Unit 21: Nutrition for Health and Social Care

Unit code: L/601/2407

QCF Level 3: BTEC Nationals

Credit value: 10

Guided learning hours: 60

Aim and purpose

This unit aims to give learners an understanding of current thinking on nutritional health particularly relating to users of health and social care services. Learners will then be able to apply this understanding and make recommendations to improve the nutritional health of an individual.

Unit introduction

This unit builds on learner understanding of the principles introduced in *Unit 5: Fundamentals of Anatomy and Physiology for Health and Social Care*.

Improvements in the diet of individuals are increasingly being recognised as a significant factor in maintaining, or effecting improvements, in overall health. It is therefore important that people working in the health and social care sectors, or those who are responsible for the wellbeing of others, have a good understanding of nutrition and diet. This unit gives learners an understanding of nutrition from a science-based perspective and of the role that food plays in social contexts. The unit may also provide useful underpinning knowledge for the study of food hygiene and practical culinary skills.

Learners will explore concepts of nutrition using the language of nutritional science. Different aspects of nutritional health will be defined and routine ways of measuring this explored. Other aspects of nutritional data will involve describing the general principles on which nutritional requirements are determined in the UK and how information on the nutrient content of foods can be retrieved. Learners will also explore how the nutritional value of foods may be affected by food processing.

The function and sources of the main nutrients will be investigated in relation to the contribution they make to the healthy physiological functioning of the body. Particular attention is given to the chemical characteristics of nutrients and other features of the diet that are important in order to understand the scientific principles that underpin current government advice on nutritional health and general wellbeing.

The context surrounding food consumption in learners' home countries will be considered through an exploration of the factors that influence the dietary intake of individuals. Learners will consider the consequences of some common disorders which give rise to specific dietary requirements. The role of personal preferences, lifestyle and socio-cultural factors in determining what and how food is eaten will be addressed as well as economic factors. Social policy considerations, such as education and government initiatives aimed at improving nutritional health are also included.

Finally, learners will carry out a quantitative investigation of the food intake of a chosen individual over a three-day period, analysing it in relation to the health and lifestyle choices of the chosen individual.

On completion of the unit, learners should be able to apply their understanding to promote healthy eating principles when supporting users of health and social care services.

Learning outcomes

On completion of this unit a learner should:

1 Understand concepts of nutritional health

2 Know the characteristics of nutrients

3 Understand influences on dietary intake and nutritional health

4 Be able to use dietary and other relevant information from an individual to make recommendations to improve nutritional health.

Unit content

1 Understand concepts of nutritional health

Concepts: food, diet, meals and snacks, nutrients

Nutritional health: malnutrition, undernutrition, deficiency, overweight, obesity

Nutritional measures: nutritional and energy balance, growth charts, weight for height and gender, Body Mass Index (BMI); actual food intakes, recommended intakes: Dietary Reference Values, Reference Nutrient Intakes; nutrients per portion and per 100 g of food

Dietary intake guidelines: Eatwell Plate, food groups, five-a-day; effect of food preparation/processing methods

Current nutritional issues: one of, eg food labelling, organic food, genetically modified foods, environmental aspects of food production, self-prescribed health supplements, treatments for obesity, advertising food, global food inequalities

2 Know the characteristics of nutrients

Characteristics: dietary sources, function in body, changes in processing, eg heat, storage, freezing

Carbohydrates: sugars, starch, non-starch polysaccharides; sugar substitutes, eg artificial sweeteners, sorbitol

Proteins: polypeptides, essential and non-essential amino acids

Lipids: mono- and polyunsaturates; saturates, cis and trans fats; cholesterol

Vitamins: fat-soluble, eg A, D, E and K; water-soluble: B group, C

Minerals: iron, calcium, others, eg magnesium, sodium, potassium, selenium, zinc

Energy: dietary sources, as kilocalories and kilojoules, energy values for protein, fat, carbohydrate and alcohol

Other diet-related consumption: water, dietary fibre, alcohol

Physiological context: nutrient functions explained using appropriate physiological terminology relevant to the body systems and metabolic processes, eg converted in liver to fatty acids stored in adipose tissue, absorption of calcium in small intestine

