



Design & Technology

Key Stage 3 Framework for Learning

Year 7 2017-2018: Future Foundations

Students in Technology will study (over the course of a single term) a range of skills and topics associated with the specialist area they are visiting. During Year 7 students will visit 2 areas of Technology and will spend 1 cycle of the rotation working within Computing. More rigorous details are available in mid-term planning documents as this framework encompasses all of the Technology KS3 curriculum for year 7.

First 2 weeks

Knowledge	<p>Cosmic</p> <p>Having read the text, students will complete a short design and make task which follows the design process as an introduction to Design and Technology at Chorlton High School. This short unit will focus on the design and development of a rocket, under the guise of an award to claim the winning design from Liam who is set to journey into space.</p>
Skills	<p>Students will follow the design process in order to complete their design and make activities focusing on the following subject skills throughout the unit:</p> <ul style="list-style-type: none"> • Specifications • Design Ideas • Development of designs • Plan of Manufacture • Making • Evaluation <p>Throughout the unit students will be guided through the design process by staff enabling them to glean an initial understanding of the methodology for working as part of the Technology Curriculum.</p>
Assessment	<p>Students will be assessed throughout this piece of work both formatively and summative against the CHS assessment criteria awarded for Design and Technology. Students key assessment points will be for Design and Making activities and their ability to evaluate against the design criteria, or their own design criteria. Opportunities for students to self/peer assess their own work or the work of others will be included as part of the unit of work.</p>
Cultural enrichment	<p>Enrichment opportunities might come in the form of wider experiences or further research opportunities.</p>
Character	<p>As part of the tasks being completed in lessons there are plenty of opportunities for staff to link the learning in lessons to the CHS Qualities of Success.</p> <ul style="list-style-type: none"> • QofS Curiosity – Specification writing and analysis of tasks. • QofS Creativity – Designing and making products in Technology. • QofS Reflection – Annotating and Evaluating work, and reflecting on work during an ongoing process. • CV Democracy – this could be delivered through the sharing of a voting system to select winning designs which could be commissioned. <i>Use of Ballot Boxes etc.</i>

Autumn 1

Knowledge	<p>Foundation:</p> <p>During this term students will undertake a unit of work which enables them to secure a foundation to which they can build upon the Design and Technology processes, techniques and methodology of working. In each area of Technology students will study a range of topics which relate to the materials or ingredients they are working with, and will follow the design process to enable them to design and make products using both creativity and technical skill. Students will study with a subject focus in Food, Digital Technology, Product Design or Textiles typically responding to a design brief, or a given scenario.</p>
Skills	<p>Foundation/Introduction:</p> <p>Students will undertake a range of tasks and activities in lessons which relate to the area of Technology they are studying. In each area of Technology students will follow the design process and during the course of the topic the following skills will be delivered to students throughout the topic.</p> <p>Research, Investigation and Analysis:</p> <ul style="list-style-type: none"> • Investigate and analysis of existing product. • Seeking inspirations or use of themes (including analysis) <p>Technical Knowledge</p> <p>(Materials, ingredients and processes):</p> <ul style="list-style-type: none"> • Health and Safety in Technology classrooms. • Use of tools and equipment in the classrooms/workshops



	<p>Design and Development:</p> <ul style="list-style-type: none"> • Producing designs (structure, form, layout and details for inclusion) • Labeling ideas. • Creating specifications. • Using inspiration to create design ideas. • Annotating ideas <p>Making/Manufacturing Skills:</p> <ul style="list-style-type: none"> • Using appropriate tools and equipment. • Working accurately during manufacturing tasks. • Working accurately during manufacturing tasks. • Working independently throughout practical tasks. <p>Evaluation:</p> <ul style="list-style-type: none"> • Evaluating practical work and skills learnt throughout unit. • Testing and evaluating a product. • Evaluating against original brief/criteria.
Assessment	<p><i>Marking Point 1</i></p> <p>A piece of classwork: Students will undertake a product analysis of an existing item.</p> <p><i>Marking Point 2</i></p> <p>A piece of classwork: Students will produce a design specification and a set of ideas</p> <p><i>Marking Point 3</i></p> <p>Home Learning Task This will be set in week 4 of the rotation. Students will complete a home learning booklet in which there are several elements of a design task to complete. A cumulative mark will be awarded.</p>
Cultural enrichment	<p>Enrichment opportunities might come in the form of wider experiences or further research opportunities. Guest speakers or links to industry experts could be used to help develop enrichment opportunities for students.</p>
Character	 <p>Q of S Optimism</p> <p>As pupils start their journey of progress they will now plot targets into their assessment books and require optimism to reach their goals</p> <p>For many of the students, completion of a piece of practical work involving the mastery of new technical skills can be problematic. They will need to be optimistic that products they design and manufactured will be useable.</p>
Autumn 2	
Knowledge	<p>Foundation: During this term students will undertake a unit of work which enables them to secure a foundation to which they can build upon the Design and Technology processes, techniques and methodology of working. In each area of Technology students will study a range of topics which relate to the materials or ingredients they are working with, and will follow the design process to enable them to design and make products using both creativity and technical skill. Students will study with a subject focus in Food, Digital Technology, Product Design or Textiles typically responding to a design brief, or a given scenario.</p>
Skills	<p>Foundation/Introduction: Students will undertake a range of tasks and activities in lessons which relate to the area of Technology they are studying. In each area of Technology students will follow the design process and during the course of the topic the following skills will be delivered to students throughout the topic.</p> <p>Research, Investigation and Analysis:</p> <ul style="list-style-type: none"> • Investigate and analysis of existing product. • Seeking inspirations or use of themes (including analysis) <p>Technical Knowledge (Materials, ingredients and processes):</p> <ul style="list-style-type: none"> • Health and Safety in Technology classrooms. • Use of tools and equipment in the classrooms/workshops <p>Design and Development:</p> <ul style="list-style-type: none"> • Producing designs (structure, form, layout and details for inclusion) • Labeling ideas. • Creating specifications.



