LYNN GROVE ACADEMY

WJEC EDUQAS GCSE in FOOD PREPARATION AND NUTRITION

DESIGN TECHNOLOGY CURRICULUM MAP KS4

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	Timescale- 7 weeks Learning Focus Commodity: Fruit and vegetables, including potatoes (fresh, frozen, dried, canned and juiced) Skill/knowledge development Provenance, How commodity is grown/reared and Processed, Classification, Nutritional values (include sources, functions, deficiencies, excess, daily requirements), Dietary considerations, Food science, NEA Assessment 1 practise investigation- enzyme action, Food hygiene and safety, Storage (Bonne Femme Soup, Pineapple upside down cake, fruit salad, mini roast dinner, lemon curd), British cuisine Keywords/terminology/concepts How/where fruit and vegetables are grown, link	Timescale- 7 weeks Learning Focus Commodity: Milk, cheese and yoghurt Skill/knowledge development Provenance, How commodity is grown/reared and Processed, Classification, Nutritional values (include sources, functions, deficiencies, excess, daily requirements), Dietary considerations, Food science, NEA Assessment 2 practise investigation- making butter/yoghurt/cheese, Food hygiene and safety, Storage (cheesecake, cauliflower cheese, quiche, own choice) Keywords/terminology/concepts Local versus nationally distributed, import, cost, milk prices for farmers livelihood, food miles, organic, Food wastage and	Timescale- 6 weeks Learning Focus Cereals (including flours, breakfast cereals, bread and pasta) Skill/knowledge development Provenance, How commodity is grown/reared and Processed, Classification, Nutritional values (include sources, functions, deficiencies, excess, daily requirements), Dietary considerations, Food science, NEA Assessment 3 practise investigation - Investigate the best flour for bread making, Food hygiene and safety, Storage (focaccia, calzone, fougasse, spinach & ricotta ravioli, fried rice, choux pastry, Cornish pasties). How starch behaves according to method of heat transfer. Keywords/terminology/concepts	Timescale- 6 weeks Learning Focus Commodity: Meat, fish, poultry, eggs Skill/knowledge development Provenance, How commodity is grown/reared and Processed, Classification, Nutritional values (include sources, functions, deficiencies, excess, daily requirements), Dietary considerations, Food science, NEA Assessment 4 practise investigation - Show how the setting of egg protein can be affected when making baked egg custard, or Conduct an experiment to show the best way to tenderise meat by breaking down the connective tissue. Food hygiene and safety, Storage (portioning/boning whole chicken, fish goujons and mayo, bbq chicken wings, sweet & sour chicken,	Timescale- 6 weeks Learning Focus Commodity: Butter, oils, margarine, sugar and syrup Skill/knowledge development Provenance, How commodity is grown/reared and Processed, Classification, Nutritional values (include sources, functions, deficiencies, excess, daily requirements), Dietary considerations, Food science, NEA Assessment 5 practise investigation- Investigate a range of sugars and sweeteners suitable for making cupcakes. Food hygiene and safety, Storage (lemon meringue pie, chocolate gateaux, scones, own product puff) Keywords/terminology/concepts Food miles (UK verses imported raw materials to make the butter, oil,	Timescale- 6 weeks Learning Focus Commodity: Soya, tofu, beans, nuts, seeds Skill/knowledge development Provenance, How commodity is grown/reared and Processed, Classification, Nutritional values (include sources, functions, deficiencies, excess, daily requirements), Dietary considerations, Food science, Food hygiene and safety, Storage. No NEA assessment as limited time & food science opportunities. (Quorn dish of own choice, bean burgers, lemon and poppy seed cake, dish for specific dietary requirement). Keywords/terminology/concepts how/where soya, beans, nuts and seeds are grown climate, soil types Organic verses non-organic, Food miles

	to climate, soil Types, organic verses non-organic (Soil Association, etc.) Use of pesticides and herbicides, Customer choice , cost, Food miles, Seasonality, growing, harvesting, primary and secondary Processing, preservation, taste test, methods of sensory testing, changes to texture, colour and flavour due to cooking, 5 a day , Eatwell guide, dietary fibre ,Water, Energy requirements (link to different groups) balance of energy input with energy output vitamins and minerals, Nutrient requirements, Fat and water soluble vitamins – effect of oxidation, heat on vitamin content of fruits and vegetables, nutrient content of a specific fruit or vegetable – fresh, frozen, canned, dried, Vegetarians (lacto/lacto-ovo/vegan) Bone health, Healthy blood, Composition of fruits and vegetables, primary source of carbohydrate/fibre Oxidation/enzymic browning, personal hygiene, Refrigeration temperatures, Use By and Best Before dates Stock rotation, Bagged salads – food poisoning	sustainability, how animals are reared, fed and milked. Animal sources of milk, different methods of preserving milk (drying, UHT, pasteurisation, etc.), convenience foods, hygiene for effective food safety (heat treatment), Effect on nutritional content from processing, secondary processing – milk to cream, yoghurt, cheese, etc. different animal sources (non-dairy milk – e.g. nut, soya, coconut; alternatives to non-dairy cream), cream, yoghurt, cheese, etc. different types of milk – skimmed, semi-skimmed, etc. different types of cream – whipping, soured, etc. , fat content, different types of cheese – hard, soft, etc. time management, dovetailing, writing detailed time plans, Protein – HBV and discuss amino acids, Fats – saturated, Recap on vitamins and minerals , Trace element – iodine Effect on nutritional content from processing Dietary considerations bone health, allergies: Lactose intolerance from cow milk (why?) What are the alternatives? heart health: at content and type, Chemical and physical structure of dairy based products,	How climate, soil, etc., affects the types of cereals which can grow, GM crops, staple food, impact of crop failure on health of a nation, general structure of grain – endosperm, germ and bran, milling of wheat into flour, secondary processing, breakfast cereals, sugar and salt content , link in food labelling on packaging – how healthy are the cereals? Function of packaging and environmental impact, marketing, bread types, pasta, range of cereals grown and eaten across the world , Wheat – wholemeal, white, self-raising, semolina, etc. Rice – brown, white, basmati, Arborio, rice flour, rice vinegar, etc. Oats – rolled, oatmeal, etc. gluten-free flour Nutritional values , Nutrient requirements Carbohydrate – starch Dietary fibre (NSP: non-starch polysaccharide) – soluble and insoluble, B vitamins, effect of nutrient absorption due to presence of phytates Principal of fortification of food in the context of flour and breakfast cereals, Importance of whole grains to reduce risk of heart disease,	chicken tagine, meatballs, schnitzel, steak sandwich, meringues) Keywords/terminology/concepts compare geographical areas where meat, fish, poultry and eggs are reared/produced, local verses imported, north sea fishing verses southern hemisphere fishing, local eggs verses imported eggs from Europe, sea fish and farmed fish, fish quotas and availability/ethical fishing – Marine Stewardship Council, etc.) Intensive farming verses natural farming, animal welfare, animal feed (can reference BSE) and shelter How fish (including shellfish) is caught, poultry (including eggs) – how poultry is reared and slaughtered/how egg farming is conducted (different animal sources as well as hens eggs), game, cuts of meat and poultry, processing into bacon, ham, sausages, pies, etc. methods of preservation, offal, cuts of fish, Eggs, pasteurised whole/white/yolk , methods of cooking tender versus tough cuts, and cost, gelatine Categories of fish, canned, smoked, etc.	margarine) Where is sugar cane and sugar beet grown? Organic verses non-organic, GM, Butter, oils, margarine Butter – how is butter made? Oils/margarine – growing of vegetable crop for oil production, include pressing, fish oil Processing of margarine – different oil types used, fortification, Sugar and syrup Cane and beet (climate requirements), refining process, making syrup, Primary processing: Oil, sugar Secondary processing: Butter, margarine, sugar syrups, animal and vegetable fats, Hard and liquid fats, mention lard and suet, Margarine – different oil bases, Is margarine healthy? hydrogenation, monosaccharaides and disaccharides, substitutes, energy dense, Saturated and unsaturated fats, empty calories, link to weight gain, obesity, dental caries, type 2 diabetes, Free sugars, implications of a diet high in saturated fat, Making sensible choices on fat type, Lower fat alternatives, Fat soluble vitamins, chemical and physical structure, Plasticity, Shortening Emulsification, Melting point/smoke point	Seasonality, Soya, tofu How soya beans are cultivated, processed into tofu, TVP (textured vegetable protein), How beans (pulses/legumes), nuts and seeds are grown, mycoprotein (Quorn TM) – what it is derived from, how it is processed, Secondary processing: Beans (legumes), drying and canning, Nuts – ground, flaked, nibbed, etc. Seeds – drying, etc. Soya products – milk, yoghurt, TVP, tofu, tempeh Beans (legumes) – red kidney, black eyed, aduki, etc. Nuts – brazil, cashew, almonds, etc. discussion on 14 allergens, Seeds – sesame, poppy, caraway, Protein, amino acids, HBV source, LBV source Complementing proteins High in fibre and other nutrient sources Nuts – high in good fats Fibre source –soluble and insoluble, nuts as a thickener, keep nuts away from other food sources – risk of allergen contamination nut storage relating to rancidity, chilled, frozen, ambient, and discuss suitable storage Summative Assessment Graded according to 9-1 Mock Exam & reasons for

	risk, Ambient, Chilling, canned foods, Freezing, blanching, sensory testing Summative Assessment Graded according to 9-1 Provenance Guide on own choice fruit or vegetable, Mock NEA Assessment, End of module test SMSC learning opportunities: ethical impact of food production, cost of food related to food choices, healthy diets, multicultural cuisine Key resources Usual kitchen equipment, spare ingred for DP, information sheets, podcasts, herbs/spices, ingredients for taste tests and assessments Challenge See individual lessons for challenge, e.g. differentiated end of module test and assessment format National Curriculum (Key Competencies) Understand that their need for water is affected by many factors, especially hot weather and levels of physical activity, and be aware of the consequences of dehydration.	Emulsion, Denaturation and coagulation of milk proteins. Use of rennet (curds and whey). Benefits of bacteria in the making of yoghurt, cheese, etc. Effect of heat on cheese, food hygiene and safety Concept of high risk , How bacteria multiplies, How to avoid cross-contamination, Why heat treating raw milk is important Summative Assessment Graded according to 9-1 Exam questions on secondary processing , time plan for own dish, Mock NEA Assessment, SMSC learning opportunities ethical impact of food production, cost of food related to food choices, healthy diets, multicultural cuisine Key resources Usual kitchen equipment, spare ingred for DP, information sheets, podcasts, herbs/spices, ingredients for assessments, jars for butter making, muslin, griddles Challenge See individual lessons for challenge, e.g. differentiated exam questions, time plan proforma, and assessment format (cheese) National Curriculum	type 2 diabetes and control blood cholesterol Link to effect of low-fibre diet: Haemorrhoids, diverticulitis, cancer of the colon Deficiencies: Beriberi – lack of thiamin (vitamin B1)Pellagra – lack of niacin (vitamin B3) Coeliac disease Chemical and physical structure of cereal grains Gluten formation, gelatinisation, coagulation, dextrinisation, Retrogradation, Gels Bread making, Scientific principles, including problem solving, Chorleywood , Vitamin C (ascorbic acid) in large scale bread manufacturing Yeast , Concept of low risk foods (exception includes cooked rice) Food spoilage – mould, etc. Food safety issues with cooked rice Summative Assessment Graded according to 9-1 Task analysis for design brief (coeliac), dietary guide for this food group, mock NEA assessment SMSC learning opportunities ethical impact of food production, cost of food related to food choices, healthy diets, multicultural cuisine Key resources Usual kitchen equipment,	Protein (HBV), Saturated fat, B vitamins, Iron Trace element – iodine and fluoride in fish and shellfish, Health benefits of eating fish, Omega 3 in oily fish, Implications of excess or deficiency of protein, Healthy blood – iron (haem and non-haem iron), Iron deficiency, religious considerations when eating meat, Chemical and physical structure of meat, fish, poultry and Eggs, Denaturation, Coagulation, Foaming , Aeration, Connective tissue, Maillard reaction High risk foods – link to specific food poisoning