



<b>Unit title</b>	Nutrition for Physical Activity and Exercise
<b>Guided learning hours</b>	60
<b>Number of lessons</b>	30
<b>Duration of lessons</b>	2 hours
<b>Links to other units</b>	
<ul style="list-style-type: none"> <li>• Unit 6: Exercise and Fitness Skills Development</li> <li>• Unit 7: Personal Training and Programming</li> </ul>	

<b>Key to learning opportunities</b>			
<b>AW</b>	Assignment writing	<b>RS</b>	Revision session
<b>GS</b>	Guest speaker	<b>V</b>	Visit
<b>IS</b>	Independent study	<b>GW</b>	Group work



Lesson	Topic	Lesson type	Suggested activities	Resources
<b>Learning aim A: Examine principles of nutrition, digestion and hydration</b>				
1	<b>Introduction</b> A1 Nutrition	IS/GW	<ul style="list-style-type: none"> <li>• <b>Tutor presentation:</b> using the specification and assignment briefs, give a presentation to outline the content and assessment of the unit. Explain the importance of the command verbs for each grade boundary when learners consider the level of evidence required to meet each criterion. Conclude this section by watching a short interview with James Milner on the success of LFC and the reference to Ribena.</li> <li>• <b>Tutor presentation – topic introduction:</b> learners to watch a clip from Mona Nemmer discussing his diet considerations for LFC players. Learners to discuss the points raised in small groups before feeding back, tutor to prompt further discussion about their opinion. In contrast, learners to watch a short video on Conor McGregor before discussing as a whole-class activity.</li> <li>• <b>Tutor and learner activity:</b> tutor to present information on sources of information on nutrition and balanced diets using national, local and sporting guidance. Learners to be split into small groups to create a poster presentation on one national nutritional source and one evidence-based source on sporting requirements of nutritional intake.</li> <li>• <b>Plenary:</b> summarise the points raised within the session, use Q&amp;A to confirm learning, making links to the clips viewed on football and boxing.  Learners to complete posters before the next lesson to present to their peers.</li> </ul>	Unit specification and assignment briefs Tutor presentation James Milner: <a href="https://www.youtube.com/watch?v=97wLijUAblo">https://www.youtube.com/watch?v=97wLijUAblo</a> Mona Nemmer: LFC Nutritionist: <a href="https://www.youtube.com/watch?v=0kiL3HYRV4k">https://www.youtube.com/watch?v=0kiL3HYRV4k</a> Conor McGregor: <a href="https://www.youtube.com/watch?v=G2X_jnr3EO0">https://www.youtube.com/watch?v=G2X_jnr3EO0</a> Tutor presentation – sources of nutritional guidelines Poster equipment
2	A1 Nutrition A2 Macronutrients	IS/GW	<ul style="list-style-type: none"> <li>• <b>Starter activity:</b> true and false questions on nutritional information given by Mona Nemmer from the previous session.</li> </ul>	Prepared true/false sheet



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			<ul style="list-style-type: none"> <li>● <b>Learner activity:</b> learners to present their posters, whilst peers make notes on the key messages from the sources of nutritional guidance presented.</li> <li>● <b>Tutor and learner activity:</b> tutor to provide resources on 'common terminology for nutrition'. Learners to produce a glossary of terms for future reference.</li> <li>● <b>Tutor and learner activity:</b> elicit prior learning on the term 'nutrients', record answers on the board (add all nutrients if required). Ask learners to split the examples into macro and micronutrients. Learners to record the correct lists in their notes.</li> <li>● <b>Tutor-led delivery:</b> address the structure and function of carbohydrates whilst giving examples of sources. Offer food examples for learners to examine, for example rice, pasta, cakes and biscuits. The teaching materials should include simple and complex carbohydrates as well as the three subtypes and glycaemic index. The presentation should refer to the RDA linked to football. Learners should make notes, with examples.</li> <li>● <b>Flip learning:</b> read the information sports nutrition: Carbohydrates (<a href="https://www.active.com/nutrition/articles/athletes-what-to-eat-and-when-for-top-performance?page=2">https://www.active.com/nutrition/articles/athletes-what-to-eat-and-when-for-top-performance?page=2</a> for a quiz at the start of the next lesson: Tutor to prepare questions for the quiz using the information learners will be reading.</li> </ul>	Learner posters Presentation on amino acids 'Fats' resources Tutor presentation Printed copies of article
3	A2 Macronutrients		<ul style="list-style-type: none"> <li>● <b>Starter activity:</b> quiz using the information read during the flip learning activity from lesson 1 – answers given at the end/confirm learning.</li> <li>● <b>Tutor/learner activity:</b> elicit information on prior knowledge of proteins – learners to list food source examples on the board. Tutor to enhance as required.</li> </ul>	Quiz questions Tutor presentation 'Fat' resources Poster materials



