# Case Studies and Activities for BTEC First Award in Health and Social Care

Zig Zag Education

Unit 6: The Impact of Nutrition on Health and Wellbeing



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# **Teacher's Introduction**

This workbook has been prepared to assist students and staff with the learning aims of Unit 6 of the BTEC First Award in Health and Social Care. It comprises a collection of presentations by working health practitioners, set in the fictional town of Thornton Green. These and case studies of clients provide the basis for a range of tasks and activities for both classroom and homework use, to complement the tutor's input. It is not intended as a textbook; indeed, I do not refer to a textbook, but instead offer suggestions for students to do their own research. It also cannot replace the tutor; it is a supplementary source to facilitate teaching and learning, and could form part of a departmental virtual library.

It contains a variety of student-centred activities, discussions, tasks and practical exercises based on health situations. They are designed to encourage students to develop their knowledge and prepare them for their assignments.

Similar activities have been used by the author during many years of both vocational and GCSE / A Level teaching, and have proved extremely successful in enhancing student motivation and improving performance.

All the worksheets are photocopiable, and they provide a valuable resource for the busy tutor. Learning takes place through practical tasks performed by the students themselves. Where relevant, suggested answers are given for the activities.

Many of the activities and case studies are based on visits to and interviews with actual practitioners to ensure that the information is as up to date and as relevant as possible. Organisations and settings may be different in different areas, and service provision may depend on practitioners' interpretations of local needs. Therefore, I strongly recommend that contact is made with local authorities and service providers to find out what the local situation is and how it differs from what is presented here and, if possible, to arrange visits or invite guest speakers in.

The information provided is correct at the time of writing, but legislation and circumstances change, so tutors should check the current situation for any changes.

May 2015

# Free updates

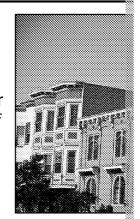
Register your email address to receive any future free updates\* made to this resource or other Health and Social Care resources your school has purchased, and details of any promotions for your subject.

Go to zzed.co.uk/freeupdates

\* resulting from minor specification changes, suggestions from teachers and peer reviews, or occasional errors reported by customers

# The Thornton Green Scena

The presentations and case studies in this book have been drawn from health- and social-care settings in Thornton Green, a small market town a few miles from a major city, with several features that are typical of many towns in Britain in the twenty-first century.



A recent health survey shows that residents generally enjoy a good standard of health,

but there are pockets of deprivation where health is poor, and that a large proportion of the town's children live. One such Estate, an area of mainly social housing with few amenities, to town centre. Access to services is generally good, but recent have created transport issues for some elderly and poorer res

The local health service providers have identified the following concern: teenage pregnancy, lung cancer, hypertension, obesides and stroke. With an increasing number of elderly per a growing need for services for them, including residential call

The credit crisis has led to service cutbacks and business closincreased the level of unemployment. Many long-established and been replaced by charity shops and fast-food restaurant marginalised groups have been identified as needing additional travellers, homeless people, members of ethnic minorities are eastern Europe.



# **Presentation 1: The Dietician**

My name is Greg, and I am a dietician. I am part of the local community ly variety of people who have different nutritional needs, and promoting he

Many of my clients have conditions and factors that prevent them from lest am often able to address these factors and positively affect how they feel involve helping them to control or maintain their weight, but it may mean term effects of poor nutrition. For example, problems such as diabetes, he often be traced back to an unbalanced diet, and deficiencies in particular brittle bones or even diseases such as rickets.

Clients are referred to me by different health professionals, such as GPs, d I try to learn as much as I can about their social, cultural and emotional bafamily circumstances, finance, culture and religion may have a strong infl

Healthy eating means different things for different people and will be diffidiets are bound to vary. For example, the diets of an athlete and an elderly will the diets of a small child and an adult.

It is also very important, when preparing school or hospital meals or meal sensitive about people's preferences, as some cultural and religious group. There is also evidence that richer people generally have healthier diets that because they have access to a wider variety of foods. Others may have all conditions that require particular diets. But whatever their cultural sensition financial and social situations, it is still important that they have a balance food groups, and takes account of the recommended daily intakes. I also unaware of the importance of water in the diet; this is especially true of older, so thirst decreases.

A lot of my work involves promotion and education, because if people are balanced diet, and of the effects of unhealthy eating, they can make more control of their own and their families' eating habits.





# **Presentation 2: The District Nurse**

My name is Sinita and I have been a district nurse in Thornton Green for taking up this post I had two years' professional experience as a qualified train as a district nurse, because I had a particular interest in public health involves visiting clients with a range of conditions on a regular basis – so

The aim of this community-based support is to pick up on any major probate client being admitted to hospital. To do this I need to plan and managinclude:

- older people with health problems, such as dementia
- those with a terminal illness
- physically disabled clients of all ages

Many clients also need help taking their drugs, or having their wounds clinjections, check blood pressure, temperature and breathing, as well as helphysical examinations. A major part of my work involves giving advice a carers or families to ensure that they remain as healthy as possible. This refeeding, and planning nutritious meals to suit their requirements. Many example, are not aware of how their dietary needs might have changed. I help than I can give, I can refer them to one of my colleagues, such as a dietary needs might have changed.

