# Curriculum Overview

Subject: Food Preparation & Nutrition

Year Group: 10

CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

Students are working in line with the AQA GCSE Food Preparation and Nutrition specification. The topics taught over the year are: 1. Food, nutrition and health 2. Food science 3. Food safety 4. Food choice 5. Food provenance. The range of food and ingredients studied reflect the recommended guidelines for a healthy-balanced diet based on the main food commodity groups. Food groups include: • starch: bread, cereals, flour, oats, rice, potatoes and pasta • fruit and vegetables (fresh, frozen, dried, canned and juiced) • Dairy and alternatives: milk, cheese and yoghurt • Protein: meat, fish, eggs, soya, tofu, beans, nuts and seeds • Oils and spreads: butter, oil, margarine, sugar and syrup.

Students will work on their NEA using the given topics supplied by AQA.

| TERM 1 | TERM 2 | TERM 3 |
|---|---|---|
| KNOWLEDGE/SKILLS<br><br>**Nutritional Needs and Health**<br><br>Protein – what protein is made up of, functions, natural substances, biological values, protein complementation, alternatives, deficiency, excess and RDA's.<br>Protein Practical: Asian Chicken Noodles:<br>Skills – Portioning \| Knife Skills<br><br>Fats – chemical structures, functions, saturated, unsaturated, deficiency effects, excess effects, adipose fat, visceral fat.<br>Fat Practical – Shortcrust Pastry Dish<br>Skills – Rubbing technique \| Pastry making<br><br>Carbohydrates – Photosynthesis, functions, fibre, effects of deficiency and excess, RDA's, simple carbs, complex carbs, monosaccharides, disaccharides, polysaccharides, tooth decay, energy levels.<br>Carbohydrate Dish: Pasta Dish | KNOWLEDGE/SKILLS<br><br>**Food Safety**<br><br>Micro-organisms – types of micro-organisms, bacteria, yeast, mould. Analysing binary fission and what impacts the rate, palatability, contamination, cross contamination.<br><br>Micro-organisms used in food production.<br><br>Bacterial contamination – food poisoning, campylobacter, E.coli, salmonella, listeria and staphylococcus, incubation periods.<br><br>Temperatures – storage areas, cupboard, fridge, freezer.<br>Practical: Lasagne<br>Skills – Pasta making, knife skills, reduction sauce, roux sauce<br>Practical: Pot Pie | KNOWLEDGE/SKILLS<br><br>NEA1 Walk Through<br>- Food science knowledge recall<br>- Research greater depth<br>- Investigation planning<br>- Conducting investigations<br>- Report writing<br>- Sensory analysis<br><br>NEA2 Walk Through<br>- Choice of topics<br>- Task analysis: recall prior learning<br>- Research: providing greater depth.<br>- Dish research: 10 dishes<br>- Practical: 4 dishes<br>- Produce written report on nutritional content, sensory analysis and criteria of the task.<br>- Menu planning – drawing specific links to skills, ingredients or nutrients.<br>- Creating a time plan. |

Skills: Pasta making

Vitamins and Minerals – fat-soluble, water-soluble, functions, effects of deficiency and excess, antioxidants.
Vitamin and minerals practical: Spiced carrot and lentil soup.

Skills: Soup making | Bread making

Lifestages – Looking at all lifestages, nutrients required to support processes, infancy, childhood, adolescence, adulthood and elderly. Analysing each ones dietary needs.

Lifestage Practical – Student choice
Skills – student choice

Energy Needs – BMR, PAL, energy balance, calorie intake, calorie output, effects of too much and too little energy

Diet-Related Diseases – obesity, cardiovascular disease, skeletal, anaemia and diabetes. Assessing dietary needs, impact on the body, coronary heart disease, rickets, osteoporosis, osteomalacia.

**Food Science**
Why do we cook food.
Heat Transfer - conduction, convection, radiation.
Cooking methods – frying, shallow frying, deep frying, simmering, braising, baking, roasting, sauteeing, boiling, steaming, grilling, microwaving, toasting etc.
Heat Transfer Practical: Rosti Starter

Skills – Pastry making, roux sauce, knife skills, glazing.

