



# WJEC LEVEL 3 DIPLOMA IN FOOD SCIENCE AND NUTRITION

Year 12 Virtual  
Induction Day

# SAMPLE LESSON – UNIT 1 NUTRITION

Unit 1 of the course focuses on  
Nutrition and Health

This session will look at one of ways  
you will need to apply your  
nutritional knowledge





# NUTRITIONAL KNOWLEDGE

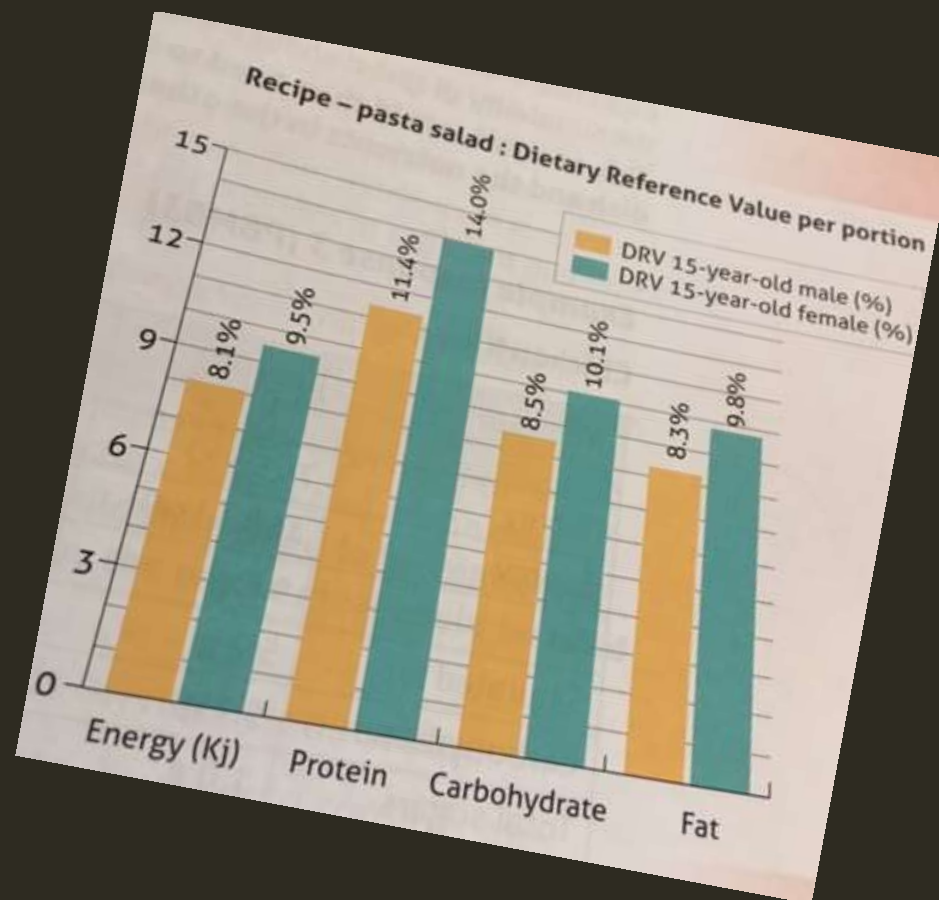
The course covers:

- The **classification** of nutrients
- The **structure** of nutrients
- The **function** of nutrients in the body
- The **nutritional needs** of specific groups
- **Unsatisfactory** nutritional intake
- **Planning** nutritional requirements
- The **impact** of food production methods on nutritional value

# APPLYING NUTRITIONAL KNOWLEDGE

## Controlled Assessment

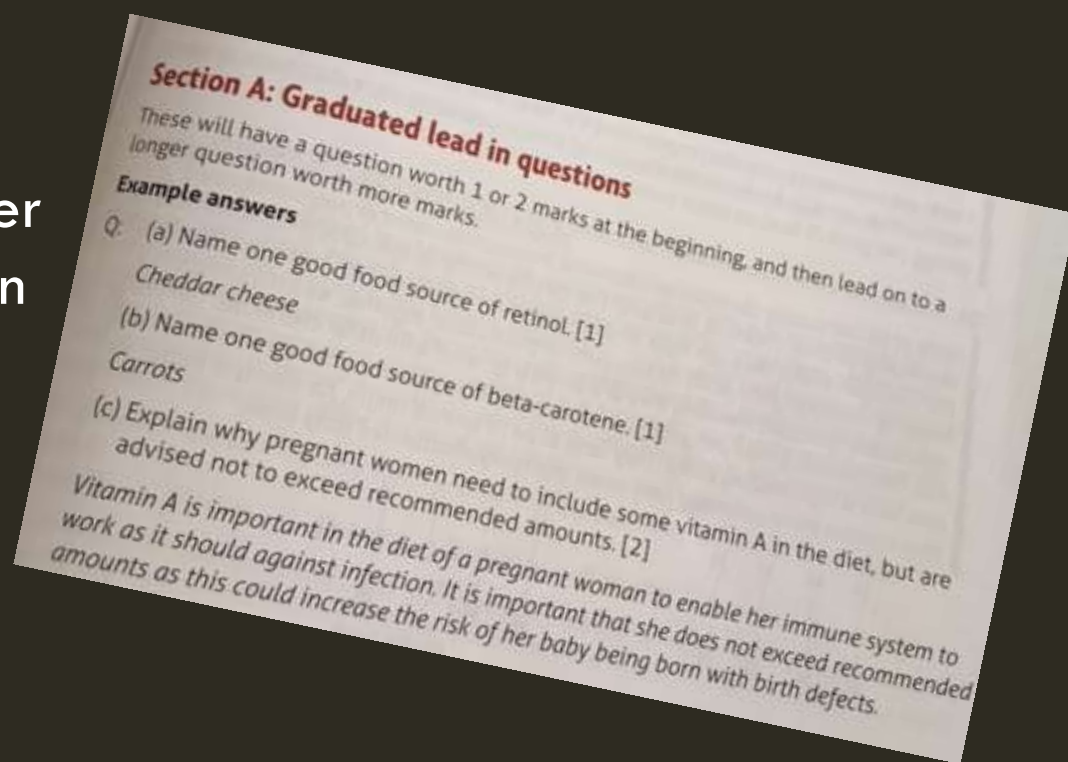
Using knowledge to analyse nutritional needs of the target group, calculate the nutritional content of dishes made, comment on the impact of your cooking processes on the nutritional value of your dishes



# APPLYING NUTRITIONAL KNOWLEDGE

## Exam Paper Section A – Short Answer Questions

Using knowledge to answer  
short or graduated lead in  
questions





# APPLYING NUTRITIONAL KNOWLEDGE

## **Exam Paper Section B – Longer Style Questions**

Using knowledge to answer  
essay-style questions

*Explain why it is important for  
primary and secondary school  
children to eat during the school  
day [8]*

# APPLYING NUTRITIONAL KNOWLEDGE

## Exam Paper Section C – The Case Study

Using knowledge to analyse nutritional needs, current nutritional intake and to propose improvements

**Scenario 2**

Henry a 23 year old man has been referred to your new fitness programme. He has specifically asked to not only lose some body fat, but also increase his muscle mass.

You have set him a moderate intensity cardiovascular and resistance training programme that he completes for 60 minutes on 5 occasions per week.

When discussing a nutrition plan with Henry, he informed you that he is a vegetarian and that he is lactose intolerant.

<b>Height</b>	1.75m
<b>Weight</b>	88kg
<b>Activity Levels</b>	45 minutes Moderate intensity cardiovascular and resistance training programme that he completes for 45 minutes on 5 occasions per week.
<b>Typical Daily Diet</b>	7 a.m.: Cornflakes and soya milk with two tablespoons of sugar. 10 a.m.: Can of cola, packet of salt and vinegar crisps. 12 p.m.: Can of cola, jacket potato with cheddar cheese and baked beans, bar of chocolate. 3 p.m.: Packet of salt and vinegar crisps and glass of fresh orange juice. 7pm: Plate of French fries with tomato ketchup, cup of tea and half a packet of biscuits.

**Questions for learners**

Does Henry have the same needs as Abdul had?  
 What can Henry eat to increase his muscle mass?  
 What impact will being a vegetarian have on Henry's diet?  
 What is lactose intolerant and how does this impact what Henry eats?