For many clients, food preparation can be a major problem and they will sof difficulties with shopping, and preparing and cooking food. I am able to have their shopping done for them or ensuring that they have meals despend be emphasised enough just how important it is for a client to be getting the further complications do not occur.







# Case Study 1: The L

Tim Lester is 45 and lives in the Park View area of Thornton Green with his wife Cathy, who is 42, and their son Patrick, nine, and daughter Louise, who is seven months and has just been weaned. He is a management consultant, working from home. Cathy has just returned to work as a Head of Department at Thornton Green Community College, and Patrick goes to Park View Primary School, near to where they live.

Tim is overweight and gets very little exercise. He eats irregularly, sometimes getting himself lunch at home and sometimes eating out with clients; he has a tendency to eat a lot of fatty foods. Cathy and Patrick both take packed lunches to school. Louise is at a nursery all day.

Cathy does not have much time for lunch, as she is extracurricular activities during the break at school, and the school is to lunch recently been diagnosed with a heart condition. Cathas coeliac disease.

Because of her busy lifestyle, Cathy often comes hor go out again to evening meetings, so Tim does most week, although his range is rather limited and he oc of buying a ready meal. Patrick has a sweet tooth, a the local shop on his way back from school and buying

Greg, the dietician, first became involved with the fa GP because of Patrick's coeliac disease, but has since their diet.





# Case Study 2: Jar

James is 80 and lives alone in a small council flat on the Greenview Estate in Thornton Green, having recently been widowed. His daughter has suggested that he should move in with her, but he values his independence. His only income is his state pension, so he has to live on a tight budget.

He has never had to cook for himself and is worried about using a cooker. However, his children have given him a microwave, and he sometimes buys read meals and cooks them in that. He is limited in what he can buy, because he cannot get to a supermarke and, therefore, relies on what the local shop can offer his daughter does not live very far away, however, and he usually has Sunday dinner with her and her family. One evening a week he goes down to the put there he usually has a pork pie and a packet of crisp pints of bitter as his evening meal for that day.

James had a fall recently and hurt his leg. Sinita, the visiting him to change his dressings, and has become She is particularly worried that he is not getting enoughs any fruit or vegetables, and this could lead to a She is also concerned about his water intake; she does not often feel very a meal plan, and has shared this with James' daught his diet and try to ensure that he sticks to the plan.





# Case Study 3: An

Anna is a solicitor in Thornton Green. She is 27 years old and lives alone in a small flat. She is not currently in a relationship.

Her job can sometimes be stressful and she works long hours, but she still finds time for an extensive social life. She has a firm group of friends, and they quite often go to concerts and plays together in the nearby city. She keeps fit by playing squash regularly.

Because of her busy life, she does not have time to evenings, if she is not going out, she usually has a pathe television. She just has a cup of coffee and perhashe often works through her lunch break, making do her desk.

Two months ago she had to take time off work became few days she went back. However, she could not she to see her GP. He diagnosed pneumonia. He also reat the local hospital. There, it was discovered that sher immune system was affected; in particular, she

She was given medication and supplements to take, although her pneumonia would have led to a loss of she eat good, nutritious meals to help her body cour about her lifestyle, the GP also took advice from Great diet plan to ensure that she continued to get a ball.



# **Activities**

### Activities based on the Thornton Green scenario

For these activities, you will need the case studies and presentations from

The specific materials required for each activity are clearly displayed in the

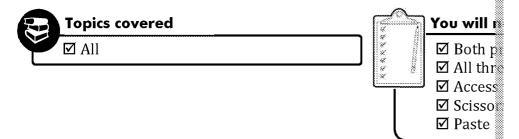
This pack contains a variety of student-centred activities, discussions, role exercises based on health-care and social-care settings. They are designed develop their knowledge and prepare them for the assignments. In additispecifically to cover the learning aims of this unit, there is one general activities vocabulary used by health professionals, which could be used as an expectation of the students of the second sec

# 



# INTRODUCTORY ACTIVITY

# Activity I1 (The vocabulary of diet an



# **Activity I1 (Individual Work)**

Read the presentations by the dietician and the district nurse, and the case studies and Anna.

In them, you will find a number of terms used by health professionals. The match the terms with their definitions.

Cut out the definitions from the sheet provided, and match them to the testown on the 'Terms' sheet. Then paste them in the correct place.