**Food Choice**

Allergies and Intolerance – common allergens, symptoms, anaphylaxis shock, lactose intolerance, coeliac, villi, impact on body.

Religion and culture – Hinduism, Christianity, Judaism, Islam, Sikhism and Rastafarianism. Each look at celebration events, restrictions in the diet, moral and ethical beliefs.
Practical: Culture Dish – Student Choice
Skills – Student choice of complex skills.

Factors that influence food choice – cost, seasonality, availability, religion, medical issues, intolerances, marketing, packaging, eating habits.

Investigation: Sensory Analysis – Savoury VS Sweet VS Salt

**Food Provenance**

Understanding where food comes from: growing, rearing, catching, gathering, specialist equipment, polytunnels, hydroponic production.

Farming methods – organic, intensive, advantages, disadvantages, fallow land.

Genetic Modification – deoxyribonucleic acid, growth rates, resistance, sensory qualities, nutritional content.

Food and environment – climate change, greenhouse gases, global warming, severe

- Practical exam run through: students produce three dishes in an allocated time period (three hours)
- Written analysis report on the nutritional content, costing and sensory analysis of each dish.
- Produce a final evaluation explaining all outcomes.

PPE EXAM
- Nutritional needs and health
- Food science
- Food safety
- Food choice
- Food provenance

Content Recap, Recall and Retrieve
- Nutritional needs and health

Practical: Student Choice – Produce an informative nutritional content report.
- Food science

Practical: Student Choice – Produce an informative nutritional content report.
- Food safety

Practical: Student Choice – Produce an informative nutritional content report.
- Food choice

Practical: Student Choice – Produce an informative nutritional content report.
- Food provenance

Practical: Student Choice – Produce an informative nutritional content report.

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| <u>Functional and Chemical Properties</u><br>- Protein: Denaturation, coagulation, gluten, foams.<br>- Carbohydrates: Gelatinisation, dextrinisation and caramelisation.<br>- Fats: Plasticity, aeration, shortening and emulsification.<br><br><u>Raising Agents</u><br>Mechanical, chemical and biological raising agents. Carbon dioxide \| fermentation<br>F&C/Raising Agent Practical – Choux Pastry Buns<br>Skills – Pastry making and piping | weather conditions, food production, food miles, food waste, primary and secondary processing and food sustainability.<br>Practical: Homemade soft cheese<br>Practical: Pizza baguettes (using soft cheese)<br>Skills: Bread making, reduction sauce, cheese making, knife skills, portioning.<br><br><u>Technological Developments</u> – food additives, fortification, nutritional content, e-numbers, advantages and disadvantages | |
| KEY ASSESSMENTS<br><br>Half term 1: Macronutrient EOT Test<br><br>Half term2: Food science EOT Test | KEY ASSESSMENTS<br><br>Half term 1: Food Safety EOT Test<br><br>Half term2: Food Provenance EOT Test | KEY ASSESSMENTS<br><br>Half term 1: PPE<br><br>Half term 2: NEA 1 and NEA 2 Walk Through |
| Extended reading suggestions and external resources:<br><br>Jenny Ridge well Nutrition Programme<br><br>Online Textbook: illuminatedigital/aqafood<br><br>BBC Good Food Guide<br><br>BBC Bitesize | | |

# Curriculum Overview

Subject: Food Preparation & Nutrition

Year Group: 11

CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

Students are working in line with the AQA GCSE Food Preparation and Nutrition specification. Students are developing their skills and knowledge and applying what they

have learnt to their NEA 1 and NEA 2. Investigation project and Food Preparation task.

Students will work on their NEA using the given topics supplied by AQA.