# CASE STUDY EXAMPLE

Name	Richard
Age	18
Weight	84 kg
Height	1.79m
Medical Conditions	Type 2 Diabetes
Activity Levels	Walks to and from college 60 minute weight bearing and cardio at gym 4 times a week
Food / Drink Likes	Junk food, beer, cake, fruit and vegetables
Food / Drink Dislikes	Oily fish, pasta, bread
Approximate Daily Kcal Intake	2,200 weekdays 2,700 weekends




# CASE STUDY EXAMPLE

In the live Q&A we'll look at a model answer – have a go at answering the questions in advance


Example Daily Diet	7am - Porridge with strawberries and honey 10am - 2 biscuits, orange juice 1pm - Caesar salad (chicken, croutons, lettuce, avocado, cucumber) 3pm - Apple, banana 5pm - Salt and vinegar crisps 7pm - Beef burger with chips and beans, Budweiser, chocolate bar
--------------------	---

1. Analyse Richard's profile to determine his current and future nutritional needs (14)
2. Identify lifestyle changes Richard will need to make as a result of your diagnosis (10)
3. Produce a 2-day dietary programme for Richard with 1 day being at the weekend (10)
4. Justify your diet plan in relation to fitness for purpose. (6)


# CASE STUDY TOP TIPS




**POINT**  
Write the main idea you want to talk about



**EVIDENCE**  
Prove your point using facts/figures/examples



**EXPLAIN**  
Tell me why you make this point



**LINK**  
Use a connective to link back to the point

Diabetics need to limit the amount of sugar in their diet

They are unable to regulate their blood sugar levels because the insulin they produce isn't sufficient to break down glucose into energy

For this reason Richard should cut down on alcohol, fruit juices and sugary snacks

Complex carbohydrates would be a better choice for stabilising blood sugar levels and preventing snacking

# CASE STUDY TOP TIPS

Use the information provided to work out:

❖ **Base Metabolic Rate (BMR)**  
the amount of calories needed before activity

❖ **Physical Activity Level (PAL)** the amount of calories needed including activity

❖ **Body Mass Index (BMI)**  
an indication of healthy/unhealthy weight)

Sense check your figures . .

## BMR FOR WOMEN CALCULATION

$$10 \times \text{WEIGHT (KG)} + \\ 6.25 \times \text{HEIGHT (CM)} - \\ 5 \times \text{AGE (YEARS)} - 161$$

[GetResults.org.uk](http://GetResults.org.uk)

## BMR FOR MEN CALCULATION

$$10 \times \text{WEIGHT (KG)} + \\ 6.25 \times \text{HEIGHT (CM)} - \\ 5 \times \text{AGE (YEARS)} + 5$$

**BMI Calculation:** Divide the weight in Kg by the height in metres and then divide your answer by the height again

# CASE STUDY TOP TIPS

- **BMR** averages 1400 (women) – 1800 (men)
- **PAL** adds on more calories for activity levels so will always be higher than the BMR:
  - low (BMR x 1.4)
  - moderate (BMR x 1.6 or 1.7)
  - high (BMR x 1.8 or 1.9)
- **BMI** is double digit:
  - BMI is below 18.5 – underweight range
  - between 18.5 and 24.9 – healthy weight range
  - between 25 and 29.9 – overweight range
  - between 30 and 39.9 – obese range
- **Eatwell Guide** calorie averages 2000 (women) or 2500 (men)

# CASE STUDY TOP TIPS

## Commenting on figures:

- **Use** the figures you've calculated to comment on the current and future needs
- Consider the main **characteristics** of the case study – sex, age and activity levels
- Take into account additional **health factors**
- Consider not only calorie intake but **eating patterns and lifestyle**

# ANY QUESTIONS?

Join us for the live Q&A session or contact us by email if you have questions about the course or the summer tasks:

[n.thompson@springwoodhighschool.co.uk](mailto:n.thompson@springwoodhighschool.co.uk) or [s.beech@springwoodhighschool.co.uk](mailto:s.beech@springwoodhighschool.co.uk)