Groups: young children, young people, adults, older people, pregnant women and breast feeding mothers

3 Understand influences on dietary intake and nutritional health

Health factors: underlying health condition resulting in specific nutrient needs, eg diabetes, coeliac disease, irritable bowel syndrome, lactose intolerance, food allergy; loss of ability to feed independently, eg from paralysis; loss of function, eg cognitive, digestive

Dietary habits: influences, eg meal patterns, snacking, personal tastes, food availability

Lifestyle: influences, eg eating at home, social eating and drinking, exercise/activity levels, occupation (active, sedentary), leisure pursuits

Economic: influences, eg cost of food, access to shops; food supply, eg seasonal variation

Socio-cultural: influences, eg beliefs, socialisation, food rituals, role of food in families and communities

Education: influences, eg public health, health education, food hygiene, marketing and labelling; role of health professionals, eg dieticians, public health nutritionists, doctors, nurses, carers, sports nutritionists, health and fitness instructors

Social policy: legislation, regulations and policies, eg Children Act 2004, Every Child Matters, Nutrition Standards for School Lunches and Other School Food 2006, other initiatives, eg Healthy Schools, National Minimum Standards for Care Home Catering

4 Be able to use dietary and other relevant information from an individual to make recommendations to improve nutritional health

Record of food intake: record over one three-day period, all food eaten including meals, snacks, drinks, confectionery, supplements; portion sizes, processing details as relevant to the nutritional analysis frequency

Sources of nutritional information: food analysis tables (database or printed), tables of portion sizes, packaging (especially for processed foods)

Quantitative analysis: to include energy, protein, fat, iron, vitamin C, fibre intakes, proportion of energy from fat

Strengths and weaknesses: in relation to RNI, general health targets eg five-a-day, representativeness of three-day intake measured to usual dietary habits

Nutritional plan: to include meals, snacks, drinks, guidance on portion size, eg number, weight/volume

Activity: record of time per day spent sleeping, sitting, walking (fast/slow), on other exercise, eg sport to estimate daily energy expenditure

Lifestyle influences: as relevant, eg personal food preferences, cultural, economic, social, availability of time; day-to-day variations, eg week days/weekends

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	**To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:**	**To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:**
P1 explain concepts associated with nutritional health [CT1; CT2; SM2]		
P2 describe the characteristics of nutrients and their benefits to the body [IE4; CT4; SM2]	**M1** discuss similarities and differences in the nutritional and energy requirements of two groups of individuals	
P3 explain possible influences on dietary intake [IE1; IE3; IE4; CT2; CT3; SM2]	**M2** assess how influences on dietary intake may affect the nutritional health of individuals	**D1** make realistic recommendations for minimising negative influences on individuals in a specific health and social care setting
P4 carry out a quantitative analysis of the daily intake of nutrients and energy by one individual [IE2; IE5; RL3; RL5; SM2]	**M3** assess how the plan will meet the nutritional needs of the chosen individual.	
P5 prepare a one-week plan to improve the nutritional health of the chosen individual. [IE6; CT2; CT3; SM2]		**D2** evaluate how the nutritional plan might improve the health of the chosen individual.

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills which are embedded in the assessment of this unit. By achieving the criteria, learners will have demonstrated effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

This unit builds on knowledge and understanding gained in *Unit 5: Fundamentals of Anatomy and Physiology for Health and Social Care*, in relation to digestion and metabolism, and it would be helpful to review key aspects of these topics at an early stage in the delivery of the unit. A scientific approach is expected when delivering this unit. Guiding learners at an early stage about the reliability and validity of internet sources of information is important, given the extremely large amount of information on this subject. Consideration of less reliable sources may be appropriate to establish alternative perspectives on the selected nutritional issue.

Learners' existing understanding of food and nutrition could be used to introduce the unit through exploring their eating habits and/or those of others, for example household members, service users, friends. Checking on the accuracy of learners' understanding of nutritional concepts is advisable before encouraging learners to apply them to health and social care settings. More directed tutor input will be required to ensure accurate understanding and sufficient coverage of all the specified concepts.