# 



# 'Definitions' Sheet for Activity

A collection of types of food with similar nutritional

Taking account of people's different cultural or religions.

backgrounds

A constituent of food that helps us to survive and de

Substances that are added to food to make it look or ta

The amount of a nutrient that is considered sufficient person's needs

The result of not having the right balance of nutrients is

Disease of the heart and blood vessels

The strength we need for physical or mental activity

Someone who does not eat meat

The type of food a person eats

An intolerance to gluten

The process of gradually introducing an infant to soli and cutting back on breastfeeding and/or bottle feedi

A condition that causes a person's blood-sugar levels become too high

Being very overweight, with an excess of body fat

A reaction by the immune system to a particular food another person can eat without problems

A disease that is caused by a deficiency of vitamin C

# 



# 'Terms' Sheet for Activity I

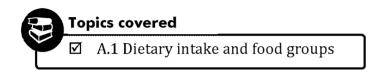
Diet	
Food group	
Nutrient	
Malnutrition	
Weaning	
Cultural sensitivity	
Additives	
Energy	
Allergy	
Diabetes	
Recommended daily intake	
Obesity	
Coronary disease	
Vegetarian	
Scurvy	
Coeliac disease	
	l



# LEARNING AIM A:

Explore the effects of balanced and unbalanced diets on the health and wellbeing of indivi

# **Activity A1 (Food groups and the**



# Activity A1 (Individual Work)

a. Read Presentation 1 by the dietician. He talks about the importance of including all the five what these groups are, their functions, where they can be found, and the recommended dail





# **Answer sheet for Activity**

East areas	Function	Wh
Food group	runction	vvr
Food group	Function	Wh
		1



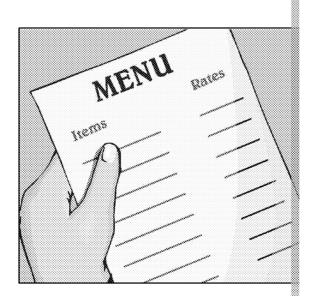
# **Answer sheet for Activity A1**

Food group	Function	Wh
Food group	Function	Wh



# **Answer sheet for Activity A1**

Food group	Function	Wh





b. The dietician also talks about the importance of water in the diet; it catea, coffee, fruit juice and soft drinks, as well as plain water. Explain to bodily functions, and what factors might affect how much we need

What factors might affect the amount we need?

Why is water important?

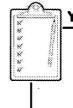




# **Activity A2 (Promoting healthy e**

# **Topics covered**

A.2 Long-term effects of balanced and unbalanced diets



## You will r

- ☑ Preses ☑ Informand to
- benei
- ☐ Pape

# Activity A2 (Group and Individual Work)

- If possible, arrange an interview with a dietician, or invite them to tal promote healthy eating.
- b. Read Presentation 1 by the dietician. Individually, design a poster or people the benefits of a balanced diet (e.g. greater immunity to infection healing) and the dangers of an unbalanced diet (e.g. obesity, tooth deaddition to your own research, if you are able to invite a dietician to able to give you information to help.



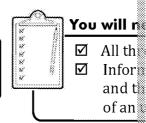


# Activity A3 (The risks of an unbalan



# **Topics covered**

A.2 Long-term effects of balanced and unbalanced diets



# **Activity A3 (Pair Work)**

Read the case studies about the Lesters, James and Anna. All the people is risk from an unbalanced diet. In pairs, discuss what the risk factors are for effects might be if they do not make the necessary adjustments.

Tim
Risk factors
Possible effects
Cathy
Cathy Risk factors
<b>Cathy</b> Risk factors
Risk factors
Risk factors
Risk factors
Risk factors



# Activity 3 (cont.)

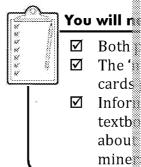
D / 1.1
Patrick
Risk factors
Possible effects
1 obsidit effects
James
Risk factors
Possible effects
<i>"</i>
Anna
Risk factors
Risk juciois
Possible effects



# Activity A4 (The effects of vitamin and min

# **Topics covered**

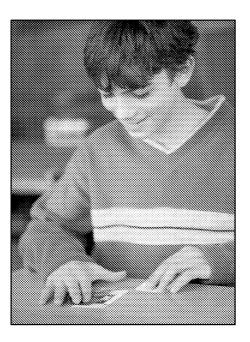
A.2 Long-term effects of balanced and unbalanced diets



# **Activity A4 (Small Group Work)**

Read the presentations by the dietician and the district nurse. Both talk all can be caused by nutrient deficiencies. In small groups, play the 'deficien

- 1. Spread out the cards provided face down.
- 2. Players take it in turns to turn over two cards at a time.
- 3. The aim is to match a nutrient with the health problem that could be that nutrient.
- 4. If they turn over a match, they keep those cards and have another turn again and play passes to the next player.
- 5. The winner is the person with the most pairs when all the cards have





