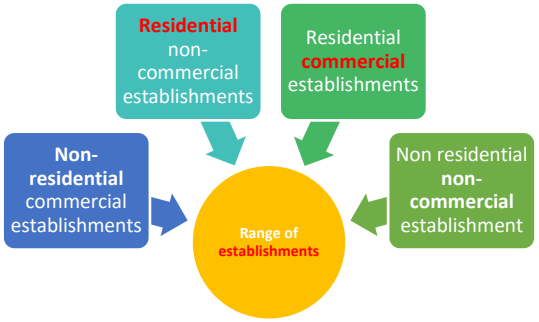
Knowledge Organiser: Hospitality & Catering / Year 11 / Unit 1 – The Hospitality & Catering Industry

Hospitality and catering providers

1.1.1 -1.1.4

1.1.1. Types of **Provider**



Establishment	Service provided	Examples
Commercial residential	Accommodation, house keeping, food, beverages, conference or training facilities	Hotels, guest houses, campsites, bed and breakfasts, holiday parks, farmhouses
Commercial non-residential	Food and beverage to eat in or take away, areas to sit to eat and drink	Restaurants, cafes, tea rooms, coffee shops, fast food outlets, pubs and bars, street food and pop up restaurants, mobile vans
Non-commercial residential	Accommodation, food and beverages	Hospitals, care homes, prisons, armed forces, boarding schools, colleges, universities.
Non-commercial non-residential	Food and beverages	Canteens in offices, day-care centres, schools and nurseries, charity food suppliers, for example soup kitchen

Standards and ratings

tripadvisor

AA Rosettes 2015 Culinary Excellence

THE GOOD FOOD GUIDE WAITROSE & PARTNERS

MICHELIN

Hotel and Guest house standards

Hotels and guest houses are often given a star rating. Star ratings help customers to know what services and facilities they can expect at a hotel or guest house. The quality of the service provided is rated on a scale of one to five stars

The three main restaurant rating systems used in the UK are Michelin stars, AA Rosette Awards and The Good Food Guide reviews:

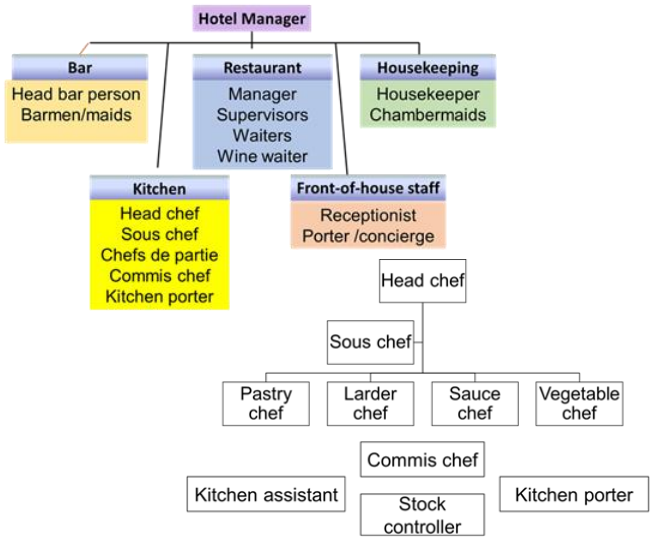
Michelin stars are a rating system used to grade restaurants for their quality: **One** star is a very good restaurant, **Two** star is excellent cooking **Three** stars is exceptional cuisine

AA Rosette Awards score restaurants from one (a god restaurant that stands out from the local competition) to five (cooking that compares with the best in the world)

The Good Food Guide gives restaurants a score from one (capable cooking but some inconsistencies) to ten (perfection)

1.1.2. Job roles in the industry

Staff structure in a hotel



Personal Attributes

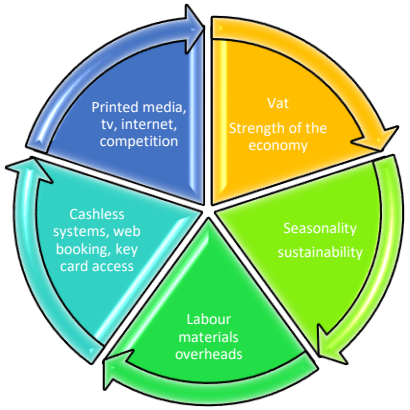
- Organised
- Hardworking
- Hygienic
- Team Player
- Flexible
- Friendly
- Punctual
- Pleasant Calm
- People skills
- Willingness to learn

1.1.2. Qualifications

Level	Types of training
Key stage 4 school courses	Level ½ Vocational award in Hospitality and Catering
Post 16-19	Colleges offer many courses for those leaving school after Year 11, for example: • Certificate in Hospitality and Catering Level 1 • Certificate in Introduction to Culinary Skills Level 1 • Diploma in Introduction to Professional Cookery Level 1 • Diploma in Hospitality and Catering Level 2 • Diploma in Professional Cookery Level 2
Universities	Universities offer degree, HND and HNC courses in subjects such as: • Catering • Hospitality • Culinary Arts • Hotel management • Food and beverage service
Apprenticeships	These provide both work experience and training
In-house training	On-the-job training provided by the organisation you work for

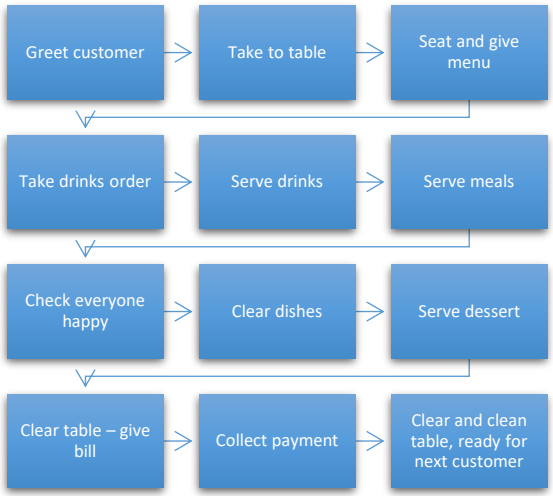
1.1.3. Working conditions

1.1.4. Factors of success

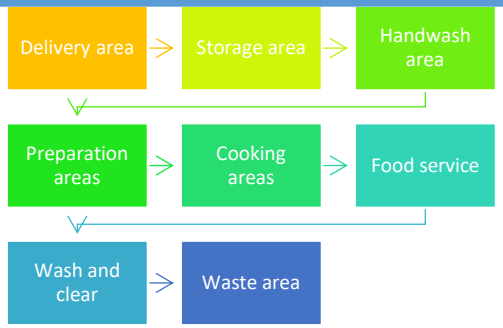


Knowledge Organiser: Hospitality & Catering / Year 11 / Unit 1 – The Hospitality & Catering Industry

1.2.1 Front of house



1.2.1 Back of house



1.2.1 dress code

1.2.1-1.2.3 Hospitality and catering provisions operate

1.2.1 Kitchen equipment

What documentation is used in the kitchen?

