

## Marshland Curriculum Overview

## Food Preparation and Nutrition

### Curriculum Intent

The Food Preparation and Nutrition curriculum is divided into five categories;

- Nutrition and Health
- Science
- Safety
- Choice
- Provenance

Practical elements, such as hygienic practice and safe equipment use, are progressively taught throughout the course and each skill is revisited several times in order to facilitate mastery, without sacrificing exposure to a broad range of ingredients, dishes and cuisines.

Food science requires experimentation/investigations to occur so that students can better understand key processes, so they can replicate these skills when cooking a dish that lends itself to that science. Such experiments are selectively incorporated into the curriculum to achieve significantly rich and retainable learning outcomes.

The curriculum is constructively aligned to the K4 GCSE, designed to include problem solving development, examination proficiency, independent working and elements that tie in with the school and subject lead's philosophies of deep and critical thinking, broadened perspectives, determination and courage.

### How does our curriculum build upon previous learning?

**KS3**

Food Preparation and Nutrition, or any derivative, is not yet reliably or consistently delivered despite featuring briefly within the Design and Technology national curriculum at KS1 and KS2. It is however expected that it is taught until the end of KS3, within a Healthy Eating School ethos. Guidance and recommendations for how, what, how much to deliver in the primary phase of the curriculum, however, is ultimately down to individual schools.

Approximately a quarter of primary schools have teaching kitchens and research suggests the teaching is inconsistent based on feedback and outcomes.

Food Preparation and Nutrition currently falls under Design and Technology.

**KS1** - Students should be taught where food comes from and they should be conceptually aware about a balanced diet.

**KS2** - Students should be taught how to produce balanced dishes, as well as add to their knowledge on healthy eating, ingredients and understand the primary production processes of various ingredients.

Students should, where possible, be taught how to prepare basic, healthy recipes in both key stages.

KS1 and 2 principles of healthy eating are revisited and developed in KS3. The Eatwell Guide, NHS healthy living guidelines and energy balance, for example, are taught alongside practical areas on hygiene and safety. Practical dishes are predominantly savoury, balanced and align with current British Nutrition Foundation recommendations and initiatives including The Independent's School Food Plan and the School Cooking Revolution.

In Y7, students look at different ingredients, how they're grown, how to store, prepare and cook foods safely and efficiently. These are the primary principles that should be taught in previous key stages.

### How does our curriculum build upon previous learning?

	<p>In Y8, students continue learning about these areas, but extend their understanding of healthy eating principles, learning about macronutrients, where they are found and how our body uses them. Practical cooking delves further into science and higher-level techniques such as thickening agents, bread &amp; pastry making. In Y9 micronutrients, international cuisine, allergies, intolerances and consumer awareness work form the foundations of a balanced, sustainable and nutritious diet, demonstrating broadening of the curriculum, in turn providing a useful link to KS4 progression. After learning about vitamins and minerals, students study the various food choices and differences/similarities in the global culinary scene. Practically, students move into pasta making, make both British and international dishes as well as continue to learn new complex skills including emulsions.</p>
<b>KS4</b>	<p>KS3 content is constructively aligned to the necessary outcomes at KS4. Knowledge obtained in earlier key stages provides the foundation of what is necessary to succeed in the final years of the course.</p> <p>KS4 follows on in more detail, recovering each of the 5 Food Preparation and Nutrition categories. Students have double lessons to attempt more challenging and complex dishes in preparation for their examinations, and also complete mock exams and coursework. In-between, students revisit core material from earlier key stages and take that further with additional information and content, such as food production, processing and food-based experiments as part of food science. The demands in relation to planning, analysing and evaluating are high, with students receiving repetitive training in these areas.</p>

### What do students do with this knowledge or these skills?

Students use knowledge and skills in a variety of activities within their lessons:

- Extended writing tasks
- Questions and answers
- Share information, reasoning, and/or knowledge
- Autonomous notes/reports
- Planning and evaluating
- Producing complex skills
- Working safely and hygienically
- Designing research
- Reporting research results accurately
- Problem solving
- KS4 students organise order of work

### How do we help students secure this knowledge in long-term memory?

Methods are used consistently and selectively depending on the context of the lesson.

