



ATAM Academy

Design and Technology

Curriculum Overview

Year Group	Autumn	Spring	Summer
EYFS	<p>Use various construction materials.</p> <p>To make salt dough Diva's.</p> <p>To make Christmas cards and decorations for friends and family using a range of media.</p> <p>To make festival cards.</p> <p>To make patterns with paint and different objects, explore what happens when you mix colours.</p> <p>Join construction pieces together to build and balance.</p> <p style="text-align: center;">N</p> <p style="text-align: center;">All About Me</p> <p style="text-align: center;">Homes</p> <p style="text-align: center;">R</p> <p style="text-align: center;">Marvellous Me!</p> <p style="text-align: center;">Let's Celebrate!</p>	<p>To construct, stacking blocks vertically and horizontally, making enclosures and creating spaces</p> <p>To engage in role play by making stick puppets of different story characters.</p> <p style="text-align: center;">Tools to be used for a purpose.</p> <p>Use simple tools and techniques competently and appropriately.</p> <p>Construct with a purpose in mind, using a variety of resources.</p> <p>To plan, carry out and evaluate and change where necessary.</p> <p style="text-align: center;">N</p> <p style="text-align: center;">People from around the World</p> <p style="text-align: center;">Growth</p> <p style="text-align: center;">R</p> <p style="text-align: center;">Around the world!</p> <p style="text-align: center;">Once upon a time...</p>	<p>To make masks for role play.</p> <p>To use available props to develop stories and make imaginative play more purposeful</p> <p>To construct with bricks and blocks to make an enclosure.</p> <p>Select appropriate resources and adapt work where necessary</p> <p>To be able to safely construct with a purpose and evaluate their designs.</p> <p style="text-align: center;">N</p> <p style="text-align: center;">People Who Help Us</p> <p style="text-align: center;">Amazing Animals! (Farm, Food and Growing)</p> <p style="text-align: center;">R</p> <p style="text-align: center;">Animals</p> <p style="text-align: center;">Fun at the Seaside!</p>
1	<p>Mechanisms – Wheels and axles</p> <p>Learn about the key parts of a wheeled vehicle, to develop an understanding of how wheels, axles and axle holders work. Design and make a moving vehicle.</p>	<p>Food-Fruits and vegetables smoothie</p> <p>Learn to distinguish between fruit and vegetables and where they grow. Design a fruit and vegetable smoothie and accompanying packaging.</p>	<p>Textiles: Puppets</p> <p>Explore methods of joining fabric. Design and make a character-based hand puppet using a preferred joining technique, before decorating.</p> <p>Example theme: Storybook character.</p>



<p>2</p>	<p>Structure: Baby Bear's chair</p> <p>Explore stability and methods to strengthen structures, to understand Baby Bear's chair weaknesses and develop an improved solution for him to use.</p>	<p>Food: A balanced diet</p> <p>Learn about the food groups (carbohydrates, proteins, fruits and vegetables, dairy, oils and spreads) to understand a balanced diet to develop a healthy wrap.</p>	<p>Mechanisms: Fairground wheel</p> <p>Design and create a functional Ferris wheel, learn how different components fit together so that the wheel rotates and the structure stands freely.</p>
<p>3</p>	<p>Mechanical systems: Pneumatic toys</p> <p>Explore pneumatic systems, then apply this understanding to design and make a pneumatic toy including thumbnail sketches and exploded diagrams.</p>	<p>Food: eating seasonally</p> <p>Learn about various fruits and vegetables, and when, where and why they are grown in different seasons. Discover the relationship between colour and health benefits</p>	<p>Textiles: Cross-stitch and applique</p> <p>Learn and apply two new sewing techniques – cross-stitch and appliqué. Utilise these new skills to design and make a cushion or Egyptian collar.</p>
<p>4</p>	<p>Digital world: Mindful moments timer</p> <p>Explore what is meant by mindfulness and write design criteria to fulfil a brief to develop a programmed product for timing a mindful moment</p>	<p>Food: Adapting a recipe</p> <p>Work in groups to adapt an existing biscuit recipe, whilst taking into account the cost of the ingredients and other expenses against a set budget.</p>	<p>Mechanical systems: Making a slingshot car</p> <p>Using a range of materials, design and make a car with a working slingshot mechanism and house the mechanism using a range of nets.</p>