Stock control?
Food safety?
Health and safety

What do they do? How do you take care of them?

1.2.2 Customer requirements

Types of customer	Customer needs	Customer rights
business	Equipment	age
Leisure	Accommodation	Disability
Families	catering	Sexual orientation
Young customers		Ethnicity
Older customers		Gender
		Race and culture
		Pregnancy and maternity

1.2.3 Specific requirements

Requirements
- Lifestyle
- Nutritional needs
- Dietary needs
- Time available

Expectation
- Service
- Value for money
- Trends
- Media influence
- Environmental awareness
- Seasonality
- Competition from others

Demographics
- Age
- Location
- Accessibility
- Money
- Access to provision

Knowledge Organiser: Hospitality & Catering / Year 11 / Unit 1 – The Hospitality & Catering Industry

1.3.1 Health and safety in hospitality and catering provisions

Report of Injuries, Diseases and Dangerous Occurences Regulations (RIDDOR) 2013

What employers need to do by law	What paid employees need to do
Inform the Health and Safety Executive (HSE) of any accidents, dangerous events, injuries or diseases that happen in the workplace.	Report any concerns of health and safety matters to the employer immediately. If nothing is resolved, then inform the HSE.
Keep a record of any injuries, dangerous events or diseases that happen in the workplace.	Record any injury in the accident report book.

Health and Satefy at Work Act 1974 (HASAWA)

What employers need to do by law	What paid employees need to do
Protect the health, wellbeing and safety of employees, customers and others.	Take reasonable care of their own health and safety and the health and safety of others.
Review and assess the risks that could cause injuries.	Follow instructions from the employer and inform them of any faulty equipment.
Provide training for workers to deal with the risks.	Attend health and safety training sessions.
Inform staff of the risks in the workplace.	Not to misuse equipment.

Control of Substances Hazardous to Health Regulations (COSHH) 2022

What employers need to do by law	What paid employees need to do
Control substances that are dangerous to health.	Attend all training sessions regarding COSHH.
Provide correct storage for those substances and appropriate training for staff.	Follow instructions carefully when using the substances.
Some examples of substances that are dangerous to health include cleaning products, gases, powders & dust, fumes, vapours of cleaning products and biological agents.	Know the different types of symbols used to know different types of substances and how they can harm users and others when used incorrectly.

Personal Protective Equipment at Work Regulations (PPER) 1992

What employers need to do by law	What paid employees need to do
Provide PPE e.g. masks, hats, glasses and protective clothes.	Attend training and wear PPE such as chef's jacket, protective footwear and gloves when using cleaning chemicals.
Provide signs to remind employees to wear PPE.	
Provide quality PPE and ensure that it is stored correctly.	

Manual Handling Operations Regulations 1992

What employers need to do by law	What paid employees need to do
Provide training for staff.	Ask for help if needed.
Assess and review any lifting and carrying activities that cannot be avoided.	Squat with feet either side of the item. Keep back straight as you start to lift. Keep the item close to your body whilst walking. Make sure you can see where you're going.
Store heavy equipment on the floor or on low shelves.	
Provide lifting and carrying equipment where possible.	

1.3.2 Food Safety

Food Hazards

A food hazard is something that makes food unfit or unsafe to eat that could cause harm or illness to the consumer. There are three main types of food safety hazards:

- **Chemical** – from substances or chemical contamination e.g. cleaning products.
- **Physical** – objects in food e.g. metal or plastic.
- **Microbiological** – harmful bacteria e.g. bacterial food poisoning such as Salmonella.

All food businesses are required to:

- assess and review food safety risks
- identify critical control points to reduce or remove the risk from happening
- ensure that procedures are followed by all members of staff
- keep records as evidence to show that the procedures in place are working.

Hazard Analysis and Critical Control Points (HACCP)

Every food business lawfully needs to ensure the health and safety of customers whilst visiting their establishment. To ensure this, they need to take reasonable measures to avoid risks to health. HACCP is a food safety management system which is used in businesses to ensure dangers and risks are noted and how to avoid them.

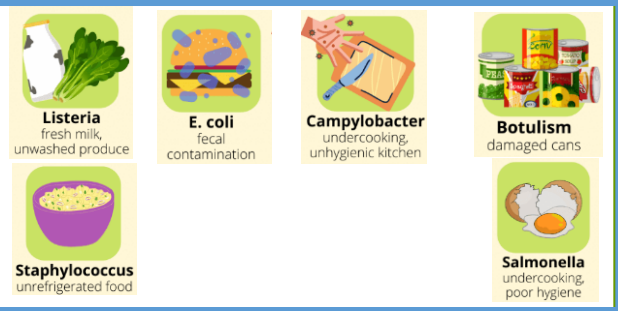
Hazard	Analysis	Critical Control Point
Receipt of food	Food items damaged when delivered / perishable food items are at room temperature / frozen food that is thawed on delivery.	Check that the temperature of high-risk foods are between 0°C and 5°C and frozen are between -18°C and -22°C. Refuse any items that are not up to standard.
Food storage (dried/chilled/frozen)	Food poisoning / cross contamination / named food hazards / stored incorrectly or incorrect temperature / out of date foods.	Keep high-risk foods on correct shelf in fridge. Stock rotation – FIFO. Log temperatures regularly.
Food preparation	Growth of food poisoning in food preparation area / cross contamination of ready to eat and high-risk foods / using out of date food.	Use colour coded chopping boards. Wash hands to prevent cross-contamination. Check dates of food regularly. Mark dates on containers.
Cooking foods	Contamination of physical / microbiological and chemical such as hair, bleach, blood etc. High risk foods may not be cooked properly.	Good personal hygiene and wearing no jewellery. Use a food probe to check core temperature is 75°C. Surface area & equipment cleaned properly.
Serving food	Hot foods not being held at correct temperature / foods being held too long and risk of food poisoning. Physical / cross-contamination from servers.	Keep food hot at 63°C for no more than 2 hours. Make sure staff serve with colour coded tongs or different spoons to handle food. Cold food served at 5°C or below. Food covered when needed.

Knowledge Organiser: Hospitality & Catering / Year 11 / Unit 1 – The Hospitality & Catering Industry

1.4 Food Safety in Hospitality and Catering

1.4.1 Food related causes of ill health - Allergens

Food Poisoning



Food Intolerance

1.4.2 Symptoms of food induced ill health

Visible symptoms

Visible symptoms of food poisoning, chemical poisoning, allergic reaction and food intolerance include:

- **Diarrhoea:** a common symptom of most types of food poisoning bacteria and can also be a symptom of lactose intolerance.
- **Vomiting:** a common symptom of most types of food poisoning bacteria, but may could also be caused by taking in chemicals accidently added to food.
- **Pale or sweating/chills:** a high temperature is a common symptom of E-coli and Salmonella.
- **Bloating:** a symptom of lactose intolerance.
- **Weight loss:** a symptom of gluten intolerance (coeliac disease).