# **Cards for Activity A4**

Vitamin A	Ca
Muscle weakness	Impaired
Rickets	Vi
Anaemia	Vi



# Cards for Activity A4 (cont.)

Beriberi	Night
Vitamin C	Impo
Iron	Vii
Scurvy	Vit



# LEARNING AIM B:

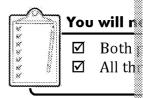
Understand the specific nutritional needs and preferences of individual

# Activity B1 (Factors affecting an indivi



# **Topics covered**

B.1 Factors influencing the diet of individuals and their associated dietary needs



# **Activity B1 (Pair Work)**

Read the presentations by the dietician and the district nurse, and the case James and Anna. In pairs, discuss how the following factors might affect and what steps they might need to take in order to ensure that they maint

Environmental factors (e.g. access to food and co	okin
Factors:	
Who would be affected:	
What they should do to ensure a nutritional balance:	
Personal preferences	
Personal preferences  Factors:	
Factors:	



# Activity B1 (cont.)

Socio-economic factors (e.g. costs, family circumsta
Factors:
Who would be affected:
What they should do to ensure a nutritional balance:
N. 1
Moral reasons
Factors:
Who would be affected:
What they should do to ensure a nutritional balance:
vinui incy snouta ao to ensure a natritional balance.
Underlying health conditions
Factors:
Who would be affected:
What they should do to ensure a nutritional balance:

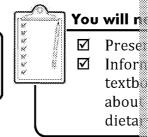


# Activity B2 (The effect of religion and continuous individual's diet)



# **Topics covered**

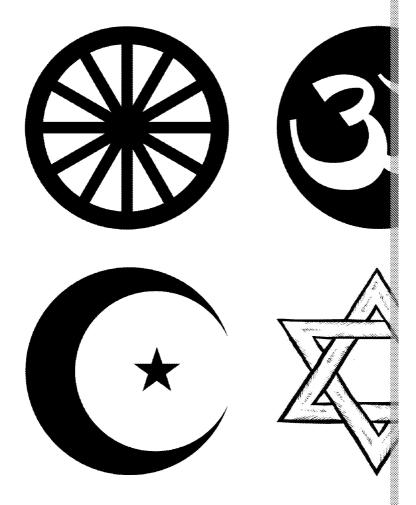
☑ B.1 Factors influencing the diet of individuals and their associated dietary needs



# **Activity B2 (Individual Work)**

Read the presentation by the dietician. He talks about the need to take accultural differences in working out a diet for them. Choose **one** of the follow:

- Buddhism
- Hinduism
- Islam
- Judaism



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Religion:		
Dietary rules:		

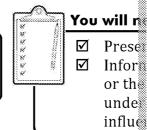


# Activity B3 (The nutritional needs of people health conditions)



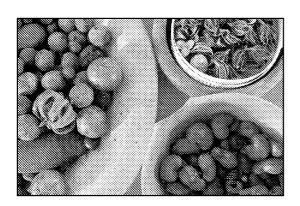
# **Topics covered**

B.1 Factors influencing the diet of individuals and their associated dietary needs

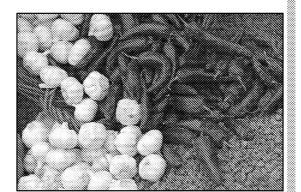


# **Activity B3 (Individual Work)**

Read Presentation 1 by the dietician. He talks about the necessity of caters with underlying health conditions while still ensuring that they maintain Case Study 1, has coeliac disease, which requires him to follow a gluten-fix into other health conditions that might affect a person's diet, and explain problem. Use the sheet provided for your answers.







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# **Answer Sheet for Activity B**

Health condition	Dietar
	L

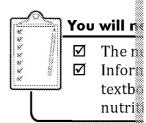


# Activity B4 (Children's nutritional



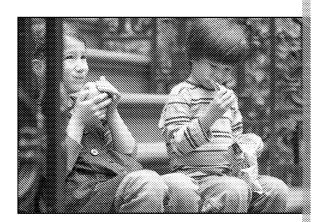
# **Topics covered**

- ☑ A.2 Long-term effects of balanced and unbalanced diets
- ☑ B.2 Nutritional variation during lifestage development



# **Activity B3 (Small Group Work)**

Read the newspaper article provided. Then, in small groups, consider the sheet provided.





# **Newspaper Article for Activity**

# CHILDREN GETTING UP TO 2.5 FATTER EACH DECADE

Research has shown that children's waists are expanding by as much as 2.5 cm every ten years, and health professionals warn that they could face major health problems as a result. Although the biggest increase is among girls aged two to three, the problem is not confined to girls or to this age group: there is evidence that children of all ages and both sexes are becoming heavier.

Researchers compared the waist circumference and body mass index of children of the same age, taken ten years apart, starting in 1989. Although boys generally had larger waists, the increase over time was greater among girls. The researchers say dramatic improver children's lifestyle needed, including balanced diet, alon lines of the Eatwel as well as more exe Not only are Britis children becoming but they are deposimore fat centrally, increases the risk of cardiovascular proboth childhood and adulthood.