Practical activities involving food groups and the nutritional value of different foods could link understanding of nutritional measures and dietary intake. Direction and practise in using charts and tabulated data, particularly relating to Recommended Nutrient Intakes (RNI), Dietary Reference Values (DRV) and quantitative analysis is recommended and will require the use of mathematical skills. The Eatwell plate could be discussed in relation to current guidance on healthy eating relevant to the home country. Visual and compositional comparisons between foods prepared in different ways would be valuable for understanding the effect of processing.

Investigating nutritional issues is likely to require some independent research supported by individual guidance from the tutor. This could follow a general class discussion about current contentious issues relating to nutrition, for example famine in the developing world or obesity epidemiology. There may be links to other units such as *Unit 20: Health Education* or *Unit 14: Physiological Disorders* if looking at specific diet-related disorders. Learners may select a topic of personal interest, specifically relevant to their placements or of public interest, or choices may be managed so that learners each research a different nutritional issue in order to share learning across the class, for example through presentations or wall displays.

Specific knowledge of nutrients and their contribution to health is required. The focus however is on the practical use of the knowledge as applied to learners' own diets and those of people who use health and social care services. Information on main food sources could be linked to the Eatwell plate. Consideration of the effect of food processing on foods should include nutrient loss/gain as well as changes in physical characteristics and their effect on the aesthetic appeal of food and/or on its digestibility and thus physiological usefulness. Functions should be described using physiological knowledge introduced in *Unit 5: Fundamentals of Anatomy and Physiology for Health and Social Care*. If laboratory facilities are available, practical activities might include chemical investigations and these activities could be linked, as appropriate, with *Unit 15: Biochemistry for Health* and *Unit 16: Science for Health*. Unless linked to science units in the programme where biochemical terminology may be expected, terminology reflecting that in public usage is accepted. Differences in nutritional and energy requirements should be related to physiological functions of the nutrients and variations in energy expenditure due to basal metabolic rate and energy used for activity.

Exploration of the various influences on food intake and nutritional health should be considered as much as possible through class discussion based on learners' own experiences, observations of others, case materials and independent research. Activities encouraging learners to relate their nutritional knowledge to the nutritional needs of a range of others could be based on observations made on work experience placements. Whether weight is monitored routinely, use of fluid balance charts or specific records to record food intake could all be discussed. Questioning could help learners think through the nutritional consequences of ignoring these details. Discussions could focus on different age groups, needs or other themes, as appropriate, to structure activities so that learners are aware of a wide range of influences in each category. Sharing learning from observations made in settings could be helpful in gaining insights into how the nutrition of service users might be improved. This could be supplemented by learners' independent research.

A critical perspective on the diary method used to measure food intake should be encouraged. Learners may consider the extent to which maintaining a food diary affects what the individual eats. Again research of nutrition texts would be helpful. Learners should then have sufficient knowledge and understanding to conduct quantitative analysis of an individual's dietary intake without further nutritional input. Specialist guidance to support them in presenting the data appropriately could be achieved through ICT sessions. If diet analysis software is used, learners should know the mathematical principles underpinning any calculations. Daily energy expenditure should be calculated from daily activity diaries. A comparison of energy expenditure with energy intake should be linked to the concept of energy balance and the long- term health consequences for weight loss/gain.

Learners should also receive guidance on how to present a diet plan systematically, for example in a tabulation. Plans should include portion size information as well as cooking methods and take account of the individual's usual lifestyle choices over a seven-day period.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Unit introduction.
Tutor input/quiz: review of existing knowledge and understanding of digestion and the metabolism of main nutrients from Unit 5.
Discussion/reading short articles: different perceptions, eg of what constitutes a snack or a meal.
Activities: comparing nutritional information, eg extreme diets promoted by personalities rather than governmental nutritional guidelines based on medically-based nutrition science. Discussion: reliability and validity, eg in relation to relevance to home country and distinguishing between factual information derived from independent research versus, eg that for marketing food/nutrition products.
Tutor input: introduction to measures in nutrition; measuring nutritional status; nutrient requirements; concept of nutritional balance – intake less output/requirement. Eatwell plate and other Food Standards Agency guidelines, application to menu planning, judging nutritional health of individuals.
Practical activity: food analysis; portion sizes.
Using tables to compare trends in nutrient content across food groups, eg protein content, iron, vitamin C, folate. Relate to Eatwell plate. Comparison of fresh foods with processed foods. Comparison of constituents in different foods, eg fat and calcium in different types of milk.
Tutor input/practical activities: energy expenditure, energy cost of different activities; consequences of energy imbalances for health; using pedometers or ergometers to measure energy expenditure; working with given or measured data.