Non-visible symptoms

Non-visible symptoms of food poisoning, chemical poisoning, allergic reaction and food intolerance include:

- **Nausea (feeling sick):** the most common symptom for all types of food-induced ill-health.
- **Stomach-ache/cramps:** abdominal pain is common symptom of lactose intolerance as well as a sign of an allergic reaction. Cramps may happen at the same time as diarrhoea.
- **Wind/flatulence:** a common symptom of lactose intolerance.
- **Constipation:** a symptom of Listeria food poisoning.
- **Painful joints:** a symptom of E-coli food poisoning.
- **Headache:** a symptom linked to Campylobacter, E-coli and Listeria.
- **Weakness:** non-stop vomiting, and diarrhoea can leave a person feeling weak. Gluten intolerance (coeliac disease) can leave a person feeling tired because their bodies can't absorb the correct amount of nutrients.

1.4.3 Preventative measures

1.4.4 The environmental Health Officer (EHO)

EHO and the law

If the EHO discovers problems with the food safety and hygiene in the premise, they are allowed by law to:

- remove any food that may be hazardous so it can't be sold
- tell the owners to improve hygiene and safety within a set time and then come back and re-inspect
- close the premises if there is a risk to health of the public
- give evidence in a court of law if the owners are prosecuted for breaking food hygiene and safety laws.

EHO inspections

The EHO can carry out an inspection of any hospitality and catering premise at any time during business hours – they do not need to make an appointment. During an inspection, the EHO will check to make sure that:

- the premises are clean
- equipment is safe to use
- pest control measures are in place
- waste is disposed properly
- all food handlers have had food hygiene and safety training
- all food is stored and cooked correctly
- all food has best-before and use-by dates
- there is a HACCP plan to control food hazards and risks.

The EHO is allowed to:

- take photographs of the premises
- take food samples for analysis
- check all record books, including fridge and freezer temperatures, cleaning schedules and staff training
- offer advice on improving food hygiene and safety in the business.

Unit 2: Controlled assessment (Approx. 12 hours)

Nutrition: Describe functions of nutrients in the human body.

Fruits & Vegetables

40%

- Eat 5 portions s a day!
- Choose a variety
- Provides fibre for healthy digestion
- Provides vitamins and minerals for healthy body functions and immune system

Starchy Foods

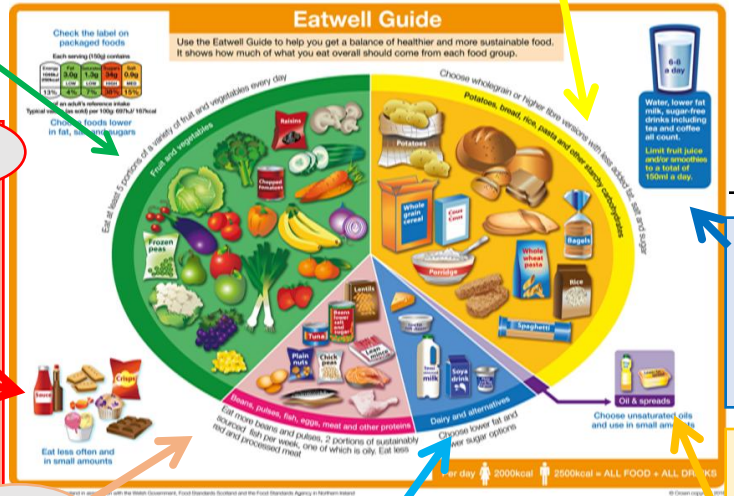
38%

- Provide slow-release carbohydrate used by the body for energy
- Choose wholegrains for increased fibre (good digestion, reduced risk of heart disease)

Fatty and Sugary Foods

0%

- These are the danger foods!
- They are not part of a healthy diet
- Eat them only occasionally
- Eating too much fatty and sugary processed food is linked to increased risk of weight gain/obesity, diabetes , tooth decay and cardiovascular disease



12%

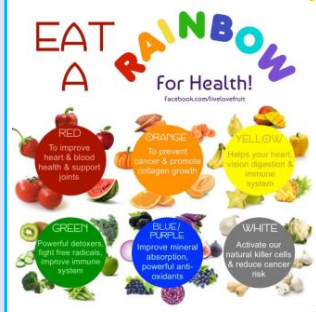
8%

Beans, Pulses, Eggs, Meat, Fish

- Provide protein for growth, repair and maintenance of body cells
- Choose a combination of plant proteins
- Avoid eating too much processed meat like bacon and sausages as these are linked with increased risk of bowel and stomach cancer

Dairy Foods

- Provide calcium for healthy bones, teeth and nails
- The body needs Vitamin D to absorb calcium effectively



Portion Control!

Healthy diets not only have the correct balance, but have the right portion sizes. Here is a 'handy' guide…
Vegetables = double cupped palm.
Grains/Starches = clenched fist.
Protein = palm of hand.
Fruits = clenched fist.
Thumb = fats.

Water Intake

A balanced diet must include water, it is required for nearly all brain and other bodily functions
See slide 2 for more details on water

Oils & Spreads

1%

Provide fat soluble vitamins A,D,E & K
Are high in calories & energy so keep use to a minimum
It is recommended to choose unsaturated oils like olive oil

The Eatwell Guide is the UK Healthy Eating Model. It shows what we should eat as a balanced diet. The size of the sections represents the proportion of our diet that particular food group should make up. The Eatwell Guide was updated in 2016 to take into account scientific opinion and public opinion. The main change was that sugary and fatty foods are shown off the plate as they are not part of a healthy diet.

Nutrition: Describe functions of nutrients in the human body.

Water intake

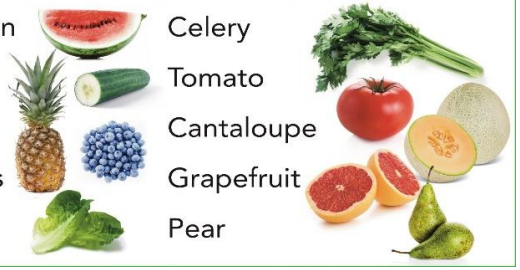
Click here to watch video on water

Water makes up just over 2/3 of the human body and is required for:

- Maintain body temperature
- Metabolise fat
- Aid digestion
- Lubricate organs
- Transport nutrients
- Flushes out waste and toxins

Foods Rich in Water

Watermelon, Cucumber, Pineapple, Blueberries, Lettuce, Celery, Tomato, Cantaloupe, Grapefruit, Pear

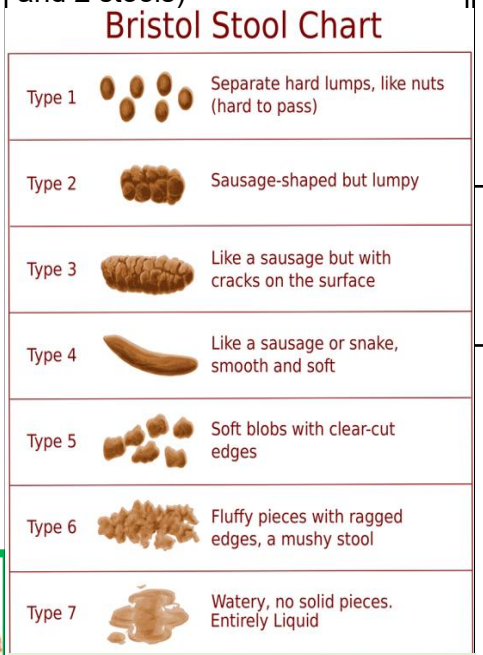


FIND OUT MORE HERE: https://www.nhs.uk/live-well/eat-well/water-drinks-nutrition/

Keeping hydrated is important. It is recommended that 6-8 glasses of water or other fluid are consumed everyday to replace normal water loss, rather than to obtain any broader health benefits.