# 



# **Answer Sheet for Activity B**

	***************************************
What did the researchers find when they studied the waist circumferer	
do you think they are increasing?	
What are the possible long-term effects of a child becoming overweigh	
What is the Eatwell Plate? How does the NHS suggest it should be us	
diet? (You may find the following website useful: www.nhs.uk/Livew	<b>.</b>
plate.aspx)	
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	PROTECTED
plate.aspx)	
	<b>7</b> io

# Activity B5 (Nutritional needs at differe



# **Topics covered**

B.2 Nutritional variation during lifestage development

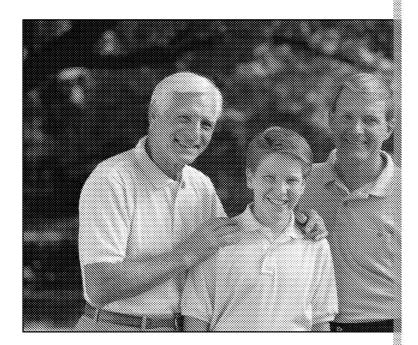


## You will r

- **☑** Both
- ☑ All th
- ☑ Acces

# **Activity B5 (Small Group Work)**

If possible, work in groups of six. Read the presentations by the dietician case studies about the Lesters, James and Anna. Both the dietician and the fact that a person's nutritional needs change depending on their stage of lamember of the group should research the needs of one of the people in the life stage and lifestyle. Then discuss with the rest of the group the reasons diet you have suggested. Use the answer sheet provided for your answers.





# **Answer Sheet for Activit**

Person	Life stage	Nutrition
Louise		
Patrick		
Cathy		



# **Answer Sheet for Activity B**

Person	Life stage	Nutrition
Tim		
James		
Anna		

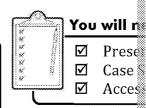


### Activity B6 (Designing a menu for a



### **Topics covered**

- B.1 Factors influencing the diet of individuals and their associated dietary needs
- B.3 Considerations for nutritional planning



### **Activity B6 (Pair and Group Work)**

Read Presentation 1 by the dietician and Case Study 1 about the Lesters. Tim is overweight and has a heart problem, Cathy is a vegetarian and Patrick has coeliac disease. Tim either has lunch at home or in a restaurant with clients, but Cathy and Patrick usually take packed lunches to school. In pairs, look at the 'food sheet' provided and decide what each member of the family should have for each meal in order to have a healthy and nutritious diet for their different life stages. Also decide whether they should have any snacks, and if so, what would be suitable. To get you started, we have provided a menu for the evening meal, which Tim, Cathy and Patrick will eat together (because she has only just been weaned, Louise will have her meal separately).

Write your conclusions on the menu sheets provided, and give reasons for your choices. Then discuss your reasons with the whole group.





### **Food Sheet for Activity B6**

with baked beans	
Baked potato (small) with butter and	F
grated cheddar cheese	
Bread (white) and jam	Fra
Bread roll (wholegrain)	•
Burger and bun	F
Cake	Ham and
Carrot sticks	Muesli and
Cheese and tomato sandwich	Pac
Chicken curry	
Chips	
Chocolate bar	
Coco Pops and whole milk	
Cornflakes and whole milk	
Crispbread and jam	1
	8

Baked potato (medium)

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Fish pie Toasta

Fizzy drink Veg

Crisps

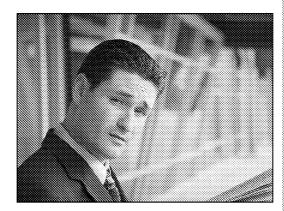
Digestive biscuits

Dried fruit and nuts (packet)

Egg (boiled)

Salad (

### Menu Sheet 1 for Activity B



Tim

Breakfast	Eve
	Vea
	<b>^</b>
	Evil Vegil N
Reasons	
Lunch	
Reasons	
	L



### Menu Sheet 2 for Activity B



Cathy

Breakfast	E.
	E Ve
	^
	F
Reasons	
Lunch	
Reasons	



### Menu Sheet 3 for Activity B



**Patrick** 

Breakfast	Ev
	Ev Veg N
	/
	F.
Reasons	
Lunch	
Reasons	
	Care Unit 6 Page 20

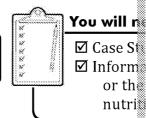


### Activity B7 (Feeding a newly weane



### **Topics covered**

B.2 Nutritional variation during lifestage development



### **Activity B7 (Pair Work)**

Read the case study about the Lesters. During the week, Louise has her lu

 In pairs, discuss what the nursery needs to consider when giving Lou most important factors they must take into account.

Factor 1	
Factor 2	
Factor 3	

b. Still in pairs, plan a week's lunches that the nursery might provide for her nutritional needs and the factors you identified above. Use the planswers.





### **Planning Sheet for Activit**

Monday	Tuesday	Wednesday



### **Activity B8 (Creating a nutritional**



### **Topics covered**

B.3 Considerations for nutritional planning



### You will i

☑ Both p
☑ Access

### **Activity B6 (Pair Work)**

Read the presentations by the dietician and the district nurse. In pairs, role dietician or a district nurse and a client, with a view to creating a nutritional their particular circumstances. One person should take the part of the healt the client. The 'professional' should try to find out as much as they can about preferences of the 'client', and use this information to devise a suitable nutritheir suggestions. Then change places, with the 'client' becoming the 'healt'

The following are the kinds of things you should be taking into account:

- Does the 'client' have any allergies or other health conditions that
- Do they have any religious or moral views about diet?
- Do they have any personal preferences?
- Are there any factors that might restrict their access to certain food
- What is their life stage, and how might this affect their nutritional
- What are their current eating habits?





### **Answer Sheet for Activity B**

### Information Allergies or health conditions Religious or moral views Personal preferences Restrictions on access to certain foods Life stage Current eating habits

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### **Answer Sheet for Activity B8 (c**

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**Nutrition Plan** 

Reasons for suggestions



### **Answers**

### **Introductory Activity I1**

Nutrient  A constituent of food that helps us to the Malnutrition  The result of not having the right bath of the process of gradually introducing cutting back on breastfeeding and/of the Taking account of people's different backgrounds  Additives  Substances that are added to food to the the theorem.  Energy  The strength we need for physical of the theorem.		<del>,</del>
Nutrient A constituent of food that helps us to the Malnutrition The result of not having the right bath the process of gradually introducing cutting back on breastfeeding and/of the Cultural sensitivity Taking account of people's different backgrounds  Additives Substances that are added to food to the Energy The strength we need for physical of the Strength we need for physica	Diet	The type of food a person eats
Malnutrition  The result of not having the right bath of the process of gradually introducing cutting back on breastfeeding and/or Taking account of people's different backgrounds  Additives  Substances that are added to food to the Energy  The strength we need for physical or the strength we need for phys	Food group	A collection of types of food with simi
Weaning  The process of gradually introducin cutting back on breastfeeding and/o  Taking account of people's different backgrounds  Additives  Substances that are added to food to the strength we need for physical o	Nutrient	A constituent of food that helps us to
Cultural sensitivity  Taking account of people's different backgrounds  Additives  Substances that are added to food to the strength we need for physical or the strength was need	Malnutrition	The result of not having the right bala
Additives  Substances that are added to food to  Energy  The strength we need for physical o	Weaning	The process of gradually introducing cutting back on breastfeeding and/or l
Energy The strength we need for physical o	Cultural sensitivity	Taking account of people's different cu backgrounds
	Additives	Substances that are added to food to n
A 15 15 15 15 15 15 15 15	Energy	The strength we need for physical or 18
Allergy person can eat without problems	Allergy	A reaction by the immune system to a person can eat without problems
Diabetes  A condition that causes a person's b too high	Diabetes	A condition that causes a person's blo too high
Recommended daily intake  The amount of a nutrient that is con person's needs	Recommended daily intake	The amount of a nutrient that is consider person's needs
Obesity Being very overweight, with an exce	Obesity	Being very overweight, with an excess
Coronary disease Disease of the heart and blood vesse	Coronary disease	Disease of the heart and blood vessels
Vegetarian Someone who does not eat meat	Vegetarian	Someone who does not eat meat
Scurvy A disease that is caused by a deficient	Scurvy	A disease that is caused by a deficienc
Coeliac disease An intolerance to gluten	Coeliac disease	An intolerance to gluten



### **Learning Aim A Activities**

### **Activity A1a**

**Fats** 

Functions: To insulate the body, to provide energy

Where found: Meat, oily fish, butter, cream, cheese, eggs, milk, nuts, sur

RDI: Women 70 g (saturated fats 20 g), men 95 g (saturated fats

fats 20 g)

Carbohydrates

Functions: To provide energy, to help growth and development, to h Where found: Sugar and sweets, potatoes, pasta, rice, noodles, beans, ce

RDI: Women 230 g (sugars 90 g), men 300 g (sugars 120 g), chil

Vitamins

Functions: Vitamin A keeps the skin and eyes healthy.

The vitamin B group helps release energy from food.

Vitamin C helps the body to heal and protects against

Vitamin D helps in the absorption of calcium.

Vitamin E helps maintain cell structure.

Vitamin K helps in blood clotting; it also strengthens

Where found: RDI:

Butter, margarine, eggs, cheese, fish, vegetables, cereals, d Although they are important, the recommended quantities that they are measured in milligrams and micrograms, an

between women, men and children.

**Minerals** 

Functions: Calcium strengthens bones.

Iron is an important constituent of blood and maintai

Fluoride makes teeth resistant to bacteria.

Iodine maintains the body's metabolism.