| TERM 1 | TERM 2 | TERM 3 |
|---|---|---|
| KNOWLEDGE/SKILLS<br><br>**1st September – NEA1 Release Date**<br>Three sets of criteria are sent for students to select one they wish to complete.<br>- Food science knowledge recall<br>- Research greater depth<br>- Investigation planning<br>- Conducting investigations<br>- Report writing<br>- Sensory analysis<br>**Completion date October 30th**<br><br>**1st November – NEA2 Release Date**<br>- Choice of topics<br>- Task analysis: recall prior learning<br>- Research: providing greater depth.<br>- Dish research: 10 dishes<br>- Practical: 4 dishes<br>- Produce written report on nutritional content, sensory analysis and criteria of the task. | KNOWLEDGE/SKILLS<br><br>NEA2 Continued<br>- Menu planning – drawing specific links to skills, ingredients or nutrients.<br>- Creating a time plan.<br>- Practical exam run through: students produce three dishes in an allocated time period (three hours)<br>- Written analysis report on the nutritional content, costing and sensory analysis of each dish.<br>- Produce a final evaluation explaining all outcomes.<br><br>**Completion Date February 15th**<br><br>**Nutritional Needs and Health**<br><br>Protein – what protein is made up of, functions, natural substances, biological values, protein complementation, alternatives, deficiency, excess and RDA's. | KNOWLEDGE/SKILLS<br><br>**Food Science**<br><br>Why do we cook food.<br>Heat Transfer - conduction, convection, radiation.<br>Cooking methods – frying, shallow frying, deep frying, simmering, braising, baking, roasting, sauteeing, boiling, steaming, grilling, microwaving, toasting etc.<br><br>Functional and Chemical Properties<br>- Protein: Denaturation, coagulation, gluten, foams.<br>- Carbohydrates: Gelatinisation, dextrinisation and caramelisation.<br>- Fats: Plasticity, aeration, shortening and emulsification.<br><br>Raising Agents<br>Mechanical, chemical and biological raising agents. Carbon dioxide \| fermentation<br><br>**Food Safety** |

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|---|---|---|
| | Fats – chemical structures, functions, saturated, unsaturated, deficiency effects, excess effects, adipose fat, visceral fat.<br><br>Carbohydrates – Photosynthesis, functions, fibre, effects of deficiency and excess, RDA's, simple carbs, complex carbs, monosaccharides, disaccharides, polysaccharides, tooth decay, energy levels.<br><br>Vitamins and Minerals – fat-soluble, water-soluble, functions, effects of deficiency and excess, antioxidants.<br><br>Lifestages – Looking at all lifestages, nutrients required to support processes, infancy, childhood, adolescence, adulthood and elderly. Analysing each ones dietary needs.<br><br>Energy Needs – BMR, PAL, energy balance, calorie intake, calorie output, effects of too much and too little energy<br><br>Diet-Related Diseases – obesity, cardiovascular disease, skeletal, anaemia and diabetes. Assessing dietary needs, impact on the body, coronary heart disease, rickets, osteoporosis, osteomalacia. | Micro-organisms – types of micro-organisms, bacteria, yeast, mould. Analysing binary fission and what impacts the rate, palatability, contamination, cross contamination.<br><br>Micro-organisms used in food production.<br><br>Bacterial contamination – food poisoning, campylobacter, E.coli, salmonella, listeria and staphylococcus, incubation periods.<br><br>Temperatures – storage areas, cupboard, fridge, freezer.<br><br>**Food Provenance**<br>Understanding where food comes from: growing, rearing, catching, gathering, specialist equipment, polytunnels, hydroponic production.<br><br>Farming methods – organic, intensive, advantages, disadvantages, fallow land.<br><br>Genetic Modification – deoxyribonucleic acid, growth rates, resistance, sensory qualities, nutritional content.<br><br>Food and environment – climate change, greenhouse gases, global warming, severe weather conditions, food production, food miles, food waste, primary and secondary processing and food sustainability.<br><br>Technological Developments – food additives, fortification, nutritional content, e-numbers, advantages and disadvantages. |

| KEY ASSESSMENTS | KEY ASSESSMENTS | KEY ASSESSMENTS |
|---|---|---|
| Half term 1: Internal nutritional needs test<br><br>PPE exam | Half term 1: PPE Exam | Half term 1: Topic Tests \| Exam Preparation \| Walk Throughs<br><br>Half term 2: Exam |
| Extended reading suggestions and external resources:<br><br>Jenny Ridgewell<br><br>BBC Good Food Guide<br><br>BBC Bitesize | | |