The Bristol Stool Chart

The Bristol stool chart shows how the shape of different stools (poos) on a continuum.
Both dietary fibre and water play a HUGE role in keeping the digestive system functioning properly.
Too little water and/or fibre can result in constipation (the Type 1 and 2 stools)



Soluble fibre dissolves in water and the insoluble kind doesn't.
Insoluble helps absorb water and bulk up stools. **Soluble** helps reduce blood cholesterol and sugar.

Fibre intake

What is it?
Fibre is found in fruits and vegetables, nuts, seeds, wholegrain cereal flours and products. It is not digestible and passes through the digestive system, forming the bulk of our stools (poo).
Dietary fibre has many health benefits:

- It can reduce your risk of heart disease, diabetes and some cancers, and also help weight control.
- Fibre is also important for digestive health - fibre bulks up stools and holds water in them, making them softer and easier to pass. It also makes waste move through the digestive tract more quickly, which is better for the gut and can help to prevent constipation.
- Some types of fibre can be fermented by gut bacteria, producing substances that appear to be good for gut health. Providing 'food' for gut bacteria can also help increase the number of healthy bacteria in the gut.

How FIBRE Much do we Need?
30g a day for adults
2-5 years 15g per day, 5-11 years 20g per day, 11-16 years 25g per day, 16-18 years 30g per day

To increase your fibre intake you could:

- Choose a high fibre breakfast cereal e.g. bran flakes, or porridge
- Choose wholegrains like whole-wheat pasta, bulgur wheat or brown rice, wholemeal bread
- Go for potatoes with skins
- For snacks try fruit, vegetable sticks, rye crackers, oatcakes, unsalted nuts or seeds
- Include plenty of vegetables with meals – either as a side dish or added to sauces, stews or curries
- Add pulses like beans, lentils or chickpeas to stews, curries and salads
- Eat fruit!
- Add nuts and seeds to recipes

Reference Intake

The NHS recommends the following intake of each nutrient per day:

Nutrient	Amount	Calories per gram
Energy (calories)	**2,000kcal**	
Carbohydrate of which **sugars**	**At least 260g** **90g**	4kcal
Protein	**50g**	4kcal
Fat of which **saturates**	**Less than 70g** **Less than 20g**	9kcal

As you can see below, we need much less of the micronutrient: Vitamins and minerals. There are slight differences between males and females.

Nutrient	Males	Females
Vitamin A	**0.7mcg**	**0.6mcg**
Vitamin D	**10mcg**	
Vitamin E	**4mg**	**3mg**
Vitamin K	**1mcg per kg of body weight**	
Vitamin B	**Thiamin: 1mg** **Riboflavin: 1.3mg** **Vitamin B12: 1.5mcg**	**Thiamin: 0.8mg** **Riboflavin: 1.1mg** **Vitamin B12: 1.5mcg**
Vitamin C	**40mg**	
Sodium (Salt)	**Less than 6g**	
Iron	**All (M) 8.7mg**	**(F) 19-50yrs 14.8mg / 50yrs+ 8.7mg**
Calcium	**700mg**	

NHS

What are Calories click here

The amount of energy in an item of food or drink is measured in calories. When we eat and drink more calories than we use up, our bodies store the excess as body fat. If this continues, over time we may put on weight.
As a guide, an average man needs around 2,500kcal (10,500kJ) a day to maintain a healthy body weight.
For an average woman, that figure is around 2,000kcal (8,400kJ) a day..

Adult reference intakes

Unless the label says otherwise, RI values are based on an average-sized woman doing an average amount of physical activity. This is to reduce the risk of people with lower energy requirements eating too much, as well as to provide clear and consistent information on labels.

As part of a healthy balanced diet, an adult's reference intakes ("RIs") for a day are:

- Energy: 8,400 kJ/2,000kcal
- Total fat: 70g
- Saturates: 20g
- Carbohydrate: 260g
- Total sugars: 90g
- Protein: 50g
- Salt: 6g

Click here to find out more about food labels

Red colour coding means the food or drink is high in this nutrient and we should try to have these foods less often or eat them in small amounts.
Amber means medium, and if a food contains mostly amber you can eat it most of the time.
Green means low, and the more green lights a label displays the healthier the choice.

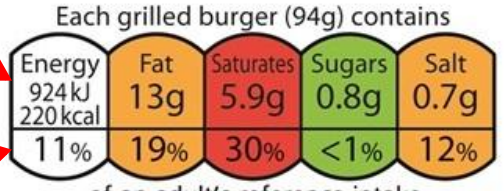
Front of Pack label

Portion/Serving size is indicated on the label.
This is NOT always the whole pack!

Front of pack nutrition labelling is optional

Traffic light system indicates with colour how much of intake is needed.
Easy to see, quick to take in

Energy intake as a percentage of RI



Typical values (as sold) per 100g: Energy 966kJ / 230kcal

Current Healthy Eating Advice

Fat intake

Sugar intake

Salt intake

Click here to find out more about salt

AGE	Target Maximum Salt Intake (grams)
0 to 6 months	less than 1g daily
7 to 12 months	1g per day
1 to 3 years	2g per day
4 to 6 years	3g per day
7 to 10 years	5g per day
From age 11 onwards	6g per day (as for adults)

8 Tips for Healthy Eating!

1. Eat more fibre
2. Eat more fruits and Vegetables
3. Eat more oily fish
4. Eat less salt
5. Eat less fat
6. Eat less sugar
7. Choose wholegrains
8. Drink 6-8 glasses of water per day

What counts as 5 A Day?

For **kids**, the amount they should eat depends on their size and age. As a rough guide, one portion is the amount they can fit in the palm of their hand.

For **adults,** a portion is 80g fruit of vegetables or 30g of dried fruit.

Healthy Eating Guidelines in the UK are set by Public Health England

2016 Update from Public Health England - The latest advice on Vitamin D intake

What is the new vitamin D advice?

The new advice from PHE is that adults and children over the age of one should consider taking a daily supplement containing 10mcg of vitamin D, particularly during autumn and winter.

People who have a higher risk of vitamin D deficiency are being advised to take a supplement all year round.