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			<ul style="list-style-type: none"> <li>● <b>Teacher activity:</b> present information on amino acids, examining essential and non-essentials. RDA of proteins linked to football to be shared with learners.</li> <li>● <b>Teacher/learner activity:</b> small-group activity. Create information or print resources detailing information on fats (as directed by the specification). Set the groups time to review the information whilst creating a poster presentation to present during the end of the session.</li> <li>● <b>Learner activity/plenary:</b> small groups to present their posters, tutor to enhance with Q&amp;A if necessary.</li> <li>● <b>Flip learning:</b>  <a href="https://www.nutrition.org.uk/healthyliving/basics/fibre.html">https://www.nutrition.org.uk/healthyliving/basics/fibre.html</a>                      Learners watch the clip and read the information before creating a fact file to submit at the start of the next lesson.</li> </ul>	
4	<b>A2</b> Macronutrients <b>A3</b> Micronutrients and fibre	IS/GW	<ul style="list-style-type: none"> <li>● <b>Starter activity:</b> tutor to feed back on the fact files created in the flip learning activity: Q&amp;A to test learning of all learners on fibre function, sources and RDA.</li> <li>● <b>Tutor presentation:</b> tutor to present information on energy content of macronutrients, showing how the data relates to sporting demands. Examples from football and other sports to be used to reinforce learning. To develop further, tutor to use data to show differences in required amounts for different playing positions.</li> <li>● <b>Learner activity:</b> learners to use information from tutor delivery to create a series of case studies on players' macronutrient requirements</li> <li>● <b>Tutor activity:</b> present information on the food pyramid, eat well plate and food labelling. Learners to take notes.</li> </ul>	Prepared Q&A questions from information used to create learner fact file Tutor presentation Resources for case studies Learners' own phone or tablet



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			<ul style="list-style-type: none"> <li>● <b>Learner activity:</b> learners to produce a video diary on one of the food guidance strategies in the tutor presentation. Videos to be played to the class.</li> </ul>	
5	<b>A3</b> Micronutrients and fibre	IS	<ul style="list-style-type: none"> <li>● <b>Starter activity:</b> small-group activity. Examine a small selection of food and note the vitamins and minerals in each type of food.</li> <li>● <b>Tutor activity:</b> present information on of the role of vitamins and minerals including types, their functions and RDAs.</li> <li>● <b>Learner activity:</b> small groups to produce a wall presentation on the vitamins and minerals from the tutor presentation. Food sources, role and impact of deficiencies in the stated vitamin or minerals should be displayed. The wall presentation should be colourful and creative.</li> <li>● <b>Plenary:</b> learners to present their presentations to their peer whilst the tutor reflects on learning.</li> <li>● <b>Flip learning:</b> learners to research impact of vitamin and mineral deficiencies and email the tutor with 10 facts.</li> </ul>	Tutor to access advertised % of each nutrient Tutor presentation
6	<b>A3</b> Micronutrients and fibre		<ul style="list-style-type: none"> <li>● <b>Learner activity:</b> learners to create a poster on fibre including sources and importance.</li> <li>● <b>Plenary:</b> tutor to tour posters collating questions for a quick fire Q&amp;A for each group.</li> </ul>	
7	<b>A4</b> Fluid intake	IS/GW	<ul style="list-style-type: none"> <li>● <b>Starter activity:</b> watch a clip from a game between Wigan Warriors and St Helens rugby league teams, played in extreme heat. Discuss the impact of dehydration on the defending players in terms of conceding the try. Learners to share their views.</li> <li>● <b>Tutor presentation:</b> present information on dehydration, hyperhydration and hypohydration; Including amounts and effects on performance. Learners to examine the impact of dehydration</li> </ul>	Wigan Warriors vs St Helens: <a href="https://www.youtube.com/watch?v=Yb3ckz9efa8">https://www.youtube.com/watch?v=Yb3ckz9efa8</a> Tutor presentation



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			<p>using the video clip of the Brownlee Brothers. Learners to take notes.</p> <ul style="list-style-type: none"> <li>● <b>Learner activity:</b> practical activity for learners to understand dehydration. Collect a urine poster of colour in relation to hydration. Make several bottles with varying levels of apple juice (diluted as shown by the pictures). Learners to reflect on resources handed out about urine colour.</li> <li>● <b>Learner activity/plenary:</b> learners to watch information from Lucozade on hydration. Take notes from the information to create a question to ask their peers.</li> <li>● <b>Flip learning:</b> learners to research impact of climate and activity level on hydration levels – tutor to provide signposting of resources. Tutor to set questions to be submitted online before the next lesson.</li> </ul>	<p>Brownlee brothers – dehydration:  <a href="https://www.youtube.com/watch?v=liCRrh eKIOI">https://www.youtube.com/watch?v=liCRrh eKIOI</a>                      Urine colour information sheet                      Varying bottles of ‘urine’ using the pictures: Dilute apple juice                      Water vs sports drinks information                      Lucozade website:  <a href="https://www.lucozad.esport.com/training/hydration/">https://www.lucozad.esport.com/training/hydration/</a></p>
8	A5 Digestion		<ul style="list-style-type: none"> <li>● <b>Starter activity:</b> quick fire definitions of key terms (glossary), check everyone is familiar with the terms.</li> <li>● <b>Tutor presentation:</b> tutor to display digestive system and discuss the route of food from buccal cavity to anus, including digestive juice and enzyme activity on the way. Learners to take notes. Learners to use Playdough or plasticine to recreate the digestive system on a piece of paper, label and take a photograph with their mobile phone for future reference.</li> <li>● <b>Learner activity:</b> learners to produce a story of a food’s journey through the digestive system, correct anatomy used through the journey as well as digestive juices and enzymes.</li> </ul>	<p>Quick fire questions for key terms of the digestive system                      Tutor presentation                      Playdough/plasticine                      Learners’ own phone</p>



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			<ul style="list-style-type: none"> <li>Tutor to set a deadline date for completion for the stories.</li> </ul>	
9	A1 A2 A3 A4 A5		<ul style="list-style-type: none"> <li><b>Guest speaker:</b> to be invited into the group. Focus on nutrition and hydration for sports performers.</li> </ul>	Pre-book an appropriate guest speaker
10	Learning aim A	IS/GW	<ul style="list-style-type: none"> <li><b>Tutor/learner activity – practice assessment:</b> tutor administers a practice assessment using the command verbs associated with the learning aim: a describe task and an explain task.</li> <li><b>Further task:</b> learners to be offered an analyse task in relation to hydration and the needs of a specified athlete.</li> </ul>	Practice tasks to gain confidence in action verbs
<b>Learning aim B: Explore energy intake and expenditure in sport and physical activity.</b>				
11	<b>B1</b> Energy	IS/GW	<ul style="list-style-type: none"> <li><b>Starter activity:</b> complete height and weight measurements.</li> <li><b>Tutor activity:</b> tutor presentation on the terms used to measure energy as well as sources of energy from their nutritional intake. Learners to take notes.</li> <li><b>Tutor activity:</b> create an information document or presentation on body composition, including the tools used for measuring. Learners to take notes.</li> <li><b>Learner activity:</b> learners to calculate their BMI with equipment available in the centre. Learners to produce a guide on each measuring tool.</li> </ul>	Height measure Weighing scales Tutor presentation NHS BMI calculator: <a href="https://www.nhs.uk/live-well/healthy-weight/bmi-calculator/">https://www.nhs.uk/live-well/healthy-weight/bmi-calculator/</a> Skinfold resources
12	<b>B1</b> Energy	IS/GW	<ul style="list-style-type: none"> <li><b>Learner activity:</b> learners to complete BMI calculations and measuring guide.</li> <li><b>Research activity:</b> learners to work in pairs to investigate the term basal metabolic rate including the factors affecting BMR. Learners</li> </ul>	Learner presentation resources Tutor presentation Spaghetti Marshmallows