	<ul style="list-style-type: none"> • Using inspiration to create design ideas. • Annotating ideas <p>Making/Manufacturing Skills:</p> <ul style="list-style-type: none"> • Using appropriate tools and equipment. • Working accurately during manufacturing tasks. • Working accurately during manufacturing tasks. • Working independently throughout practical tasks. <p>Evaluation:</p> <ul style="list-style-type: none"> • Evaluating practical work and skills learnt throughout unit. • Testing and evaluating a product. • Evaluating against original brief/criteria.
Assessment	<p><i>Marking Point 1</i></p> <p>A piece of classwork: As the design and manufacturing task finishes students will be required to complete a full evaluation of the work and product.</p> <p><i>Marking Point 2</i></p> <p>Home Learning Task This will be set in week 4 of the rotation. Students will complete a home learning booklet in which there are several elements of a design task to complete. A cumulative mark will be awarded.</p> <p><i>Marking Point 3</i></p> <p>Students will sit a progress test of 1 hour in length. The test given to students will be appropriate to the individual Technology subject being currently studied in this rotation. All test will be in a format that the students will encounter should they elect to study a Technology subject at Key Stage 4.</p>
Cultural enrichment	Enrichment opportunities might come in the form of wider experiences or further research opportunities. Guest speakers or links to industry experts could be used to help develop enrichment opportunities for students.
Character	 <p>Q of S Empathy</p> <p>There will be opportunities in the lessons to work individually to develop resiliency but also as a small and large group to nurture empathy and consideration for others.</p> <p>Benefits of products for different types of consumers will be explored.</p>
Spring 1	
Knowledge	<p>Foundation/Development: During this term students will undertake a unit of work which enables them to secure a foundation to which they can build upon the Design and Technology processes, techniques and methodology of working. <i>If students have completed a rotation in Technology they will be focusing on developing skills in Technology.</i> In each area of Technology students will study a range of topics which relate to the materials or ingredients they are working with, and will follow the design process to enable them to design and make products using both creativity and technical skill. Students will study with a subject focus in Food, Digital Technology, Product Design or Textiles typically responding to a design brief, or a given scenario.</p>
Skills	<p>Foundation/Introduction or Development of Subject Skills: Students will undertake a range of tasks and activities in lessons which relate to the area of Technology they are studying. In each area of Technology students will follow the design process and during the course of the topic the following skills will be delivered to students throughout the topic.</p> <p>Research, Investigation and Analysis:</p> <ul style="list-style-type: none"> • Investigate and analysis of existing product. • Seeking inspirations or use of themes (including analysis) <p>Technical Knowledge (Materials, ingredients and processes):</p> <ul style="list-style-type: none"> • Health and Safety in Technology classrooms. • Use of tools and equipment in the classrooms/workshops <p>Design and Development:</p> <ul style="list-style-type: none"> • Producing designs (structure, form, layout and details for inclusion) • Labeling ideas. • Creating specifications. • Using inspiration to create design ideas.



	<ul style="list-style-type: none"> Annotating ideas <p>Making/Manufacturing Skills:</p> <ul style="list-style-type: none"> Using appropriate tools and equipment. Working accurately during manufacturing tasks. Working accurately during manufacturing tasks. Working independently throughout practical tasks. <p>Evaluation:</p> <ul style="list-style-type: none"> Evaluating practical work and skills learnt throughout unit. Testing and evaluating a product. Evaluating against original brief/criteria.
Assessment	<p><i>Marking Point 1</i> A piece of classwork: Students will undertake a product analysis of an existing item</p> <p><i>Marking Point 2</i> A piece of classwork: Students will produce a design specification and a set of ideas</p> <p><i>Marking Point 3</i> Home Learning Task This will be set in week 4 of the rotation. Students will complete a home learning booklet in which there are several elements of a design task to complete. A cumulative mark will be awarded.</p>
Cultural enrichment	<p>Enrichment opportunities might come in the form of wider experiences or further research opportunities. Guest speakers or links to industry experts could be used to help develop enrichment opportunities for students.</p>
Character	<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>Q of S Creativity & Curiosity</p> <p>During the completion of written work, students will be given the opportunity to produce a variety of work where their creativity can be used. In particular, a considerable piece of work on designing a product to meet the design brief requires students to use their creativity skills.</p> <p>During the completion of the rotation, students will be introduced to several topics where they may have none or very little personal knowledge. As a result, they should develop a natural curiosity to develop their knowledge and practical skills. The Home Learning research task will also develop students' curiosity.</p>
Spring 2	
Knowledge	<p>Foundation/Development: During this term students will undertake a unit of work which enables them to secure a foundation to which they can build upon the Design and Technology processes, techniques and methodology of working. <i>If students have completed a rotation in Technology they will be focusing on developing skills in Technology.</i> In each area of Technology students will study a range of topics which relate to the materials or ingredients they are working with, and will follow the design process to enable them to design and make products using both creativity and technical skill. Students will study with a subject focus in Food, Digital Technology, Product Design or Textiles typically responding to a design brief, or a given scenario.</p>
Skills	<p>Foundation/Introduction or Development of Subject Skills: Students will undertake a range of tasks and activities in lessons which relate to the area of Technology they are studying. In each area of Technology students will follow the design process and during the course of the topic the following skills will be delivered to students throughout the topic.</p> <p>Research, Investigation and Analysis:</p> <ul style="list-style-type: none"> Investigate and analysis of existing product. Seeking inspirations or use of themes (including analysis) <p>Technical Knowledge (Materials, ingredients and processes):</p> <ul style="list-style-type: none"> Health and Safety in Technology classrooms. Use of tools and equipment in the classrooms/workshops <p>Design and Development:</p> <ul style="list-style-type: none"> Producing designs (structure, form, layout and details for inclusion) Labeling ideas. Creating specifications. Using inspiration to create design ideas.



	<ul style="list-style-type: none"> • Annotating ideas <p>Making/Manufacturing Skills:</p> <ul style="list-style-type: none"> • Using appropriate tools and equipment. • Working accurately during manufacturing tasks. • Working accurately during manufacturing tasks. • Working independently throughout practical tasks. <p>Evaluation:</p> <ul style="list-style-type: none"> • Evaluating practical work and skills learnt throughout unit. • Testing and evaluating a product. • Evaluating against original brief/criteria.
Assessment	<p><i>Marking Point 1</i> A piece of classwork: As the design and manufacturing task finishes students will be required to complete a full evaluation of the work and product.</p> <p><i>Marking Point 2</i> Home Learning Task</p> <p><i>Marking Point 3</i> Students will sit a progress test of 1 hour in length. The test given to students will be appropriate to the individual Technology subject being currently studied in this rotation. All test will be in a format that the students will encounter should they elect to study a Technology subject at Key Stage 4.</p>
Cultural enrichment	<p>Enrichment opportunities might come in the form of wider experiences or further research opportunities. Guest speakers or links to industry experts could be used to help develop enrichment opportunities for students.</p>
Character	<div data-bbox="379 913 552 1003" style="display: flex; justify-content: space-around;">   </div> <p>Q of S Responsibility & Reflection</p> <p>Students will need to show responsibility during ongoing practical tasks to ensure the health and wellbeing of not only themselves but others in the room.</p> <p>At several points within the rotation, students will be asked to reflect on the work that they have completed. This may either be written or practical tasks. The reflecting that they do will enable them to fully evaluate their work and set personal targets to make progress in the future.</p>
Summer 1	
Knowledge	<p>Development:</p> <p>During this term students will develop their Design and Technology knowledge and understanding of processes, techniques and methodology of working. In each area of Technology students will study a range of topics which relate to the materials or ingredients they are working with, and will follow the design process to enable them to design and make products using both creativity and technical skill. Students will study with a subject focus in Food, Digital Technology, Product Design or Textiles typically responding to a design brief, or a given scenario.</p>
Skills	<p>Development of Subject Skills:</p> <p>Students will undertake a range of tasks and activities in lessons which relate to the area of Technology they are studying. In each area of Technology students will follow the design process and during the course of the topic the following skills will be delivered to students throughout the topic.</p> <p>Research, Investigation and Analysis:</p> <ul style="list-style-type: none"> • Investigate and analysis of existing product. • Seeking inspirations or use of themes (including analysis) <p>Technical Knowledge (Materials, ingredients and processes):</p> <ul style="list-style-type: none"> • Health and Safety in Technology classrooms. • Use of tools and equipment in the classrooms/workshops <p>Design and Development:</p> <ul style="list-style-type: none"> • Producing designs (structure, form, layout and details for inclusion) • Labeling ideas. • Creating specifications. • Using inspiration to create design ideas. • Annotating ideas <p>Making/Manufacturing Skills:</p> <ul style="list-style-type: none"> • Using appropriate tools and equipment. • Working accurately during manufacturing tasks.