SACN's review concluded that these at-risk groups include people whose skin has little or no exposure to the sun, like those in care homes, or people who cover their skin when they are outside.

People with dark skin, from African, African-Caribbean and South Asian backgrounds, may also not get enough vitamin D from sunlight in the summer. They should consider taking a supplement all year round as well.

Knowledge Organiser: Hospitality & Catering / Year 11 / Unit 2 - Hospitality and Catering in Action (60% - 120 marks)

Nutrition: Describe functions of nutrients in the human body.- **MACRONUTRIENTS**

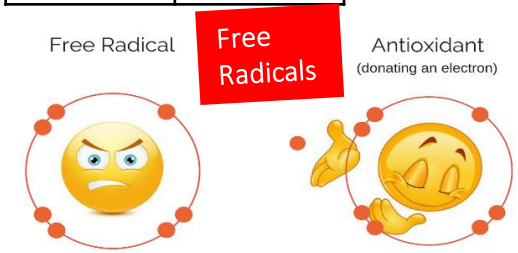
	Nutrient	Source	Function (need for)	Effects too little (deficiency)	Effect of too much (access)
MACRONUTRIENTS	Carbohydrates Click here to see a video.	**Starches** – found in cereal grains such as rice, wheat, oats, plus starchy tubers (potatoes and sweet potatoes) and vegetables (carrots, beets, corn) **Sugars** – lactose found in milk and dairy, fructose found in honey, fruits and some vegetables (peppers, tomatoes etc.)	**Two types:** **1. Starchy (complex)** provide energy when broken down – **slow-release energy** to the body (wholegrain provide slower release carbohydrates) **2. Sugary (simple)** provide quick release energy to the body's' cells.	Deficiency of carbohydrates is extremely rare in the UK. Long term lack of carbohydrates in the diet can cause Ketosis – a condition where the body switches to using protein as an energy source. **Visible symptoms-** lack of energy and weight loss. **Non- visible symptoms-** Not enough fibre from wholegrains foods leads to constipation and other intestinal problems.	If not used for energy it becomes stored as fat. **Visible symptoms** weight gain and obesity. **Non- visible-** eating too much non refined(white carbs) leads to tooth decay, raising blood sugar levels and type 2 diabetes.
	Proteins Click here for video	Come from both plant and animals sources. **High Biological Value** (HBV) protein: Meat, fish, poultry, eggs, soya beans. **Low Biological Value** (LBV) protein: Tofu, beans, nuts, lentils, pulses. **Protein complementation**: eating a range of LBV sources to get all the essential amino acids.	**Protein is needed for growth and repair of body cells. Source of energy.** Protein is digested by the body into its component parts – called amino acids. There are 8 which are essential for adults and 12 for children. HBV protein foods contain all the essential amino acids.	**Visible symptoms-** • Wasting of muscle & muscle loss • Oedema – build up of fluids in the body • Slow growth in children Severe deficiency leads to kwashiorkor (bloating of the stomach) **Non-visible symptoms-** weaker immune system which needs protein to function properly.	**Visible symptoms** excess stored as fat, lead to weight gain and obesity. **Non-visible symptoms-** Puts a strain on how well the kidneys work.
	Fats Click here for video Click here for more info	Butter, cheese, dairy foods including yogurt, crème fraiche, milk Oils, lard, suet, dripping. 	Fat is a term used to describe lipids – this can refer to solid fats and oils. **Fat is broken down by the body and used for energy as a concentrated source. Also used to provide warmth when stored under the skin.** Is a dietary carrier of fat soluble vitamins A, D, E & K. **Two types of fats:** Unsaturated and saturated (see below).	**Visible symptoms-** Weight loss over time as the body uses stores of fat. Person feels cold as fat under skin acts as insulator. **Non-visible symptoms-** Bruising of the bones as they are not protected**.** Lack of fat in the diet can lead to deficiencies of fat soluble vitamins A, D, E & K. 	**Common issue in the UK** **Visible symptoms-** Stored under the skin in adipose tissue cells, which leads to disease such as type 2 diabetes, obesity and heart disease and high bloody pressure. **Non-visible symptoms-** Internal organs store fat which prevents them working properly. Fat blocks arteries.

Unsaturated Fat:
Liquid at room temperature. Mainly from non-animal (plant) sources. Can lower blood cholesterol.

Saturated Fat:
Solid at room temperature. Mainly from animal sources. *With the exception of palm and coconut oil. Causes high blood cholesterol.

Vitamins and Minerals are chemicals found naturally in food. With the exception of Vitamin D, which can be manufactured through the action of sunlight on the skin, vitamins cannot be made by the body, and must be provided by the diet. They are needed in minute (tiny) amounts to perform specific functions and fall into two different classes:

Water Soluble	Fat Soluble
C	A
B group	D
	E
	K



Essentially, damaged oxygen molecules with an extremely unstable atomic structure. They attack fats and proteins all over the body, especially those in membranes that line the blood vessels, the skin and other connective tissue. They can make you age a lot quicker! Anything we do to raise our metabolic rate (like exercise) accelerates the production of free radicals.

Water Soluble	Needed For (function)	Found In	Deficiency/ Excess
C Antioxidant	Normal structure and function of connective tissue e.g. collagen. Helps healing process. Antioxidant (protects from free radicals). Helps absorb iron in the body. Improves immune system.	Main sources from plants – fruits and vegetables. Milk and liver contain small amounts.	Deficiency- Scurvy, very rare symptoms include bleeding gums, wounds not healing properly, tiredness. Lack of vitamin C effects absorption of iron. Excess **is eliminated from the body within 24 hours so not a problem.** However large amounts can cause stomach pain and diarrhoea.
B1 Thiamin	Normal function of the nervous system and heart. Releases energy from carbohydrates.	Whole grains, meat, flour and breakfast cereals.	Deficiency-Beri-beri (disorder of the nervous system). **Excess-body excretes it.** Very rare unless taking supplements.
B2 Riboflavin	Release of energy from carbohydrates, fats and proteins. **Maintains healthy skin, eyes, nervous system and mucous membranes.**	Milk, eggs, green vegetables, cereals.	Deficiency- Dry cracked skin around the mouth and nose. **Excess-body excretes it.**
B3 Niacin	Energy release**carbohydrates, fats and proteins.** Maintains healthy skin, digestive system and nervous system.	Milk, eggs, cheese, meat.	Deficiency- disease pellagra. Symptoms can include dermatitis, dementia and diarrhoea. **Excess-Can cause liver damage**
B9 Folate	Works with B12 to make red blood cells and nervous system. Reduces risk of nervous defects in unborn babies.	Green leafy vegetables.	Deficiency- can lead to anaemia. Symptoms can include insomnia, depression and forgetfulness. **Excess-body excretes it.**
B12 Colbalbumin	Releases energy from food. Maintains normal structure of nerves. Processes folic acid (which helps make healthy red blood cells).	Animal sources – milk, meat and eggs. Some algae and bacteria can produce B12.	Deficiency-Pernicious Anemia (rare), may be found in vegetarians and vegans. Symptoms are tingling, numbness and memory loss. **Excess-body excretes it.**