# Curriculum Overview

Subject: Design & Technology

Year Group: 10

CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

Year Group: 10

Students are working in line with the AQA GCSE Design Technology specification. Developing core technical principles to demonstrate a breadth of technical knowledge and understanding. Specialist technical principles to assess a more in-depth knowledge of technical principles. Designing and making principles.
Students will be working towards developing their practical skills in all areas, extending on prior knowledge in polymers, timbers, textiles, papers and boards and metals. Students will focus on two key areas in more depth; timbers, papers and boards.
This is taught through a mix of theory and practical sessions following the SOW

| **TERM 1** | **TERM 2** | **TERM 3** |
|---|---|---|
| KNOWLEDGE/SKILLS<br><br>Timbers, origins, working with timbers, making a frame using wood joints, commercial manufacturing, CAD, CAM, tolerances and allowances, quality control and quality assurance.<br><br>Papers and boards, natural and manufactured timbers, metals and alloys, polymers, textiles. casting a keyring. Industry and enterprise, sustainability and the environment, people culture and society, production techniques and systems, informing design decisions, batch production project. | KNOWLEDGE/SKILLS<br><br>Energy storage, energy generation, modern materials, smart materials, composite materials and technical textiles, systems approach to designing, electronic systems processing, mechanical devices, making a child's toy, forces and stresses on materials and objects, improving functionality, ecological and social footprint.<br><br>Mock NEA focusing on research, design brief and specification writing, designing, modelling, evaluation and improvement. | KNOWLEDGE/SKILLS<br><br>Box making skills and marquetry, Linkages, the 6 Rs, scales of production, selection of materials and components, tolerances and allowances, material management and marking out, specialist tools and, equipment, techniques and processes, surface treatments and finishes, NEA task. |
| KEY ASSESSMENTS<br><br>Half term 1: Unit 5B Assessment<br><br>Half term2: Unit 3 Assessment | KEY ASSESSMENTS<br><br>Half term 1: Unit 4 Assessment<br><br>Half term2: Unit 1 Assessment | KEY ASSESSMENTS<br><br>Half term 1: Unit 2 Assessment and PPE<br><br>Half term 2: Unit 6 & 7 Assessment. |

Extended reading suggestions and external resources:

https://www.theguardian.com/environment/2016/jun/25/illegal-logging-amazon-timber-tougher-laws-british-products
https://www.theguardian.com/world/2015/sep/17/illegal-timber-myanmar-china-forests https://www.youtube.com/watch?v=luygMuoFnXs
https://www.youtube.com/watch?v=NvbgwdTGoyo
https://www.youtube.com/watch?v=7pNWI1dcbg4
https://www.youtube.com/watch?v=SLUcVh_4wlM
https://www.youtube.com/watch?v=UGnDzE9mfUc
https://www.youtube.com/watch?v=eF5LVBW1vl8

https://www.youtube.com/watch?v=P9KPJlA5yds
https://www.youtube.com/watch?v=3RUE367Sb9A
https://www.youtube.com/watch?v=CBmsOvbGh-Y
https://www.youtube.com/watch?v=fcBXtwGexNc
https://www.bbc.co.uk/news/science-environment-39217985
https://www.youtube.com/watch?v=I8nMKH3y_1I
https://www.youtube.com/watch?v=ALWwK7Vz4gY
https://www.bbc.co.uk/news/business-38472652
https://www.theguardian.com/world/2016/sep/19/waste-not-want-not-sweden-tax-breaks-repairs
https://www.bbc.co.uk/news/science-environment-37902773
https://www.bbc.co.uk/news/business-38263177
https://www.youtube.com/watch?v=ftj23FRS2LI
https://www.youtube.com/watch?v=BOo8gxp3K3w
https://www.youtube.com/watch?v=BqkekY5t7KY
https://footprint.wwf.org.uk/#/
https://www.youtube.com/watch?v=BtBLXll2FNE
https://www.rapidonline.com/pdf/87-2330S_v2.PDF
https://footprint.wwf.org.uk/#/
https://www.youtube.com/watch?v=BtBLXll2FNE

# Curriculum Overview

Subject: Design & Technology,

Year Group:11

CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

Students are working in line with the AQA GCSE Design Technology specification. Developing core technical principles to demonstrate a breadth of technical knowledge and understanding. Specialist technical principles to assess a more in depth knowledge of technical principles. Designing and making principles. Students will be working towards developing their practical skills in all areas, extending on prior knowledge in polymers, timbers, textiles, papers and boards and metals.