Topic and suggested assignments/activities and/assessment
Class discussions: on topical issues in nutrition. Individual/small-group research shared with class before each learner then selects just one; independent research (information from government, food manufacturers, aid organisations, pressure groups, print and broadcast media and on food packaging).
Assignment 1: Nutritional concepts (P1)
Tutor input: macronutrients and sources. Carbohydrates: as sugars (as mono- and disaccharides; starch and non-starch polysaccarides; digestive and metabolic function. Protein: digestion to amino acids assimilated into human tissue protein; relationship with muscle mass, gender differences, metabolic rate and activity. Lipids: healthy fats, evidence for, eg omega 3 fatty acids and circulating fatty acids, eg high- and low density, cholesterol and atheroma. Scrutiny of food labels. If laboratory facilities available, food tests for protein, reducing sugar, starch and fat.
Group research: micronutrients; relevant information on each nutrient; vitamins; fat-soluble: dangers of over-consumption; groups vulnerable to deficiency, key dietary sources; if feasible, laboratory assays for vitamin C in fruit juices
Assignment 2: Nutrients, energy and requirements (P2, M1)
Tutor input: minerals; calcium and relationship to skeleton structure and stability at different life stages; iron – function and anaemia, absorption difficulties, vulnerability of women during fertile years. Sources – importance, eg of dairy products and red meats, vegetarian alternatives.
Tutor input: other food constituents: dietary fibre: sources, role in digestion, reducing cancer risk. Water: volumes, food water. Alcohol energy value harm to health.
Group discussion: of own eating habits and factors that influence what is eaten, when, how it is prepared, meal patterns etc. Discussion of how habits might differ for contrasting groups; sharing observations from settings and/or personal lives.
Assignment 3: Influences on diet (P3, M2, D1)
Group internet research: dietary implications of common health conditions, eg diabetes, informal sharing of findings with class. Alternative means of feeding under clinical supervision.
Learner research: share understanding of cultural influences on food preferences, eating habits and rituals. Links between food and social interactions. Forbidden foods, food preparation practices, festival foods and meals. Foods/practices for specific groups. Access to food – seasonal and/or cost availability, ability to shop, cook, eat without assistance, how these problems may be overcome. Learning from awareness of settings, eg from placements. Nutritional consequences of differences and how these are compensated for in different communities.
Education: learners' own experiences of learning about nutrition, eg from family, friends, school. Role of marketing, packaging. Guest talk from community dietician or health promotion team. Nutrition and sport/fitness. Nutrition therapy.
Tutor input: social policy; influence of Early Childhood Matters and the healthy child. Policies driving changes in school meals. School Meal Standards. Learners debate views arising from own experiences of food in school. Current National Minimum Standards relating to food and nutrition. Requirements of different standards, how they relate to nutritional needs of the groups targeted.
Class discussion: methods for gathering nutritionally relevant information
Tutor input/activities: food diary method of assessing food intake – advantages and disadvantages in terms of convenience, accuracy. Discussion of suitable recording template; learners gather both dietary intake and activity data in own time over a continuous three-day period.
Collate intake records for efficient analysis; briefing regarding use of spreadsheet software, formulating spreadsheet cells; discussion of assumptions and approximations that may be required; practical use of food table data for purpose of quantitative analysis
Practical activity: learners carry out nutrient and energy analysis of intake and activity for each of the three days; opportunity to discuss queries.
Class discussion: feedback on methods used and any issues that arose.

Topic and suggested assignments/activities and/assessment
Learner activity: devise nutritional plan for assessment.
Assignment 4: Food intake for improving health (P4, P5, M3, D2)
Unit review and assessment.