Nutrition: Describe functions of nutrients in the human body - MICRONUTRIENTS

Fat Soluble	Needed For (function)	Found In	Deficiency/ Excess
A **Antioxidant**	• Needed for structure and functioning of the skin and mucous membranes. • Cell differentiation (growth and development of the body). • Helps with vision in dim light and colour vision • Keeping the immune system healthy.	Dairy Products Dark Green Veg Orange coloured fruit and veg Fish Oils and Liver	**Deficiency-**Poor vision, night blindness. Excess- stored in the liver and too much can be toxic.
D	• Needed for the absorption of calcium and phosphorus from foods. • Healing broken bones. • Developing and maintaining healthy bones and teeth. • Preventing bone diseases such as rickets and osteoporosis.	Fish Oils Dairy Products Sun Light Absorption. Often added to cereal and margarine.	**Deficiency-**Rickets (soft deformed) Osteomalacia (weak bones) Excess: build up of calcium, poor appetite, vomiting
E **Antioxidant**	• Helps maintain healthy skin and eyes and strengthen the body's natural defence against illness and infection. • Forming red blood cells.	Dairy Products Dark Green veg Nuts	**Deficiency-** Rare- Age quickly, Wrinkles Skin loses elasticity. Excess- In very large doses may interfere with absorption of vitamin A. Loss of appetite.
K 	• Needed for clotting of blood and is also required maintaining healthy bones. • Infants are given vitamin K at birth.	Dark Fish, 	**Deficiency-** Hemorrh ured blood vessels. Excess- Unknown 

Nutrition: Describe functions of nutrients in the human body - MICRONUTRIENTS

Click here to watch a video on Vitamins and minerals

	Nutrient	Function (needed for)	Source	Effects of too little (deficiency)	Effect of too much (excess)
MINERALS	**Iron**	Needed to make haemoglobin in red blood cells which transports oxygen around the body. Also removing waste substances from the body.	Haem iron found in meat, offal Non-haem iron found in wholegrain foods, leafy green vegetables, fortified breakfast cereals Iron is only absorbed in the presence of vitamin C.	Iron deficiency anaemia is the most common dietary deficiency in the UK. **Visible Symptoms** include tiredness, paleness, lethargy. Weak and splitting nails.	Side effects of taking high doses (over 20mg) of iron include constipation, vomiting. Very high doses of iron can be **fatal**, particularly if taken by children, so always keep iron supplements out of the reach of children
	Calcium	Needed by the body to build strong bones and teeth. Essential for blood clotting process and blood pressure. Essential for nerve signal transmission and muscle contraction. The skeleton contains about 99% of the body's calcium	Dairy foods including milk, yogurt, cheese, butter Dark leafy green vegetables, Fish with edible bones including sardines and pilchards Non-dairy milks fortified with added calcium	**Visible symptoms** Lack of calcium in children can cause **Rickets.** This is where children's bones are weak and soft causing them to be deformed. **Osteoporosis** (brittle bones) in adults later in life when bone density is less. • To find out more click here **Non-visible symptoms** • Bones and teeth weaken, • Nerves and muscles don't work properly. • Blood will not clot and form a scrap after an injury.	Hypercalcemia is a condition in which you have too high a concentration of **calcium** in your **blood**.
	Sodium	Controls the amount of water in the body Makes nerves and muscles work properly.	Salted foods, yeast extract, stock cubes, gravies, seasonings, snack foods, canned fish, bacon, ham, fast foods, ready meals, baking powder and takeaway foods.	**Visible symptoms:** • Unlikely, but can be caused by excessive sweating or vomiting and diarrhoea • Muscle cramps, weakness	• Water retention and swelling • High blood pressure • Heart problems • Headaches • Guideline is 6g for adults • 4g for teenagers

Special Diets: Compare the nutritional needs of different groups of people.

Nutrition through life differs mainly due to the need for energy and protein for growth and development – in younger age groups, growth and development occurs, in older age groups only maintenance of the body is required, therefore protein and energy requirements are reduced.

GENDER affects nutritional requirements after puberty – before puberty male and female requirements are the same. Puberty causes girls to begin menstruation, increasing their iron needs, which remain higher than men until the menopause which occurs around 50 years of age. Generally, males are physically larger than females and therefore need to consumer more energy and protein on a daily basis.

PHYSICAL ACTIVITY LEVEL affects a person's' energy requirements. The more active a person is, the more energy they need. It is recommended that extra energy requirements come from extra starchy carbohydrate in the diet,. Increased PAL could be from having an active job or from playing lots of sport.

Babies and Toddlers
- Milk only for first 4-6 months
- Weaning occurs from 6 months – introduce a wide variety of textures and colours
- Avoid nuts (choking hazard), salt and sugar.

Pre-school children
- Balanced diet needed – in line with Eatwell Guide from 12 months
- High needs for energy and protein due to rapid growth and constant movement
- Full fat dairy products should be consumed
- Salt and sugar should be avoided

Children
- Balanced diet needed – in line with Eatwell Guide from 12 months
- High needs for energy and protein due to rapid growth and constant movement
- 5-a-day is recommended.
- Energy requirements increase because they grow quickly and become active.
- Good supply of protein, calcium, iron, vitamin A and D, as part of a healthy, balanced diet
- Calcium and vit D for healthy tooth development, and strong bones.
- Limit sugary carbohydrates such as sweets -tooth decay.
- Fat: small amounts for energy and insulation.
- Young children small stomachs, small and frequent meals. No room for junk food
- Children cannot cut food and chew as easily so need easy to eat foods
- Avoid nuts- choking and allergy risks.
- Children need plenty of fluid and they should be encouraged to drink regularly, especially if they are very active.

Click here to find out more life stages and diets

Teenagers
Increased needs for iron in teenage girls due to menstruation
Calcium intake & vitamin D are really important to ensure Peak Bone Mass is reached – setting up bone health for life.
Boys need extra iron initially for growth and muscles, but this need decreases after age 19.
Boys need more protein and energy than girls due to their later growth spurt
Many UK teenagers are lacking in calcium, iron and vitamin A.

Adults
Requirements do not change much between the ages of 19 to 50, except during pregnancy and lactation.
Well balanced diet modelled on the Eatwell Guide essential.
Many UK adults eat too much fat, too much salt and not enough fruit and vegetables.

Elderly
Older adults need protein to repair worn out body cells. They need a good supply of calcium and Vitamin D in order to maintain healthy bones and teeth and iron to keep bloody healthy.
In wintertime, they may need a little more fat in their diet to provide body warmth. Fresh fruit and Vegetables are important for a good supply of vitamins and minerals.
Old people may have digestive problems or may have difficulty cutting food (because of arthritis) or chewing food (because of false teeth).
Examples of food suitable for the elderly = Soft foods – boiled potatoes, stew, soup, casseroles, one pot meals.
A good supply of fibre is needed to prevent constipation in the elderly who may be less active
Older adults may have a weaker sense of thirst. If necessary, they should be helped and encouraged to drink regularly.