Year Group	Autumn	Spring	Summer
5	<p>Structures: Bridges</p> <p>Test and analyse various types of bridge to determine their strength and stability. Explore material properties and sources, before marking, sawing and assembling a wooden truss bridge.</p>	<p>Food: What could be healthier</p> <p>Discover the farm to fork process, understand the key welfare issues for rearing cattle. Compare the nutritional value of existing sauces and develop a healthier recipe.</p>	<p>Textiles: stuffed toys</p> <p>Design a stuffed toy and make decisions on materials, decorations and attachments (appendages), after learning how to sew a blanket stitch.</p>
6	<p>Electrical systems: Steady hand game</p> <p>Understand what is meant by fit for purpose design and form follows function. Design and develop a steady hand game using a series circuit, including housing and backboard</p>	<p>Food: Come dine with me</p> <p>Develop a three-course menu focused on three key ingredients, as part of a paired challenge to develop the best class recipes. Explore each key ingredient's farm to fork process.</p>	<p>Mechanical system: Automate toys</p> <p>Develop a functional automata window display, to meet the requirements in a design brief. Explore and create cam, follower and axle mechanisms to mimic different movements</p>
7	<p>Product Design - Money box project</p> <p>Health and safety. Use of tools. Understanding the design process. Learning to cut wood. Creating joints. Using the machines.</p> <p>Assessment 1 - Design ideas Assessment 2 - Making Assessment 3 - End of unit test</p>	<p>Food Technology - Eatwell Plate</p> <p>Health and safety, personal hygiene, Equipment and tools and uses Eatwell plate, Food groups 8 healthy tips Digestion Process Making skills, using the knife safely, rubbing in technique, using the hob, grill and oven, weighing and measuring, grating, thickening sauce, Evaluating Revision skills</p> <p>Assessment 1 - Design ideas Assessment 2 - Making Assessment 3 -End of unit test</p>	<p>Graphics - Healthy snack packaging</p> <p>Health & Safety Understanding the use of different tools and equipment Creating nets Isometric drawing techniques Typography</p> <p>Assessment 1 - Design ideas Assessment 2 - Making Assessment 3 -End of unit test</p>
8	<p>Product Design - Clock project</p> <p>Health and safety. Working through the design process. Learning how to cut plastic. How to bend plastic. Using CAD/CAM</p> <p>Assessment 1 - Design ideas Assessment 2 - Making Assessment 3 -End of unit test</p>	<p>Food Technology - Dietary Needs</p> <p>Health and safety, food hygiene Food safety Dietary needs Nutrients and allergies understand the different timings for serving food Making skills, layering ingredients, using the pasta machine, grating, making pasta, boiling, bolognese sauce, Evaluation Revision skills</p>	<p>Graphics - Small house project</p> <p>Health & Safety Tools and equipment One point perspective drawing Two point perspective drawing Understanding sustainable living. Manufacturing a small house using modelling tools.</p> <p>Assessment 1 - Design ideas Assessment 2 - Making</p>



		Assessment 1 - Design ideas Assessment 2 - Making Assessment 3 -End of unit test	Assessment 3 -End of unit test
9	Product Design - Audio amplifier project Health and safety Working through the design process. Understanding electrical components. Learning how to solder. Using CAD/CAM to design and make an audio amplifier case using skills learnt previously. Creating joints of students choice. Assessment 1 - Design ideas Assessment 2 - Making Assessment 3 - End of Unit test	Food Technology - Function of Ingredients Health and Safety, HACCP - hazard analysis critical control point Experimental biscuits, Identify the function of ingredients, Food provenance, Vegetarians foods Religion and food Functional food properties Food labelling Menu planning cooking techniques Assessment 1 - Design ideas Assessment 2 - Making Assessment 3 -End of unit test	Graphics -Comic book point of sale Health & Safety Understanding the use of tools and equipment Isometric drawing Orthographic projection Typography Using and creating complex nets Assessment 1 - Design ideas Assessment 2 - Making Assessment 3 -End of unit test

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
10	Design and Technology Unit 1 Introducing Technology Industry and Enterprise Sustainability and the Environment People , Culture and Society Production Techniques and Systems Informing Design Decisions	Unit 2 Energy generation & Storage Modern & Smart materials Composite and Technical Textiles Systems approach to designing Electronic systems processing Mechanical devices	Unit 3 Papers and boards Timbers Metals and alloys	Unit 4 Forces and stresses Materials Testing Improving Functionality The six R's Scales of production	Unit 5 Sources, origins and properties Working with paper and board Commercial manufacturing, surface treatments and finishes Surface treatments Surface finishes	Unit 6 Sources, origins and properties Working with polymers Commercial manufacturing, surface treatments and finishes Surface treatments Surface finishes



Hospitality & Catering

Introduction to the Vocational Course, assessment explained, recap yrs 7/8/9
 Nutrients
 Micronutrients
 Macronutrients
 formative questioning
 Dietary Fibre
 Different life stages
 Different life stages Special dietary needs
 Religious/vegetarians/vegan
 Water theory

Impact on cooking methods on nutritional value
 Menu Planning - Cost, portion control, balanced diets and current nutritional advice
 Menu Planning - Time of day, customers, equipment, skills of chef
 Menu Planning - Time available, environmental issues, time of year, cancelled
 Menu Planning - Organoleptic planning
 formative assessment

CHEF AFTER SCHOOL SESSION

How to plan production - commodities list, contingency.....booklet n folder organising
 How to plan production - equipment list, h&s, hygiene,....cooking methods
 How to plan production - quality points, sequencing/dovetailing, timing
 How to prepare and make dishes - basic skill preparation, medium skill preparation
 How to prepare and make dishes - complex skill preparation
 Knife techniques - basic, medium, complex
 Organise folders and catch up - retrieve lesson
 Cooking methods
 impact of cooking methods - cooking techniques - basic, medium, complex
 Preparation & Cooking
 Presentation techniques - creativity, plating, garnish and decoration -portion control

Bread Practical

AC1.1 describe the structure of the hospitality and catering industry
 AC1.2 analyse job requirements within the hospitality and catering industry
 AC1.3 describe working conditions of different job roles across the hospitality and catering industry
 AC1.4 explain factors affecting the success of hospitality and catering providers
 AC2.1 describe the operation of the kitchen
 AC2.2 describe the operation of front of house
 AC2.3 explain how hospitality and catering provision meet customer requirements
 AC3.1 describe personal safety responsibilities in the workplace
 AC3.2 identify risks to personal safety in hospitality and catering

AC3.3 recommend personal safety control measures for hospitality and catering provision
 AC4.1 describe food related causes of ill health
 AC4.2 describe the role and responsibilities of the Environmental Health Officer (EHO)
 AC4.3 describe food safety legislation
 AC4.4 describe common types of food poisoning
 AC4.5 describe the symptoms of food induced ill health
 AC5.1 review options for hospitality and catering provision
 AC5.2 recommend options for hospitality provision



Design and Technology

NEA Coursework

AO1 Exploring the Context

AO2 Design Brief and Specification

Introduction to GCSE coursework
Students will be given themes chosen by the exam board.
Investigating primary and secondary data
The work of other (designers)
The work of other (companies)
Creating a design specification

AO3 Initial Design Ideas

AO4 Developing Design Ideas

Design strategies.
Communication of design ideas.
Using research to create a range of initial design ideas.
Developing ideas through creating models/prototypes.

AO5 Realising Design Ideas (Manufacturing)

Realising design ideas
Selection of materials and components
Tolerances
Material management
Tools, equipment, techniques and finishes
Surface treatments and finishes

AO6 Testing and Evaluation

Evaluating the final product against the clients needs.
Being self critical.

Exam Preparation

Revisit units through units 1 - 6

Exam Preparation

Exam question practice in preparation for the exam in June.

Hospitality and Catering NEA Coursework - Unit 2 Hospitality and catering in action

Analyse the assignment brief and recommend **one** dish for **each** customer. Assess how the dish meets the nutritional needs of the customer.

You must show an understanding of the importance of the following:

- macronutrients
- micronutrients.

Explain the impact of cooking methods on the nutritional value of the chosen dishes.

Discuss factors which affected **your choice** of dishes.

Hospitality and Catering NEA Coursework - Unit 2 Hospitality and catering in action

Plan to produce your **two** dishes.

You should show evidence of:

- commodity list with quantities
- equipment list
- health, safety, and hygiene
- contingencies
- quality points
- sequencing/dove-tailing
- timings
- mise en place
- cooking
- cooling
- hot holding
- serving
- storage

Hospitality and Catering NEA Coursework - Unit 2 Hospitality and catering in action

Demonstrate how to work safely, follow correct food safety and hygiene practices and procedures in relation to the preparation and cooking of food and use of equipment and facilities.

Prepare the dishes, demonstrating a variety of basic, medium, and complex preparation and knife techniques.

Cook the dishes, demonstrating a variety of basic, medium, and complex cooking techniques.

Present the dishes in a way that is appropriate for the brief.

Hospitality and Catering NEA Coursework - Unit 2 Hospitality and catering in action

Review your own performance.

You should provide a review of your own performance. You should identify strengths and weaknesses and answers should refer to:

- decision making
- organisation
- planning – including the advantages and disadvantages of your chosen dishes and how they meet the specific needs of the customers identified in the brief.
- time management

Hospitality and Catering Exam Preparation Unit 1 - Revisit topics

Hospitality and catering providers

Working in the hospitality and catering industry

Working conditions in the hospitality and catering industry

Contributing factors to the success of hospitality and catering provision

Hospitality and Catering Exam Preparation Unit 1

Exam question practice in preparation for the exam in May.



ACADEMIES TRUST

You should demonstrate your knowledge of the factors that affected **your** choice of dishes.

Answers may include:

- cost
- portion control
- balanced diets
- time of day
- clients/customers
- equipment available
- techniques of the chef
- time available
- environmental issues
- time of year
- organoleptic.

Candidates should demonstrate techniques including:

- creativity
- garnish and decoration
- portion control
- accompaniments.

Assess the production of the presented dishes.

You should provide a review of your planning, preparation and cooking, highlighting areas of success and of potential further development.

Answers should refer to:

- dish production and selection
- organoleptic including qualities.
- improvements
- presentation
- health, safety, and hygiene
- food waste.