Assessment

The assessment requirements of this unit could be met through four assignments, presented either in a single assignment brief or in two separate briefs. It is essential that learners are explicit about acknowledging their sources of data throughout, in particular the dietary intake recommendation and food analysis data, as well as referencing any other sources to validate comments made in their work.

For P1, learners should be able to use the concepts identified in the unit content in the context of their evidence. Assignments could be based on using appropriate charts and tables, with annotation or brief summaries, for learners to demonstrate their understanding of the information presented. Simple calculations of BMI from given data (or their personal data) will demonstrate understanding. Evidence for the chosen nutritional issue could be submitted as a separate piece of writing, or in an alternative format, for example a presentation. More substantial evidence is not required for this unit with any in-depth study of the issue being more appropriate for *Unit 22: Research Methodology in Health and Social Care,* for example.

For P2, it is recommended that the format of the evidence to be submitted is selected to minimise the opportunity for learners to plagiarise. Informative wallcharts, annotated collages of images, an individually generated audio or video podcast could be considered. Whatever format is chosen, assessors should be vigilant regarding the authenticity of the data presented. Evidence for M1 could be integrated with the evidence for P2. Learners should be able to discuss differences and similarities between the nutritional requirements of the two groups of individuals chosen, and then be able to explain these, using appropriate nutritional and physiological language.

Evidence for P3, M2 and D1 could be integrated and presented as an essay or report. Learners could be presented with three or four short case studies from different settings and user groups to use as starting points for their explanations for P3. Recommendations for D1 could be based on one of the case studies. M2 and D1 could be based on what learners have understood from work- experience placements, as an alternative or, in addition to any given case studies. To be realistic, recommendations for D1 should take account of the circumstances of the setting as well as of its users

For P4, M3, P5 and D2, the chosen individual (subject) should ideally be learners themselves. If this is not possible, the tutor should check that all the data required to achieve the criteria can be collected from the subject, who should be aged 16 or over and should not be a patient or service user from a placement. Written consent should be obtained and the tutor should check that the instructions received are sufficiently clear for the purpose of the generating evidence needed for assessment. In addition, learners may need to conduct an informal interview to investigate lifestyle details of the chosen person. Throughout, particular care should be taken to ensure the confidentiality of the information contained in the diet record and its analysis are maintained. Records kept throughout the three-day period should record all details about the foods and drinks consumed needed for the analysis for example quantities consumed, preparation/cooking methods. Learners could retain the packaging of any processed foods to inform their nutritional analysis at the end of the period. Activity records should document minutes/hours spent sleeping, sitting, walking and in any significant physical activity, for example sport, to estimate energy expenditure for comparison with energy intake.

All intake and exercise data should be collated systematically for submission using accepted formats such as tables or charts. Learners should be strongly encouraged to use spreadsheet software, inserting appropriate formulae in relevant cells and presenting totals for their daily intake of nutrients and energy. Learners should append the raw evidence ie original records and notes documenting the food intake and activity diary over a three-day period and printouts or other statements showing formulae used in spreadsheets or calculations. Strengths and weaknesses of the diet should be judged by comparing the individual's actual intakes with recommended intakes for their age and gender. For energy, both intake and estimated expenditure (from the activity diary) can be compared with recommendations.

The nutritional plan should be for a seven-day period and indicate foods to be consumed as meals, snacks and drinks, portion sizes, preparation methods and other relevant details. Information on nutrition-related lifestyle changes should also be included with annotations, either handwritten or added using editing menus. Once learners have completed the quantitative analysis, they can devise a plan for improving the diet of the individual. Brief notes are sufficient for the P5 annotation The assessment for M3 and the evaluation for D2 should be presented as a separate statement. References to published sources should support evidence for D2.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1	Nutritional concepts	As a care worker you will need to use nutritional terminology accurately and be aware of current debates relating to food and nutrition.	Assessment worksheets completed in supervised classroom conditions.
P2, M1	Nutrients, energy and requirements	A knowledge of the sources and functions of different nutrients is essential to understanding the relationship between food and health.	Presentation, handout or similar.
P3, M2, D1	Influences on diet	Food is essential for life but what we eat is subject to a wide range of influences. Recognising these and taking account of them when planning menus and preparing food can make the difference between an individual eating sufficiently for their needs or not.	1000 word essay, including examples from case studies or work-experience placements.