Pregnancy & Lactation
Because the body becomes more efficient at absorption during pregnancy, normal nutritional requirements apply until the last third of pregnancy, when some extra energy and calcium is required.
Pregnant and lactating ladies should eat a varied diet rich in fresh fruit and vegetables and wholegrains (in line with the Eatwell Guide).
There are some foods to avoid:
- Unpasteurised milk products and undercooked meats/cured meat products – they may contain listeria which is harmful to unborn babies
- Pate, liver and liver products – due to high vitamin A content (Vitamin A is harmful to unborn babies if eaten in large quantities)
- Swordfish, marlin and shark as they are high in mercury which can be harmful to unborn baby

Special Diets: Compare the nutritional needs of different groups of people.

Medical Diets	Religious Diets	Ethical Diets
Nut & other allergies Must avoid the allergen, otherwise an allergic reaction may occur. Serious allergic reactions can result in anaphylaxis and even death. **The 14 common allergens which must be declared on menus and food packaging are:** Celery, Gluten, Crustaceans, Eggs, Fish, Lupin, Milk, Molluscs, Mustard, Nuts, Peanuts, Sesame, Soya, Sulphites.	**Halal (Muslim)** Halal is Arabic for permissible. Halal food is that which adheres to Islamic law, as defined in the Koran. Haram is the opposite to Halal and describes food which is not permitted under Islamic law. Haram items that Muslims will not consumer include pork and all pork products as well as alcohol.	**Vegetarian** Vegetarians do not eat any flesh – they do not eat meat, poultry or fish/shellfish. Vegetarians do eat dairy products and eggs (lacto-ovo-vegetarian).
Lactose intolerance - Link to website here People who are lactose intolerant do not make the digestive enzyme which is needed to digest lactose (a milk sugar found in dairy products). If they consume lactose, they will experience digestive discomfort including cramps, excess wind and diarrhoea. Lactose intolerant people can consumer lactose free milk and dairy products or dairy alternatives. They must be careful to ensure they get enough calcium in their diet.	**Kosher (Judaism)** Judaism instructs its followers to observe a kosher diet; this means no pork. Kosher food also does not mix dairy products and meat in the same meal/course. Foe example, a burger must be served without cheese.	**Vegan** Vegans avoid consuming any animal products – including milk and dairy products, Protein is a nutrient which can be lacking in a badly planned vegan diet – vegans can eat wholegrain cereals, nuts, beans, lentils and tofu. Calcium may be lacking in a vegan diet – some vegans replace dairy with calcium fortified alternatives such as soya milk or almond milk.
Coeliac - Link to website here Coeliac disease sufferers react to the presence of gluten; a protein found in wheat flour and wheat flour products. They must avoid consuming gluten. Gluten is present in any wheat flour – alternatives such as	**Hindu** Followers of the Hindu religion do not eat Beef, as they believe it is a sacred animal.	**Pescetarian** Pescatarians do not eat meat but will eat fish and shellfish.
Coronary Heart Disease - *Find out more click here* People who are diagnosed or at risk of Coronary Heart Disease are currently recommended to adopt a low sugar, low saturated fat, high fibre and fruit and vegetable Mediterranean style diet.	**Buddhist** Buddhists are usually vegetarian and do not consume meat or fish.	**Flexitarian** This is a new concept – followers of a flexitarian diet choose vegetarian or vegan diet meal choices for some parts of the week, to reduce their carbon footprint. Meat-Free Mondays campaign spearheaded this movement.

coeliac uk
live well gluten free

HALAL

Dairy free

vegan

NUT FREE

British Heart Foundation

Cooking Methods

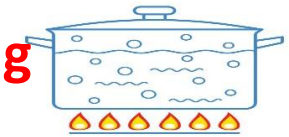
Nutrient Content Is Often Altered During Cooking

Cooking food improves digestion and increases absorption of many nutrients. For example, protein in cooked eggs is 180% more digestible than in raw eggs. However, several key nutrients are reduced with some cooking methods.

These techniques differ by water temperature:

- Poaching: Less than 82°C.
- Simmering: 85-93°C.
- Boiling: 100°C.

Boiling



-100oC

- Loss of vitamins
- Softens vegetables
- Gelatinisation happens making food like pasta softer and easier for the body to use.

Foods: Vegetables, fish, pasta, rice,

POACHING

-Enhance nutrients
-Add flavours
-Reuse nutrient stock

Foods: Eggs, fish, white meat chicken and fruit

STEAMING

-No direct heat
-Retains nutrients
-Adds flavour

Foods: Vegetables, fish, meat, rice, Chinese food

When the liquid from boiling is used in things like gravy, **100% of the minerals and 70–90% of B vitamins are retained.**

Steaming is one of the **best cooking methods** for **preserving nutrients, including water-soluble vitamins.**

Effect on nutrition

- Up to **50% of Vit C** is damaged when **green vegetables** are boiled.
- Vitamins **B1, B2 and B3** are damaged by heat and dissolve in the water.
- Some **calcium and sodium** is also lost as it dissolves in boiled water.

Starch (carbs) is gelatinised when cooked in liquid making it easier for the body to use.

- **Boiling fish** was shown to preserve omega-3 fatty acid content significantly more than **frying or microwaving.**

Effect on nutrition

- Vitamins **B1, B2 and B3** are damaged by heat and dissolve in the water.

Effect on nutrition

- Best method for conserving Vit C, as only 15% is lost as the food is not in direct contact with the water.

BOTTOM LINE:
While water-based cooking methods cause the **greatest losses** of water-soluble vitamins, they have **very little effect on omega-3 fats (essential fatty acids).**

Cooking Methods

Roasting

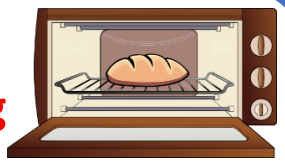
-Dry heat
-Cooking solid foods
-Food is often coated with oil and fat.

Foods: Vegetables, fish, potatoes, joints of meat,

Effect on nutrition

- High heat destroys most of Vit C.
- **Long cooking times** at high temperatures, **B vitamins in roasted meat may decline by as much as 40%.**

Baking



-Dry heat
- Not cooked in oil or covered with liquid

Foods: Cakes, muffins and bread

Effect on nutrition

- Heat can over cook protein making it difficult for the body to use.
- Damage caused to vitamin B and C.

BOTTOM LINE:
Roasting or baking does not have a significant effect on most vitamins and minerals, apart from B vitamins.

Nutrient Content Is Often Altered During Cooking

GRILLING

-Minimal oil
-Seal in flavour
-Reduce fat content

Foods: Fish, burgers, chicken, vegetables, seafood, halloumi, tofu, fruit.

Effect on nutrition

- Up to 40% of Vitamin B can be damaged. Maintains other vitamin and minerals in grilling.
- High heat can easily over cook protein.