Lesson	Topic	Lesson type	Suggested activities	Resources
			<p>to present their findings in a poster or PowerPoint presentation to share with peers on the centre's platform or displayed on the wall.</p> <ul style="list-style-type: none"> <li>● <b>Tutor activity:</b> tutor to present information on the energy intake, expenditure and performance implications for selected athletes or sports. Learners to take notes.</li> <li>● <b>Tutor and learner activity:</b> tutor to present information on the role of carbohydrates, fats and proteins for aerobic and anaerobic metabolism. Learners to take notes. To complement learner understanding of ATP, tutor to offer spaghetti and marshmallows to demonstrate energy bonds. Learners to use resources to record their own definition of energy bonds and the impact on performance.</li> <li>● <b>Plenary:</b> Q&amp;A on energy intake.</li> </ul>	Learners' own phone
13	<b>B2</b> Body composition and weight management		<ul style="list-style-type: none"> <li>● <b>Starter:</b> learners to read the information on 'Energy intake and Expenditure' from the British Nutrition Foundation. Learners to add one fact from the information on the board for the tutor to discuss and share.</li> <li>● <b>Tutor activity:</b> information on and examples of energy balance from football and other sports to be shared . Learners to take notes.</li> <li>● <b>Learner activity:</b> using a position in football, calculate the energy intake and expenditure. Share investigation with the group.</li> <li>● <b>Tutor activity:</b> information to be shared on the term body composition including factors that affect an individual's body composition as well as the relationship with health.</li> <li>● <b>Tutor and learner activity:</b> resources to be shared on how to measure body composition. Learners to review before using the</li> </ul>	<p><a href="https://www.nutrition.org.uk/nutritionscience/obesityandweightmanagement/energy-intake-and-expenditure.html?start=5">https://www.nutrition.org.uk/nutritionscience/obesityandweightmanagement/energy-intake-and-expenditure.html?start=5</a></p> <p>Sporting examples            Tutor presentation            Skinfold callipers            Measuring tape            Norm tables</p>



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			<p>skinfold callipers to measure peers and record their results. Once completed measure hip to waist ratio and record the results.</p> <ul style="list-style-type: none"> <li>● <b>Learner activity:</b> use norm table to review their body composition results. Produce a written piece of work reflecting on the results including impact on their sporting performance.</li> <li>● <b>Flip learning:</b> tutor to provide an example of body composition for a selected sport. Learners to research another example, to share with peers at the start of the next lesson.</li> </ul>	
14	<b>B2</b> Body composition and weight management		<ul style="list-style-type: none"> <li>● <b>Starter:</b> learner to present their research from flip learning activity.</li> <li>● <b>Tutor activity:</b> present information on obesity in relation to body composition and impact on performance. Use current examples from sport to support learning.</li> <li>● <b>Learner activity:</b> small groups prepare information on methods that can be adopted to manage body composition. Learners research impact on sporting performance.</li> <li>● <b>Plenary:</b> learners to share their information with the rest of the group.</li> </ul>	Learner sporting examples Tutor presentation Presentation resources
15	Learning aim B		<ul style="list-style-type: none"> <li>● <b>Tutor/learner activity – practice assessment:</b> tutor administers a practice assessment using the command verbs associated with the learning aim: a ‘describe’ task and an ‘explain’ task.</li> <li>● <b>Further task:</b> learners to be offered an ‘analyse’ task in relation to hydration and the needs of a specified athlete.</li> </ul>	Practice tasks to gain confidence in action verbs
16–21	Formal assessment for learning aims A and B		<ul style="list-style-type: none"> <li>● Learners spend 12 hours completing the assessment activity for learning aims A and B.</li> </ul>	Assignment brief