Criteria covered	Assignment title	Scenario	Assessment method
P4, P5, M3, D2	Food intake for improving health	The food diary is one of the more frequently used techniques used to measure food intake. It is important to have a clear understanding of what an individual is, or is not, eating before planning to improve their diet and nutritional health.	a) Keep a record of all that you eat and drink over a three-day period. b) Keep an activity diary over the same period so you can estimate your energy expenditure. c) Using a spreadsheet and food analysis data tables, carry out a systematic quantitative analysis of your total food intake for each of the three days and present this. d) Devise a nutritional plan to improve the diet of the chosen individual commenting on factors influencing their eating habits. A short evaluation, supported by references, of how the plan should improve the health of the individual.

Links to National Occupational Standards (NOS), other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Health and Social Care sector suite (see *Appendix A*) and has links with units from other qualifications in that suite. See *Appendix E* for NOS links and *Appendix G* for a mapping of the NHS Knowledge and Skills Framework against particular units in this qualification.

Essential resources

The following resources are essential for delivery of this unit:

- an appropriately qualified tutor
- library resources with key texts and other reference materials.

In addition, the following resources are considered to be highly valuable:

- National Diet and Nutrition Survey Adults 19-64 years – available from statistics.gov.uk/ssd/surveys
- National Diet and Nutrition Survey 4-8 years – available from statistics.gov.uk/ssd/surveys
- The Nutrient Databank Data Files – available from Her Majesty's Stationery Office, St Clements House, 2-16 Colegate, Norwich NR3 1BQ.

Employer engagement and vocational contexts

Employer engagement will primarily be through supervising learners in work experience placements. Enabling engagement through observation and questioning of the routine provision of food and drinks in settings, and learning about how nutritional health is monitored, would be valuable. Employers could discuss common nutritional needs of individuals who use their services with learners and, where possible, facilitate observations of practice and discussion of any issues associated with nutritional practices.

Indicative reading for learners

Textbooks

Aldworth C – *Knowledge Set for Nutrition and Well-being* (Heinemann Educational Publishing, 2008) ISBN 9780435402389

Arnold A and Bender D – *Food Tables and Labelling* (Oxford University Press, 1999) ISBN 97801983281 48

Barasi M – *Human Nutrition: A Health Perspective* (Hodder Arnold, 2003) ISBN 9780340810255

Bender D – *An Introduction to Nutrition and Metabolism* (Taylor and Francis, 2002) ISBN 9780415257992

Boys D, Langridge E and Michie V – *BTEC National Health and Social Care Book 2* (Nelson Thornes, 2007) ISBN 9780748781720

Byrom S – *Pocket Guide to Nutrition and Dietetics* (Churchill Livingstone, 2002) ISBN 9780443071362

Crawley H (editor) – *Food Portion Sizes (Maff Handbook)* (HMSO, 1994) ISBN 9780112429616

Food Standards Agency – *Manual of Nutrition* (Stationery Office Books, 2008) ISBN 97801983281 43

Gibney M J, Voster H H and Kok F J – *Introduction to Human Nutrition* (Blackwell Publishing, 2002) ISBN 9780632056248

Lawrence M and Worsley T – *Public Health Nutrition From Principles to Practice* (Open University Press, 2007) ISBN 9780335223206

Lean M – *Fox and Cameron's Food Science, Nutrition and Health* (Hodder Arnold, 2006) ISBN 9780340809488

Mann J and Truswell S (editors) – *Essentials of Human Nutrition* (Oxford University Press, 2007) ISBN 9780199290970

Royal Society of Chemistry – *McCance and Widdowson's The Composition of Foods Summary Edition* (Royal Society of Chemistry, 2002) ISBN 9780854044283

Stockslager J L et al – *Nutrition Made Incredibly Easy* (Lippincott Williams and Wilkins, 2003) ISBN 978158255223 1

