



# END OF KS3 EXPECTATIONS FOR DESIGN & TECHNOLOGY

KS2/KS3	<b>DESIGN</b> Identify, investigate and outline design possibilities to address needs and wants	<b>MAKE</b> Design and make prototypes that are fit for purpose	<b>EVALUATE</b> Analyse and evaluate: <ul style="list-style-type: none"> <li>• Design decisions and outcomes including for prototypes made by themselves and others</li> <li>• Wider issues in design and technology</li> </ul>	<b>TECHNICAL KNOWLEDGE</b> Demonstrate and apply knowledge and understanding of: <ul style="list-style-type: none"> <li>• Technical principles</li> <li>• Designing and making principles</li> </ul>
<b>Transfer Knowledge and Skills</b>	<p>Students can demonstrate a thorough understanding of a range of products and can identify relevant key end users needs. They can confidently explain and justify design criteria. Students can demonstrate an excellent understanding of social, moral and ethical issues.</p> <p>Students can produce 3D rendered sketches with comprehensive annotation. Designs show relevant links to appropriate research and are fully fit for purpose.</p>	<p>Students can confidently use a range of tools and equipment safely and can demonstrate an excellent level of skill. There is comprehensive evidence of quality control in their work. Outcomes show challenge and risk taking and are commercially viable. Prototypes fully meet the needs of the end user. They can use a sophisticated range of cooking techniques to produce a repertoire of predominantly savoury dishes so that they can provide themselves and others with a healthy and varied diet. Students can adapt recipes to suit the dietary needs of various end users.</p>	<p>Students can carry out thorough and appropriate testing during design and manufacture leading to sophisticated design development. They can confidently gather and analyse appropriate third party feedback. They can give sophisticated explanations as to why/how their design meets their design criteria. Students have an excellent understanding of how their product has been suitably developed and can understand and explain the need for modifications that lead to relevant design improvement.</p>	<p>Students can justify and compare:</p> <ul style="list-style-type: none"> <li>• the properties of materials.</li> <li>• structural elements.</li> <li>• mechanical systems, movement and force.</li> <li>• electronic systems and power sources.</li> <li>• computing and the use of electronics in products</li> <li>• the principles of nutrition and health</li> <li>• the source, seasonality and characteristics of a broad range of ingredients.</li> </ul>
<b>Deep Knowledge and Skills</b>	<p>Students can demonstrate a consistent understanding of products and can identify key end users needs. They can consistently describe and explain design criteria. Students can consistently show a good understanding of social, moral or ethical issues. Students can produce detailed, rendered sketches with detailed annotation. Designs show clear links to relevant research and are largely fit for purpose.</p>	<p>Students can use a range of tools and equipment safely and can demonstrate an appropriate level of skill. There is detailed evidence of quality control in their work. Outcomes are appropriate and have the potential to be commercially viable and meets most of the needs of the end user. They can use a wide range of cooking techniques to produce a selection of predominantly savoury dishes so that they can provide themselves and others with a healthy and varied diet.</p>	<p>Students can carry out relevant testing during design and manufacture leading to appropriate design development. They can access and use third party feedback. They can give detailed explanations as to why/how their design meets their design criteria. Students have a good understanding of how their product has been developed and understand the need for modifications that lead to design improvement.</p>	<p>Students can understand and explain:</p> <ul style="list-style-type: none"> <li>• the properties of materials.</li> <li>• structural elements.</li> <li>• mechanical systems, movement and force.</li> <li>• electronic systems and power sources.</li> <li>• computing and the use of electronics in products</li> <li>• the principles of nutrition and health</li> <li>• the source, seasonality and characteristics of a broad range of ingredients.</li> </ul>
<b>Surface Knowledge and Skills</b>	<p>Students can demonstrate some understanding of products and can identify end users. They can describe and explain some design criteria. Students can show some consideration of a social, moral or ethical issue. They can produce simple sketches with some annotation with links to research.</p>	<p>Students can use some tools and equipment safely and can demonstrate a basic skill level. There is some evidence of quality control in their work. Outcomes are simple and meet some needs of the end user. They can use a range of cooking techniques to produce predominantly savoury dishes so that they can feed themselves and others.</p>	<p>Students can carry out some testing during design and manufacture leading to simple design development. They can identify if aspects of their design meet their design criteria. Students can describe simple modification/s made to their product during design and manufacture.</p>	<p>Students can describe:</p> <ul style="list-style-type: none"> <li>• the properties of materials.</li> <li>• structural elements.</li> <li>• mechanical systems, movement and force.</li> <li>• electronic systems and power sources.</li> <li>• computing and the use of electronics in products</li> <li>• the principles of nutrition and health</li> <li>• the source, seasonality and characteristics of a broad range of ingredients.</li> </ul>