	<ul style="list-style-type: none"> • Working accurately during manufacturing tasks. • Working independently throughout practical tasks. <p>Evaluation:</p> <ul style="list-style-type: none"> • Evaluating practical work and skills learnt throughout unit. • Testing and evaluating a product. • Evaluating against original brief/criteria.
Assessment	<p><i>Marking Point 1</i> A piece of classwork: Students will undertake a product analysis of an existing item.</p> <p><i>Marking Point 2</i> A piece of classwork: Students will produce a design specification and a set of ideas.</p> <p><i>Marking Point 3</i> Home Learning Task This will be set in week 4 of the rotation. Students will complete a home learning booklet in which there are several elements of a design task to complete. A cumulative mark will be awarded.</p>
Cultural enrichment	Enrichment opportunities might come in the form of wider experiences or further research opportunities. Guest speakers or links to industry experts could be used to help develop enrichment opportunities for students.
Character	 <p>Q of S Practice & Resiliency</p> <p>Completion of tasks within lesson time will give the students practice in the completion of questions that they will be given within termly progress tests. Students will need to develop resiliency as they complete ongoing practical tasks.</p>

Summer 2

Knowledge	<p>Development: During this term students will develop their Design and Technology knowledge and understanding of processes, techniques and methodology of working. In each area of Technology students will study a range of topics which relate to the materials or ingredients they are working with, and will follow the design process to enable them to design and make products using both creativity and technical skill. Students will study with a subject focus in Food, Digital Technology, Product Design or Textiles typically responding to a design brief, or a given scenario.</p>
Skills	<p>Development of Subject Skills: Students will undertake a range of tasks and activities in lessons which relate to the area of Technology they are studying. In each area of Technology students will follow the design process and during the course of the topic the following skills will be delivered to students throughout the topic.</p> <p>Research, Investigation and Analysis:</p> <ul style="list-style-type: none"> • Investigate and analysis of existing product. • Seeking inspirations or use of themes (including analysis) <p>Technical Knowledge (Materials, ingredients and processes):</p> <ul style="list-style-type: none"> • Health and Safety in Technology classrooms. • Use of tools and equipment in the classrooms/workshops <p>Design and Development:</p> <ul style="list-style-type: none"> • Producing designs (structure, form, layout and details for inclusion) • Labeling ideas. • Creating specifications. • Using inspiration to create design ideas. • Annotating ideas <p>Making/Manufacturing Skills:</p> <ul style="list-style-type: none"> • Using appropriate tools and equipment. • Working accurately during manufacturing tasks. • Working accurately during manufacturing tasks. • Working independently throughout practical tasks. <p>Evaluation:</p> <ul style="list-style-type: none"> • Evaluating practical work and skills learnt throughout unit. • Testing and evaluating a product. • Evaluating against original brief/criteria.



Assessment	<p><i>Marking Point 1</i> A piece of classwork: As the design and manufacturing task finishes students will be required to complete a full evaluation of the work and product.</p> <p><i>Marking Point 2</i> Home Learning Task This will be set in week 4 of the rotation. Students will complete a home learning booklet in which there are several elements of a design task to complete. A cumulative mark will be awarded.</p> <p><i>Marking Point 3</i> Students will sit a progress test of 1 hour in length. The test given to students will be appropriate to the individual Technology subject being currently studied in this rotation. All test will be in a format that the students will encounter should they elect to study a Technology subject at Key Stage 4.</p>
Cultural enrichment	Enrichment opportunities might come in the form of wider experiences or further research opportunities. Guest speakers or links to industry experts could be used to help develop enrichment opportunities for students.
Character	 <p>Q of S Motivation</p> <p>Throughout all lessons students will need to maintain motivation in order that they complete all tasks whether they are written or practical ones.</p>