- Quizzes and tests
- Increasing storage strength by slowly removing scaffolding, interleaving questions from different topics and asking questions of incrementing demand
- Targeted questioning
- Spaced practice/repetition is designed to check prior understanding and address gaps that arise as well as consolidate prior content
- Peer teaching/coaching. Kagan style and “know it all” leadership opportunities to motivate and provide a different voice, which can also be competitive
- Revision games, rebuses, flash cards, and memory cards
- Practical progression, incorporating prior skills in combination with new skills
- Home study through quizzes or retrieval work

### How does the curriculum align to the national curriculum?

KS3 covers the national curriculum from KS1 onwards. The curriculum is constructively aligned/sequenced, and thus progressively assimilates into KS4 content, which is interwoven throughout.

KS4 curriculum covers the exam specification.

### How do we check student understanding and monitor progress?

- Retrieval quizzing, intermittent checks such as individual white-board questions, 'cold-calling' students with a 'no opt-out' policy is implemented by the school
- Practically, understanding and strengths/weaknesses are observable, especially over time
- Context sheets are used to assess students' needs, as well as regular meetings to identify and report on students who are assessed to require extra support, who may be struggling, excelling, or who have not been discussed before
- Independent work is often instructed, and this can remove potential contaminants to the teacher's assessment
- Questions re-feature in tests and checks as part of a sustained repetition premise
- Summative assessments and 'health checks' are used much like standard mini tests. Multiple-choice health checks are based around core questions within topics. Written assessments highlight student ability to apply their knowledge in broader, exam-like scenarios. Outcomes from summative assessments are then used in conjunction with formative assessment methods to analyse and strategize.

### Curriculum sequencing

Year	Autumn	Spring	Summer
7	<p><b>Food Safety &amp; Hygiene</b> Cross-contamination, microbial growth factors, biological, physical, and chemical hazards, risks, control points, food poisoning, knife safety, washing up, managing hot equipment and hot water</p> <p><b>Healthy Eating</b> Eatwell guide, NHS healthy living guidelines</p>	<p><b>Energy Balance</b> Calories/energy, metabolism, energy input and output, exercise, sugars, carbohydrates, fibre</p> <p><b>Local Produce</b> Sustainability, affordability, organic food</p> <p><b>Evaluating</b> Sensory, spider/radar charts</p>	<p><b>Enzymes</b> Digestion, metabolism (catabolism and anabolism), enzymic browning, preservation, PH levels</p> <p><b>Food Choices and Dietary Needs</b> Seasonality, food miles, recycling, diet, climate</p>