bacteria, correct storage temperatures, How to tell if meat is 'off', How to tell fish is fresh Lion mark) Summative Assessment Graded according to 9-1 Meat, fish, eggs, presentation, Mock NEA Assessment, method of research- questionnaire SMSC learning opportunities ethical impact of food production, cost of food related to food choices, healthy diets, multicultural cuisine Key resources Usual kitchen equipment, spare ingred for DP,	Caramélisation, storage relating to rancidity, foreign bodes, pests, Where should butter and margarine be stored? chilled food temperatures, effect of light on quality and longevity of oil, why is humidity a consideration, crystallisation, sensory analysis Summative Assessment Graded according to 9-1 Research 2 -Product analysis, Reasons for choice, end of unit test SMSC learning opportunities ethical impact of food production, cost of food related to food choices, healthy diets, multicultural cuisine Key resources Usual kitchen equipment, spare ingred for DP, information sheets, podcasts, herbs/spices, samples of butter, fats & oils, sugars & syrups, oven proof tins, electric whisks, eggs, nutrition program Challenge See individual lessons for challenge, e.g. differentiated test National Curriculum (key competencies) Be able to understand how to maintain a healthy weight throughout life, understanding the relationship between diet	choice of recipe SMSC learning opportunities ethical impact of food production, cost of food related to food choices, healthy diets, multicultural cuisine Key resources Usual kitchen equipment, spare ingred for DP, information sheets, podcasts, herbs/spices, cake tins, freezer, samples of nuts, beans, pulses, nuts etc, tofu, tvp, quorn Challenge See individual lessons for challenge, e.g. differentiated reasons for choice guidance, combination dietary choice e.g., active, pregnant woman National Curriculum Make informed choices about food and drink in order to achieve a healthy, varied and balanced diet. Know about food poisoning, its symptoms and preventative measures (all terms)

		(key competencies) Be able to apply current healthy eating recommendations, and understanding of people's needs, to their own diet and those of others, e.g. before and during pregnancy, breastfeeding. Consider the concept of sustainability and the impact of different choices on the environment. Apply good food safety principles when buying, storing, preparing and cooking food (all terms)	spare ingred for DP, information sheets, podcasts, pasta machines, herbs/spices, ingredients for assessments, DVD on flour production, cereal samples (breakfast packets, diff types rice, flour, grains) Challenge See individual lessons for challenge, e.g. differentiated design brief, dietary guide to include age related dietary requirements National Curriculum Consider a wider range of factors when making food choices, e.g. seasonality, local food, sustainability. Implement good food safety when handling, preparing, cooking and serving food, e.g. hand washing, keeping raw and cooked food separate to avoid cross-contamination. (all terms)	information sheets, podcasts, herbs/spices, ingredients for assessments, freezer, food processors, nutrition program Challenge See individual lessons for challenge, e.g. extended nutritional analysis, National Curriculum (key competencies) Know why, when and how to make changes to their diet. Apply costing skills to make good food selections for health when eating out or cooking at home. Apply food safety information on food labels when buying, storing and consuming food. (all terms)	and physical activity, as well as taking into account other factors, e.g. advertising, food availability. Be able to make informed choices based on food labels, ingredients lists, nutrition information and health claims Be aware of the contribution of every day and opportunistic activity to energy expenditure. Ensure that they undertake sufficient activity, including structured and everyday activities. Know how to access a variety of community-based opportunities for physical activity, including sports clubs. Prepare to keep active during adulthood and be aware of the recommendations for physical activity across the life course. Understand that different types of physical activity generate different improvements in physical capacity. Stay well hydrated when being physically active.	