Students will work on their NEA using the given topics. 50% of their final grade, alongside theory and revision work.

| **TERM 1** | **TERM 2** | **TERM 3** |
|---|---|---|
| KNOWLEDGE/SKILLS<br><br>Using the NEA to complete all sections of the project up to making. Design ideas, modelling and development, developing and testing, planning and manufacturing specification, manufacturing.<br><br>Learn how to independently form ideas.<br><br>➢ Learn how to develop ideas as part of the iterative design process.<br>➢ Develop knowledge of CAD Modelling.<br>➢ Learn how to work with a client.<br>➢ Know how to manufacture a product in the workshop.<br>➢ Practice exam skills.<br><br>Use of Exam style questions homework booklet.<br>Use of exam style question starters. | KNOWLEDGE/SKILLS<br><br>Complete all making skills, testing and evaluation ready for handing in and assessment. manufacturing, testing and evaluation.<br><br>Revision through the revision guide and workbook.<br><br>Learn how to independently form ideas.<br><br>➢ Know how to manufacture a product in the workshop.<br>➢ Learn how to test and critically evaluate own design work.<br>➢ Practice exam skills.<br><br>Use of Exam style questions homework booklet.<br>Use of exam style question starters. production techniques and systems, informing design decisions, batch | KNOWLEDGE/SKILLS<br><br>Revision through the revision guide.<br><br>Personalised learning through assessment on all units needed.<br><br>Use of Exam style questions homework booklet.<br><br>Use of exam style question starters. forces and stresses on materials and objects, improving functionality, ecological and social footprint. Industry and enterprise, sustainability and the environment, people culture and society. smart materials, composite materials and technical textiles, systems approach to designing. the 6 Rs, scales of production, selection of materials and components, tolerances and allowances, material management and marking out, specialist |

| | | |
|---|---|---|
| Papers and boards, natural and manufactured timbers, metals and alloys, polymers, textiles, casting a keyring. | production project. Energy storage, energy generation, modern materials, smart materials | tools and, equipment, techniques and processes, surface treatments and finishes. |
| KEY ASSESSMENTS<br><br>Half term 1: PPE | KEY ASSESSMENTS<br><br>Half term 1: PPE<br><br>NEA Complete for assessment | KEY ASSESSMENTS<br><br>Half term 2: GCSE Exams |

Extended reading suggestions and external resources:

Revision guide.

www.technologystudent .com

Current technological advances and newspaper articles as they arise

BBC bitesize

https://www.theguardian.com/environment/2016/jun/25/illegal-logging-amazon-timber-tougher-laws-british-products

https://www.theguardian.com/world/2015/sep/17/illegal-timber-myanmar-china-forests

https://www.youtube.com/watch?v=luygMuoFnXs

https://www.youtube.com/watch?v=NvbgwdTGoyo

https://www.youtube.com/watch?v=7pNWI1dcbg4

https://www.youtube.com/watch?v=SLUcVh_4wlM

https://www.youtube.com/watch?v=UGnDzE9mfUc

https://www.youtube.com/watch?v=eF5LVBW1vl8

https://www.youtube.com/watch?v=P9KPJlA5yds

https://www.youtube.com/watch?v=3RUE367Sb9A

https://www.youtube.com/watch?v=CBmsOvbGh-Y

https://www.youtube.com/watch?v=fcBXtwGexNc

https://www.bbc.co.uk/news/science-environment-39217985

https://www.youtube.com/watch?v=I8nMKH3y_1I

https://www.youtube.com/watch?v=ALWwK7Vz4gY

https://www.bbc.co.uk/news/business-38472652

https://www.theguardian.com/world/2016/sep/19/waste-not-want-not-sweden-tax-breaks-repairs

https://www.bbc.co.uk/news/science-environment-37902773

https://www.bbc.co.uk/news/business-38263177

https://www.youtube.com/watch?v=ftj23FRS2LI

https://www.youtube.com/watch?v=BOo8gxp3K3w

https://www.youtube.com/watch?v=BqkekY5t7KY