Stretch B and Whitehouse M – *BTEC Level 3 Nationals in Health and Social Care Student Book 1* (Pearson, 2010) ISBN 9781846907663

Stretch B and Whitehouse M – *BTEC Level 3 Nationals in Health and Social Care Student Book 2* (Pearson, 2010) ISBN 9781846907470

Truswell S A – *ABC of Nutrition* (BMJ Books, 2002) ISBN 9780727916648

Thomas B (editor) – *Manual of Dietetic Practice* (Blackwell Science, 2001) ISBN 9780632055241

Webb G – *Nutrition: A Health Promotion Approach* (Hodder Arnold, 2002) ISBN 9780340760697

Journals

Care and Health

Complete Nutrition

Health Service Journal

Human Nutrition and Dietetics

Public Health Nutrition

Websites

There are numerous websites for nutrition and health. Many should be used with caution as many are commercial sites selling nutrition products.

Sites limited to the U K are recommended.

There are several commercially available food analysis databases. These should be UK based as they may be linked automatically to the DRVs used in the UK.

American sites will relate to American recommended intakes not used in the UK.

www.bda.uk.com	The British Dietetic Association
www.nutrition.org.uk	British Nutrition Foundation
www.dfes.gov.uk	Department for Education and Skills
www.dh.gov.uk	Department of Health
www.fdf.org.uk	Food and Drink Federation
www.food.gov.uk	Food Standards Agency
www.foodinschools.org	Food in Schools
www.foodvision.gov.uk	Food Vision
www.hda.nhs.uk	Health Development Agency
www.healthyschoollunches.org	Healthy School Lunches
www.wiredforhealth.gov.uk	Healthy Schools programme
www.hesonline.nhs.uk	Hospital Episode Statistics
www.hpa.org.uk	Health Protection Agency
www.statistics.gov.uk	National Statistics Online – Government statistics resource
www.physicalactivityandnutritionwales.org.uk	Physical Activity and Nutrition Networks Wales
www.schoolfoodtrust.org.uk	School Food Trust
www.surestart.gov.uk	Sure Start
www.teachernet.gov.uk	Teachernet
www.vegsoc.org.uk	Vegetarian Society

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	[IE4] describing characteristics of nutrition [IE2,5] quantitatively analysing dietary intake for nutrients and energy [IE6] showing how the plan for improving nutrition takes into account the individual's lifestyle and other relevant influences
Creative thinkers	[CT1] explaining concepts of nutrition [CT2,3] explaining possible influences on dietary intake; constructing the plan for improving the nutrition of the chosen individual
Reflective learners	[RL5] analysing daily intake of nutrients and energy
Self-managers	[SM2] explaining concepts of nutrition; describing the characteristics of nutrients and their functions in the body; carrying out the quantitative analysis; preparing the nutritional plan.

Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	researching current nutritional issues carrying out nutrient and energy analysis using spreadsheet software preparing evidence for assessment
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	systematically organising nutritional intake data creating cell formulae for the nutrient and energy analysis
Manage information storage to enable efficient retrieval	analysing intake data for different nutrients and energy
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	researching a current nutritional issue
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	selecting valid and reliable data appropriate for their home country
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: • text and tables • images • numbers • records	entering data on food intake for data analysis entering data from activity diary
Bring together information to suit content and purpose	setting up spreadsheet for nutrient and energy analysis
Present information in ways that are fit for purpose and audience	presenting the nutritional plan for an individual annotating the plan
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	establishing the calculations required for the dietary analysis
Identify the situation or problem and the mathematical methods needed to tackle it	carrying out simple mathematical calculations relating to quantities of foods, nutrients and energy
Use appropriate checking procedures and evaluate their effectiveness at each stage	checking the accuracy of answers when calculating for the dietary analysis
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	interpreting dietary analysis data
Draw conclusions and provide mathematical justifications	drawing conclusions about diet from the data in the dietary analysis

Skill	When learners are ...
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	communicating ideas and information in class discussions asking questions in class discussions
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	researching nutritional concepts retrieving quantitative data from tables showing food analyses and recommended nutrient intakes
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	preparing assessment evidence making notes of food intake in the diet record presenting the plan for improving nutrition.