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 11	Timescale- 7 weeks Learning Focus **NEA 1 Food Investigation Assessment - released by exam board 1st September** Skill/knowledge development Recap on key principles of how to conduct NEA research methods, hypothesis setting, plan of action, writing up an experiment, analysis results of experiment and drawing conclusions, referencing sources Keywords/terminology/concepts See previous food science lessons Summative Assessment Graded according to 9-1 Internally moderated SMSC learning opportunities? Key resources Ingredients & equipment for experiments, computers Challenge Pupils choose own scale of challenge when designing investigation National Curriculum (see key competencies for previous term)	Timescale- 7 weeks Learning Focus **NEA 2 Food Preparation Assessment - released by exam board 1 November** Skill/knowledge development planning diets linked to nutritional requirements, cultural foods Research methods – a range to be conducted and analysed, plan of action, justifying choices, requisitions, time plan, evaluation (including sensory analysis) Keywords/terminology/concepts See previous years work Summative Assessment Graded according to 9-1 Internally moderated SMSC learning opportunities ethical impact of food production, cost of food related to food choices, healthy diets, multicultural cuisine Key resources Ingredients for DP & equipment, computers Challenge Pupils choose own scale of challenge when designing response to brief	Timescale- 6 weeks Learning Focus **Continue NEA 2 Food Preparation Assessment** Skill/knowledge development See Year 11 Autumn Term 2 Keywords/terminology/concepts See previous years' work Summative Assessment Graded according to 9-1 Internally moderated SMSC learning opportunities ethical impact of food production, cost of food related to food choices, healthy diets, multicultural cuisine Key resources Ingredients for DP & equipment, computers Challenge Pupils choose own scale of challenge when designing response to brief National Curriculum Be able to change recipes and dishes to make them healthier and more appealing by altering ingredients, and/or by using different cooking methods, e.g. using herbs instead of salt, using low fat	Timescale- 6 weeks Learning Focus **Complete NEA 2 Food Preparation Assessment (2 week)** focus on areas not covered sufficiently in Year 10, Skill/knowledge development Unknown Keywords/terminology/concepts See previous years' work Summative Assessment Graded according to 9-1 Mock exam SMSC learning opportunities ethical impact of food production, cost of food related to food choices, healthy diets, multicultural cuisine Key resources Ingredients for DP & equipment, computers Challenge Unknown National Curriculum Be able to change recipes and dishes to make them healthier and more appealing by altering ingredients, and/or by using different cooking	Timescale- 6 weeks Learning Focus Revision and Exam skills Skill/knowledge development See all previous terms Keywords/terminology/concepts See all previous terms Summative Assessment Graded according to 9-1 Mock exam practice SMSC learning opportunities ethical impact of food production, cost of food related to food choices, healthy diets, multicultural cuisine Key resources Revision activities Challenge Differentiated tasks National Curriculum (see key competencies for previous term)	Timescale- 6 weeks Learning Focus Skill/knowledge development Keywords/terminology/concepts Summative Assessment Graded according to 9-1 SMSC learning opportunities Key resources Challenge National Curriculum

		National Curriculum Apply skills and understanding competently to plan, prepare and safely cook dishes and menus for a healthy, varied and balanced diet.	yogurt, grilling instead of frying.	methods, e.g. using herbs instead of salt, using low fat yogurt, grilling instead of frying.		