Lesson	Topic	Lesson type	Suggested activities	Resources
<b>Learning aim C: Assess and plan diets for health and participation in exercise and physical activity</b>				
22	<b>C1</b> Balanced diet for health and wellbeing <b>C2</b> Benefits of a balanced diet and dietary concerns	IS/GW	<ul style="list-style-type: none"> <li>● <b>Guest speaker:</b> to introduce the concept of a balanced diet and the benefits, importance and content including food groups. The presentation should discuss the different methods of food preparation, with the impact on nutritional value signposted. Learners to take notes.</li> </ul>	Guest speaker
23	<b>C2</b> Benefits of a balanced diet and dietary concerns	IS/GW	<ul style="list-style-type: none"> <li>● <b>Starter activity:</b> learners share a key fact/s from the guest speaker's presentation – record information on a board to share with the group.</li> <li>● <b>Tutor activity:</b> information to be made available on dietary issues, including psychological aspects. Also share information on social and cultural pressures, as well as fad diets and myths surrounding weight loss.</li> <li>● <b>Learner activity:</b> learners to produce a poster summarising the information delivered from the tutor presentation. Posters to be displayed on the class wall for peers to view.</li> </ul>	Small wipe boards/pens  Tutor presentation Poster resources
24	<b>C3</b> Types of physical activities and exercise <b>C4</b> Nutritional supplements and strategies	IS/GW	<ul style="list-style-type: none"> <li>● <b>Starter activity:</b> give learners a table to complete in which they identify types of physical activities and exercise; tutor to use the subheadings from the specification to design the table. Feed back when complete.</li> <li>● <b>Tutor activity or guest speaker:</b> prepare information on nutritional supplements (samples would be beneficial) and strategies used in sporting performance. Include sporting examples to reinforce learning.</li> <li>● <b>Learning activity:</b> produce a podcast or blog on several nutritional supplements and strategies for their use, as well as application to sport.</li> </ul>	Activity table Tutor presentation Samples of nutritional supplements



Lesson	Topic	Lesson type	Suggested activities	Resources
25	C5 Advising and planning diets for clients	IS	<ul style="list-style-type: none"> <li>• <b>Starter activity:</b> complete a one-day food diary, share with a peer asking for feedback on meeting nutritional requirements.</li> <li>• <b>Tutor presentation:</b> information to be presented on assessing the physical and mental needs of a player in a selected sport. Tutor to include the content of the specification in their presentation. Include an example of conducting a nutritional assessment using a learner.</li> <li>• <b>Learner activity:</b> prepare assessment material to interview a player on their nutritional habits and perceptions.</li> </ul>	Food diary template Tutor presentation
26	C5 Advising and planning diets for clients		<ul style="list-style-type: none"> <li>• <b>Learner activity:</b> interviews to be arranged and conducted, learners to use their questionnaires to gather the required information whilst asking the interviewee to complete the food diary. Interviews to be recorded for assessment evidence.</li> <li>• <b>Plenary:</b> each learner to feed back to the group on their findings from the interviews. Tutor to assess quality of information gained.</li> </ul>	Interview material
27–30	Assessment of learning aim C	AW	<ul style="list-style-type: none"> <li>• Learners spend 8 hours completing the assessment activity for learning aim C.</li> </ul>	Assignment brief

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