Curriculum sequencing			
Year	Autumn	Spring	Summer
<b>8</b>	<b>Food Safety &amp; Hygiene</b> Temperatures, storage, types of microbes, packaging <b>Nutrition</b> Macronutrients, Reference Intakes, Energy rich foods, carbohydrates, starch, non-starch polysaccharides, saccharides/sugars	<b>Proteins</b> Amino acids, functional foods, high and low biological values, complementation of proteins, alternative protein sources, coagulation and denaturation	<b>Fats</b> Saturated and unsaturated, trans and cis fats, cholesterol, functional fats, vitamin absorption through fats <b>Recipe Planning</b> Adapting, substituting, planning, analysing, concluding, evaluating
<b>9</b>	<b>Allergies and Intolerances</b> Anaphylactic shock, immune system, enzymes, allergens, auto-injectors <b>Micronutrients: Minerals and Vitamins</b> Organic and Inorganic, synthesis, absorption, functions of vitamins and minerals, deficiency, overload, toxicity	<b>Food Choices</b> Religion, allergies, ethics, health conditions, availability, cost, occasion <b>British and International Cuisine</b> Culture/cultrality, globalisations, sustainability, heritage, cultivation, trade	<b>Consumer Awareness</b> Consumer rights, labelling, food waste, recycling, reusing <b>Water</b> Hydration, nervous system, digestion and waste, soluble vitamins and fibre, functions of water
<b>10</b>	<b>Food Science</b> Dextrinization, caramelisation, coagulation, emulsification, aeration, biological, mechanical, chemical raising agents, denaturing, gelatinisation <b>NEA 1 Coursework Preparation</b>	<b>Food Choices</b> Factors affecting choice, adaptations, inclusion <b>Food Safety</b> Food safety, equipment uses, storage, packaging, organisation of work flow <b>Food Provenance</b> Rearing and cultivation, sustainable practices, seasonality and regionality, environmental, regulators and charities	<b>Nutrition</b> Macro and micronutrients Individual needs <b>NEA 2 Coursework Preparation</b>
<b>11</b>	<b>NEA 1 Coursework</b>	<b>NEA 2 Coursework</b>	<b>Preparation for Exams</b>

## Curriculum sequencing

Year	Autumn	Spring	Summer
<b>Rationale for this sequencing</b>	<p>Y7 focuses on consolidating prior knowledge and bringing others (without this prior knowledge) up to this level. Primary key stages are not consistent in this subject, and many students will not have worked in a kitchen much before. Practically, introductory lessons are essential. A bridge between KS1 and KS2 is steadily built during Y7, steadily requiring more independence and initiative from the students in planning and applying. Theoretically, concepts that may have been learned are broken down and explained. These concepts are the foundations of nutritional learning and based around the UK's Eatwell Guide. More challenging concepts are introduced in Y7 to provide a stable platform to make sense of future concepts. Energy balance is pushed forward to build an understanding of calories/energy, metabolism and basal rates, and expenditure of energy. This explains the Eatwell guide and gives a pure understanding rather than a semantic registry.</p> <p>In Y8 macronutrients are taught to explain and break down the Eatwell Guide. This is essential as the Eatwell guide is not grouped into macronutrients, and the two concepts can become confusing for students. Sustained repetition is a constant, and deeper knowledge rich content is provided where motivation is highest. By the end of this year, students can look at one section of the Eatwell Guide and list multiple nutrients that exist within each category plus their functions, thus, making sense of the Eatwell Guide and therefore diet.</p> <p>This allows Y9 to go further into more complex or broader realms of the subject, working as both a pathway to KS4 for transparency for the right candidates to take on the course, and because the foundations have been put in place, we can now conceptualise aspects such as micronutrients or critique food choices with sound reasoning as to what the human body requires.</p> <p>In Y10, much of KS3 is revisited and food sciences become much more detailed and aligned with the Non-Exam Assessment 1 [NEA1] coursework requirements. This is a year of consolidation, revision, richer preparation, and mastery practically and theoretically. Practically, this will be the first-time students get a chance to cook something with higher demands, since there is one double-lesson per fortnight.</p>		

### How does our curriculum prepare students for the transition to post-16 pathways?

The national curriculum provides a template that is divided in focus between nutrition, food science and cookery. There are several direct options that are accessible at local sixth forms and colleges including certificates and diplomas in food science and nutrition, cookery, and hospitality. Marshland students progress onto these courses, whereas others adopt the cross-curriculum knowledge to assist their physiology and biological understanding in areas such as the pure sciences or sport.

The content in the Food Science and Nutrition course, whilst more abstract and demands more critical thinking from the student, requires much of the same material, for example, safety and hygiene management in a professional kitchen and the physiological risks related to allergies or deficiencies.

In KS3, students already begin to study areas such as individual needs for specific groups, which is within the opening unit of the food science course post-16.

Logical indirect pathways may include medicine, science and research into nutrients or microbes, caring, dietician, fitness instructor roles, and so on.