BOTTOM LINE:
Grilling and broiling provide **great flavour** but also **reduce B vitamins**. *Grilling generates potentially cancer-causing substances!*

STIR-FRYING

-Minimal oil
-Nutrients intact
-Great texture

Foods: Vegetables, chicken, fish, sea food.

Effect on nutrition

- The fat used in cooking increases the amount of Vit A can absorb from some vegetables.
- Damage to Vitamin C and B is minimal due to short exposure to the heat.

BOTTOM LINE:
Sautéing and stir-frying improve the **absorption of fat-soluble vitamins**, but **they decrease the amount of vit C in vegetables.**

Tips to Maximize **Nutrient Retention** During Cooking

1. Use as little water as possible for poaching or boiling.
2. Consume the liquid left in the pan after cooking vegetables.
3. Add back juices from meat that drip into the pan.
4. Don't peel vegetables until after cooking them. Better yet, don't peel at all to maximize fibre and nutrient density.
5. Cook vegetables in smaller amounts of water to reduce loss of vitamin C and B vitamins.
6. Try to finish cooked vegetables within a day or two, as vitamin C content may continue to decline when the cooked food is exposed to air.
7. Cut food after rather than before cooking, if possible. When food is cooked whole, less of it is exposed to heat and water.
8. Cook vegetables for only a few minutes whenever possible.
9. When cooking meat, poultry and fish, use the shortest cooking time needed for safe consumption.
10. Don't use baking soda when cooking vegetables. Although it helps maintain colour, vitamin C will be lost in the alkaline environment produced by baking soda.

Factors to consider- planning suitable dishes

- The price for a meal in McDonalds would be less than in a 2-star restaurant. You are paying for the food, the service and the surroundings.
- Customers with lower disposable income are looking for good value meals at a reasonable price
- Customers with a higher disposable income may be less concerned about the price and want to try more expensive dishes.

- **Table D'Hote menu-** Fixed price for 2 or 3 courses with limited choices
- **A la carte menu-** Dishes are individually priced and cooked to order
- **Children's menu-** Familiar foods in child size portions lower price
- **Function menu-** Fixed price menu for parties and groups

All costs must be considered when planning to make a profit including ingredient costs, portion sizes, staffing, heating and lighting, laundry . The establishment needs to make a profit

E.g. pub food, needs a competent cook to prepare food and bar or waiting staff to serve the plates of food

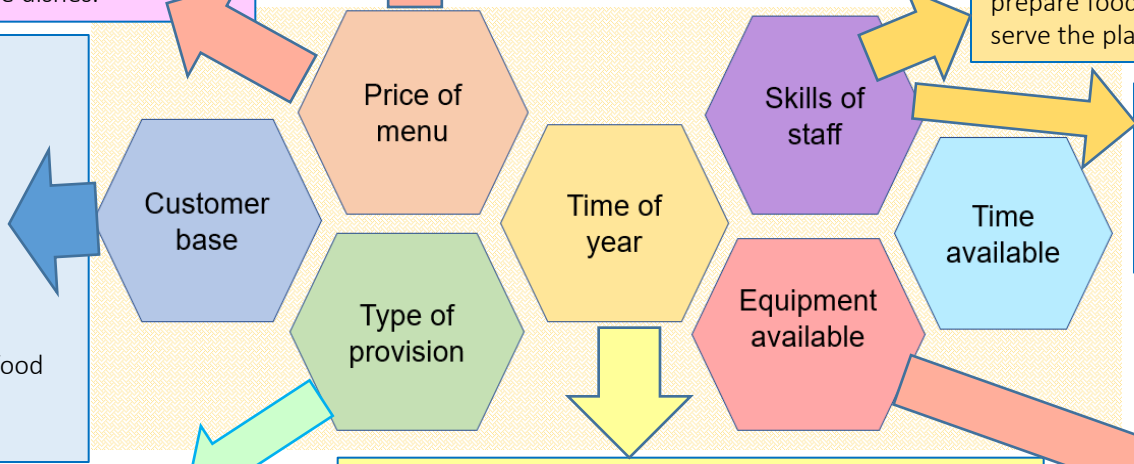
A 2-star restaurant needs a team of skilled chefs to prepare food from scratch and skilled waiting staff to do silver service

Short time for cooking and serving = limited menu
Long time for cooking and serving = extensive menu

Eat out for different reasons

- Special occasions
- Business
- Family meal
- Intimate meal
- Meals on holiday
- Regular
- Tourists
- Meal while travelling

All of these have different needs for food and service dependent on who the customer is and their needs.



- <u>The style of service</u>, i.e. Plate service, counter service, table service, silver service, gueridon service.
- **Affects the level of service** that the staff provide, and the skills needed by the kitchen and front of house staff
- **What type of food is going to be served**, i.e. café, fine dining, fast food, family restaurant
- **Venue and environment** i.e. plastic tables and chairs would be ok in a fast-food establishment but customers for fine dining would expect tables and tablecloths, napkins, cutlery condiments.

You need to comment on as many of these are you can for each of your dishes.

Food in season is readily available and peak of quality and taste, lower prices, less environmental impact in transport and storage

- E.g. strawberries are in season May- September
- E.g. spring lamb February- June
- New potatoes April-July
- Bramley apples August-December
- Runner beans July – September

Caterer link

BBC link

Foods not in season have to be imported or frozen, lower quality and taste different.
Customers prefer hot food in cold weather, cold food in <u>hot weather.</u>
<u>Seasonal events</u>: Valentine's day, Easter, Christmas?

Some items on a menu may need specialist equipment

- Pizza ovens
- Deep fat fish fryers
- Wok burners
- Tandoor ovens

You can't offer food on a menu if you don't have a way of cooking it
If you sell a lot of a dish, you may need to buy something to speed up preparation e.g. electric pasta maker

The environment

Hospitality and catering organisations need to be aware of environmental issues when running their businesses.

Dishes

- Preparation and cooking methods
- Ingredients used
- Packaging

Environmental issues

- Conserving energy and water when preparing food
- 3 Rs Reduce, Reuse, Recycle
- Food sustainability and provenance

Using ingredients

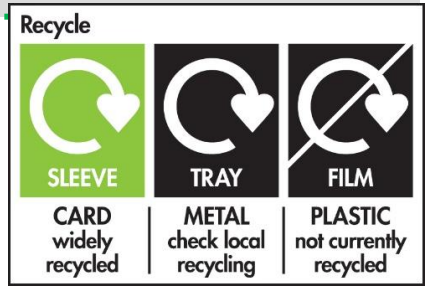
- ❑ Have the ingredients travelled from far away by environmentally damaging transport?
- ❑ Have the ingredients been processed and purified using a lot of energy carbon footprint
- ❑ Ingredients locally produced – saving food miles and environmental damage
- ❑ Organic ingredients not using excess fertilizer, pesticide or artificial hormones for animals
- ❑ Animal welfare e.g. free range or barn eggs, free range meats, organic meats
- ❑ Fruits and vegetables and meat produced locally or sustainably
- ