | 4-6   | 7-9  |
|--|---|--|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> I can draw out 2-3 design ideas and label using ACCESS FM</li> <li><input type="checkbox"/> I can identify social, moral and economic factors.</li> <li><input type="checkbox"/> I can generate ideas that meet most of my specification points.</li> <li><input type="checkbox"/> I can evaluate my design ideas identifying advantages and disadvantages for each idea.</li> <li><input type="checkbox"/> I can identify 2-3 ways of improving my designs based on my evaluations.</li> <li><input type="checkbox"/> I can test and evaluate my designs through 3D prototyping.</li> <li><input type="checkbox"/> I can show improvements through drawings and prototypes. (2-3 improvements)</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> I can draw out 4-5 design ideas and label using ACCESS FMM.</li> <li><input type="checkbox"/> I can identify social, moral and economic factors relevant to the user</li> <li><input type="checkbox"/> I can generate ideas that meet all of my specification points.</li> <li><input type="checkbox"/> I can evaluate my design ideas explaining the advantages and disadvantages for each idea linking back to ACCESS FM and the needs and wants of the user.</li> <li><input type="checkbox"/> I can identify 4-6 improvements and can explain how these could be made.</li> <li><input type="checkbox"/> I can explain how each prototype could be tested and evaluated against my design specification.</li> <li><input type="checkbox"/> I can show improvements through drawings and prototypes. (4-6 improvements)</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> I can draw 4-5 design ideas and label using ACCESS FMM.<br/>These designs are creative, innovative and appealing.</li> <li><input type="checkbox"/> I can explain how social, moral and economic factors relevant to the user and how these have informed my design ideas.</li> <li><input type="checkbox"/> I can generate ideas that meet all of my specification points and I can explain how I have met them.</li> <li><input type="checkbox"/> I can evaluate my design ideas explaining the advantages and disadvantages for each idea linking back to ACCESS FM and the needs and wants of the user.</li> <li><input type="checkbox"/> I can identify 6-8 improvements and can explain how these could be made.</li> <li><input type="checkbox"/> I can explain how each prototype could be tested and evaluated against my design specification.</li> <li><input type="checkbox"/> I can explain how each of my prototypes could be improved.</li> <li><input type="checkbox"/> I can show improvements through drawings and prototypes. (6-8 improvements)</li> </ul> |

| Target | Below (R) | Emerging (A) | On (G) | Exceeding (E) |
|--------|-----------|--------------|--------|---------------|
|        |           |              |        |               |

# Making

| Unit   | 2-3   | 4-6  | 7-9   |
|--------|---|--|---|
| Making | <ul style="list-style-type: none"> <li><input type="checkbox"/> I can select and safely use specialist tools, techniques, processes, equipment and machinery.</li> <li><input type="checkbox"/> I can make a final prototype that is accurate in parts.</li> <li><input type="checkbox"/> I can make a final prototype that meets some of the needs, wants and values of the user</li> <li><input type="checkbox"/> I can make a prototype that meets some of my specification points.</li> <li><input type="checkbox"/> I can make a prototype that uses more than one skill.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> I can select and safely use specialist tools, techniques, processes, equipment and machinery.</li> <li><input type="checkbox"/> I can make a final prototype that is accurate in most parts due to accurate marking out.</li> <li><input type="checkbox"/> I can make a final prototype that meets most of the needs, wants and values of the user.</li> <li><input type="checkbox"/> I can make a prototype that meets most of my specification points.</li> <li><input type="checkbox"/> I can make a prototype that uses a range of skills and techniques.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> I can select and safely use specialist tools, techniques, processes, equipment and machinery including CAD/CAM.</li> <li><input type="checkbox"/> I can make a final prototype that is accurate all parts due to accurate marking out and construction.</li> <li><input type="checkbox"/> I can make a final prototype that meets all of the needs, wants and values of the user.</li> <li><input type="checkbox"/> I can make a prototype that meets all of my specification points.</li> <li><input type="checkbox"/> I can make a prototype that uses a range of skills and techniques including CAD/CAM.</li> </ul> |

| Target | Below (R) | Emerging (A) | On (G) | Exceeding (E) |
|--------|-----------|--------------|--------|---------------|
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| <b>Name</b>     |  |                    |  |
| <b>Teacher</b>  |  |                    |  |
| <b>DT Group</b> |  | <b>GCSE Target</b> |  |

| TOPIC   | GCSE 1-3   | GCSE 4-6  | GCSE 7-9   |
|---|--|---|--|
| <p><b>Identifying &amp; investigating design opportunities.</b></p> <p><i>(The design context &amp; consumer profile)</i></p>                                     | <ul style="list-style-type: none"> <li><input type="checkbox"/> Lists few problems or opportunities within the design brief.</li> <li><input type="checkbox"/> States a potential user with little consideration to their needs.</li> </ul>  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Describes some problems or opportunities within the design brief which has informed the development of possible design ideas.</li> <li><input type="checkbox"/> Identified a potential user with good consideration to their needs, values &amp; wants.</li> </ul>                                      | <ul style="list-style-type: none"> <li><input type="checkbox"/> Detailed analysis of several problems or opportunities within the design brief which has informed the development of unique design ideas.</li> <li><input type="checkbox"/> Analysed a potential user in detail with consideration of their needs, values &amp; wants, including reflection.</li> </ul>                                  |
| <p><b>Generating &amp; developing design ideas.</b></p> <p><i>(Design ideas, working drawing &amp; prototyping)</i></p>   | <ul style="list-style-type: none"> <li><input type="checkbox"/> Shows limited ability to communicate simple ideas to others.</li> <li><input type="checkbox"/> Limited details of materials, dimensions, production techniques mentioned.</li> <li><input type="checkbox"/> Basic or no use of testing to evolve ideas.</li> </ul>                     | <ul style="list-style-type: none"> <li><input type="checkbox"/> Demonstrates a good use of skills to communicate average ideas to others.</li> <li><input type="checkbox"/> Basic details of materials, dimensions, production techniques mentioned.</li> <li><input type="checkbox"/> Some testing with consideration completed to evolve ideas.</li> </ul>            | <ul style="list-style-type: none"> <li><input type="checkbox"/> Demonstrates a sophisticated use of skills to clearly communicate a range of ideas to others.</li> <li><input type="checkbox"/> Comprehensive range of details including materials, dimensions &amp; production techniques.</li> <li><input type="checkbox"/> Clear, detailed &amp; effective use of testing to evolve ideas.</li> </ul> |
| <p><b>Manufacturing a prototype.</b></p> <p><i>(Using CAD/CAM &amp; manufacturing diary)</i></p>  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Used basic making skills to produce a partially functioning prototype.</li> <li><input type="checkbox"/> Lists basic stages of production with limited detail.</li> <li><input type="checkbox"/> Used tools, equipment &amp; machinery with support &amp; limited accuracy.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Used appropriate making skills &amp; processes to produce a good quality functioning prototype.</li> <li><input type="checkbox"/> Describes some relevant stages of production in detail.</li> <li><input type="checkbox"/> Used tools, equipment &amp; machinery safely with some accuracy.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Used a range of making skills &amp; processes to produce a high quality functioning prototype.</li> <li><input type="checkbox"/> Clearly communicates relevant stages of production in detail.</li> <li><input type="checkbox"/> Used tools, equipment &amp; machinery safely with independence &amp; accuracy.</li> </ul>               |
| <p><b>Analysing &amp; evaluating design decisions &amp; prototypes.</b></p> <p><i>(Product analysis, evaluating ideas &amp; prototypes, final evaluation)</i></p> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Lists some modifications &amp; strengths of the final prototype.</li> <li><input type="checkbox"/> Limited evaluation of design ideas &amp; decisions.</li> <li><input type="checkbox"/> Basic or no responding to feedback from others.</li> </ul>                                    | <ul style="list-style-type: none"> <li><input type="checkbox"/> Identifies a variety of modifications &amp; strengths of the final prototype.</li> <li><input type="checkbox"/> Produced a basic evaluation of design ideas &amp; decisions.</li> <li><input type="checkbox"/> Good use of responding to feedback from others.</li> </ul>                               | <ul style="list-style-type: none"> <li><input type="checkbox"/> Responded to feedback from others &amp; clearly identifies opportunity for development of the final prototype.</li> <li><input type="checkbox"/> Undertaken critical analysis &amp; evaluation of designs &amp; prototypes throughout.</li> </ul>  |

Year 7 Grade I am working towards Grade \_\_\_\_\_

| TOPIC Assessed   | GCSE 1-3  | Tracker GCSE 4-6  | GCSE 7-9   |
|--|---|---|--|
| <b>HYGIENE AND SAFETY</b>  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Lists hygiene and safety rules to follow when storing, preparing and cooking food.</li> <li><input type="checkbox"/> States signs of food spoilage.</li> <li><input type="checkbox"/> Identify how to prevent the growth of pathogens.</li> </ul>   | <ul style="list-style-type: none"> <li><input type="checkbox"/> Describes some problems that could occur when hygiene and safety rules are not followed.</li> <li><input type="checkbox"/> Identified a range of signs of food spoilage.</li> <li><input type="checkbox"/> Describe the role of cross contamination and temperature in the growth of pathogens.</li> </ul>  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Evaluate the role of poor hygiene in bacteria growth .with reference to different types of pathogens..</li> <li><input type="checkbox"/> Analysed how food handlers can prevent the transfer and growth of pathogens.</li> </ul>   |
| <b>DIET AND HEALTH</b>   | <ul style="list-style-type: none"> <li><input type="checkbox"/> State what is healthy eating.</li> <li><input type="checkbox"/> List why it is important to follow a healthy diet.</li> <li><input type="checkbox"/> Identify suitable food items to follow a healthy diet.</li> </ul>  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Describe a healthy diet referring to the guide.</li> <li><input type="checkbox"/> Describe reasons for following a healthy diet/lifestyle referring to links between specific nutrients on some health conditions.</li> <li><input type="checkbox"/> Describe how some changes to foods chosen can make a healthier diet.</li> </ul>  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Explain what is a healthy diet referring to the guide and tips..</li> <li><input type="checkbox"/> Explain why a healthy diet/lifestyle is important for individuals to prevent a wide range of health conditions.</li> <li><input type="checkbox"/> Assess and improve meals to make them healthier referring to specific nutrients.</li> </ul>   |
| <b>MAKING</b>  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Used basic making skills with support to produce good outcomes</li> <li><input type="checkbox"/> Followed steps for making with support.</li> <li><input type="checkbox"/> Follow hygiene and safety rules with some support.</li> <li><input type="checkbox"/> Used tools, equipment &amp; machinery with support &amp; with some accuracy.</li> </ul>   | <ul style="list-style-type: none"> <li><input type="checkbox"/> Used range of making skills making skills &amp; processes to produce a good quality of finish.</li> <li><input type="checkbox"/> Followed plan to work in a confident, and organised manner following the when preparing cooking and presenting their dishes.</li> <li><input type="checkbox"/> Selected and used tools, equipment &amp; safely with accuracy when making most dishes made.</li> </ul>  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Used a wide range of making ( complex technical) skills &amp; processes to produce a high quality finished dishes.</li> <li><input type="checkbox"/> Followed plan independently to carry out the task in the time frame. Used tools, equipment confidently &amp; safely with independence &amp; accuracy.</li> <li><input type="checkbox"/> Presented dishes to an extremely high standard, accurate portion control and high quality finish was achieved.</li> </ul>               |
| <b>FOOD SCIENCE<br/>(Function and chemical properties of chemical raising agents used for making scones)</b> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Lists some chemical raising agents used in cooking.</li> <li><input type="checkbox"/> Carry out a basic plan with help to investigate the role of these raising agents.</li> <li><input type="checkbox"/> Predict a basic outcome of test.</li> <li><input type="checkbox"/> Identify the basic difference each raising agent will produce when making scones and made basic reference to prediction .</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Identifies a variety of variables to test the role of chemical raising agents used for making scones.</li> <li><input type="checkbox"/> Produced a plan showing an understanding of the task (role of chemical raising agents).</li> <li><input type="checkbox"/> Described the differences from each result showing understanding of the task evidenced in their ability to justify The prediction is reviewed and conclusions based on the results using some key science terms correctly.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Independently identify variables with predictions for each variable showing clear in depth understanding of the task.</li> <li><input type="checkbox"/> Undertaken critical analysis of the results, reviewing your predictions to include limitations and realistic further tests.</li> <li><input type="checkbox"/> Conclusions presented are based on scientific knowledge and understanding of the ingredients selected, and the preparation or cooking methods used.</li> </ul> |