Milk, cheese, bones, green vegetables, red meat, cocoa pro Where found:

seafood, eggs

RDI: Although they are important, the recommended quantities

that they are measured in milligrams and micrograms, an

between women, men and children.

**Protein** 

RDI:

Functions: To help growth and development, to help repair the body

Where found: Meat, milk, fish, cheese, eggs, beans, nuts, lentils, soya, ric

Women 45 g, men 55 g, children 24 g



### **Activity A1b**

### Why water is important

- It is important to digestion.
- It helps the body absorb and transport nutrients.
- It helps eliminate waste.
- It regulates the body temperature.
- It is necessary in the building of body tissues.

### The factors that affect the amount we need

- heat
- exercise
- illness
- pregnancy

### **Activity A3**

Tim

Risk factors: Alcohol, excessive saturated fat from rich food Possible effects: Coronary heart disease, obesity, diabetes

Cathy

Risk factors: Vegetarian

Possible effects: Nutrient deficiency, leading to weak immune system an

**Patrick** 

Risk factors: a. Excessive sugar from sweets

b. Coeliac disease

Possible effects: a. Tooth decay

b. Diarrhoea, tiredness, nutrient deficiency, poor grow

**James** 

Risk factors: a. Not enough vegetables

b. Not enough water

Possible effects: a. Vitamin deficiency, leading to weak immune system

b. Poor digestion, poor body maintenance, also weake

Anna

Risk factors: a. Undernourishment

b. Iron deficiency

c. Illness

d. Excessive salt from processed foods

Possible effects: a. Weak immune system

b. Anaemia

c. Further weakened immune system

d. Coronary heart disease



### **Activity A4**

Vitamin A: night blindness

Vitamin B: beriberi Vitamin C: scurvy Vitamin D: rickets

Vitamin E: muscle weakness

Vitamin K: impaired blood clotting Calcium: impaired bone formation

Iron: anaemia

### **Learning Aim B Activities**

### **Activity B1**

### **Environmental factors**

Factors:

Poor access to food; inability to use a cooker

Who would be affected:

James

What they should do to ensure a nutritional balance:

Perhaps ask his daughter to shop for him when she goes to the supermarke cooking simple meals, as well as heating up ready meals

### Personal preferences

Factors:

A sweet tooth

Who would be affected:

Patrick

What they should do to ensure a nutritional balance:

His parents might restrict his access to sweets, fizzy drinks, etc. by not all school; he could get his sweetness from healthier foods such as fruit and

### Socio-economic factors

Factors:

- a. Low income
- b. A busy lifestyle

Who would be affected:

- a. Iames
- b. The Lesters
- c. Anna

What they should do to ensure a nutritional balance:

- a. Put together a menu plan that includes cheap but nutritious option his daughter's shopping
- b. Devise meals that are nutritious but can be prepared quickly
- c. Start the day with breakfast and eat something nutritious for lun

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### Moral reasons

Factors:

Vegetarianism

Who would be affected:

Cathy

What they should do to ensure a nutritional balance:

Find non-meat sources of protein, such as cheese, eggs, peas, beans and le provide vitamin B12 if necessary

### **Underlying health conditions**

Factors:

Coeliac disease

Who would be affected:

Patrick

What they should do to ensure a nutritional balance: Avoid any foods contains sources of carbohydrate and dietary fibre

### **Activity B2**

Your research may have revealed a number of requirements in your chose factors are:

### **Buddhism**

There are no hard and fast dietary rules, but the following are the usual p

- Buddhists usually avoid meat and fish.
- Some are vegans, not eating any food derived from animals, such
- Some also avoid onions, leeks and garlic.

### Hinduism

- Most Hindus do not eat meat, fish or eggs. Some do eat meat, but
- Strict Hindus also avoid:
  - o garlic
  - o onions
  - alcohol
  - o tea and coffee

### Islam

- Muslims do not eat pork or any product derived from pigs.
- Any meat must be *halal* i.e. slaughtered in a particular way.
- They do not eat the meat of any carnivorous animals or birds of p
- They avoid alcohol.

### Judaism

- Only animals which have cloven hoofs and chew the cud (e.g. cat permitted. Animals must be slaughtered in a particular way in o
- Scaly fish are *kosher*, but prawns and shellfish are not *kosher*.
- Iews avoid certain additives.
- Meat and milk should not be consumed in the same meal.

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The main health conditions that might require special diets are:

Food allergies
Lactose intolerance
Type 2 diabetes
Irritable bowel syndrome
Crohn's disease

Avoid the particular allergen while still mass Replace dairy produce with alternatives, e.s. Reduce the intake of glucose; eat foods that Eat regular meals, eat more slowly and ches Avoiding spicy or fatty foods and dairy protthe symptoms.

### **Activity B4**

Your answers might include the following:

### What did the researchers find when they studied the waist circumferent. Overall, children's waist measurements were expanding by 2.5 cm every to between the ages of two and three were the most affected, the increase was age group. Some of the reasons might be:

- increasing consumption of fast food and sweets
- decreasing levels of exercise
- poor knowledge of cooking and nutrition among parents
- bottle feeding of babies

### What are the possible long-term effects of a child becoming overweight

- the risk of moving from overweight to clinically obese
- possible coronary disease in later life
- the risk of developing type 2 diabetes
- teasing and bullying, leading to low self-esteem
- difficulty in taking exercise, thus making the problem worse

### What is the Eatwell Plate? How does the NHS suggest it should be use

The Eatwell Plate is a chart showing the proportions of each type of food phave a balanced diet. The NHS says that you do not necessarily have to keevery meal, but suggests that you try to achieve that balance over a day of

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At all life stages, a balance of nutrients – protein, carbohydrates, fats, vitar but the following are the special requirements for the life stages and lifest

Louise

*Life stage:* Infancy

Nutritional requirements: Protein, carbohydrates, calcium, low salt conte

whole nuts, fairly 'soft' foods

Reasons: Protein and carbohydrates for growth and ene

teeth, low salt because an infant's kidneys can salt, low sugar because of possible tooth decay through, no whole nuts in case of choking, 'so

**Patrick** 

Life stage: Childhood/adolescence

Nutritional requirements: Protein, carbohydrates, avoid additives, avoid

Reasons: Protein and carbohydrates for growth and ene

some can lead to hyperactivity, avoid sugar be

Cathy

Life stage: Early to middle adulthood Nutritional requirements: Protein, vitamins and iron

Reasons: She has recently given birth and needs to main

Tim

Life stage: Early to middle adulthood

Nutritional requirements: Less carbohydrate, less saturated fat, perhaps

Reasons: He does not have an active lifestyle and so do

**James** 

Life stage: Later adulthood

Nutritional requirements: Smaller quantities, adequate vitamin C

Reasons: Smaller quantities because of decreased metals

level, vitamin C because many older people d

Anna

Life stage: Early to middle adulthood

Nutritional requirements: Larger quantities, more carbohydrates and fat

Reasons: Larger quantities because of her busy life, carb

because of her active lifestyle, iron because she



There are many possible answers, and the following are, therefore, only su

Tim

**Breakfast:** Fruit juice, cornflakes and semi-skimmed milk, a slice of b

spread, tea

Reasons: Low saturated fat content because of his heart problem, v

carbohydrate from the cereal

**Lunch:** Ham and tomato sandwich made with low-fat spread, fre

ham salad, a bread roll and fruit, with water)

Reasons: Protein and vitamin C in the fresh fruit and vegetables, lo

Evening meal: As indicated on menu sheet

*Reasons:* Provides for all the family's needs, balanced nutritionally.

together, fresh ingredients, easy to prepare

Snack 1: Mid-morning coffee Snack 2: Tea and a flapjack

*Reasons:* Provide energy, and the oats in the flapjack are good for t

Cathy

Breakfast: Fruit juice, cornflakes and semi-skimmed milk, tea

Reasons: Vitamin C from the fruit juice, carbohydrate from the cere

**Lunch:** Cheese and tomato sandwich made with low-fat spread,

Reasons: Protein and calcium from cheese, vitamin C from fruit and

*Evening meal*: The same meal and reason for the meal as Tim's entry

Snack 1: Coffee

Snack 2: Tea, fruit–grain bar

Reasons: Provide an energy boost

**Patrick** 

**Breakfast**: Fruit juice, cornflakes and semi-skimmed milk, boiled egg

Reasons: A substantial breakfast to meet his needs for growth and

will satisfy his sweet tooth

**Lunch**: Rice cake with cheese and tomato, fresh fruit, flapjack, wa

*Reasons:* Contains protein, vitamin C and carbohydrate for energy.

sweetness, gluten-free

*Evening meal*: The same meal and reason for the meal as Tim's entry

Snack 1: Fruit juice, dried fruit and nuts

Snack 2: Smoothie, fruit–grain bar

Reasons: Provides energy between meals



- a. The following are the main factors to consider for an infant of Louise's
  - Give her a variety of different tastes and textures.
  - Purée, blend, chop or mash her food.
  - Provide 'finger food' (food an infant can eat with their fingers) surusks.
  - Let her try to use a spoon herself.
  - For liquids, use a beaker with two handles that she can hold hers.
- b. There is obviously a wide range of food they could provide. The followeek's menus, but you will be able to think of many others the main take account of the above factors and provide a balance of all the mos carbohydrate, vitamins (especially vitamin C), calcium and iron.

**Monday:** boiled egg with toast fingers; apple pieces; milk drink

Tuesday: puréed lamb casserole; peas; orange mousse

Wednesday: puréed vegetables with lentils; strawberry yoghurt; ap Thursday: tuna and vegetable purée; banana pieces; low-sugar ru

**Friday:** cauliflower cheese; baby rice with apricots

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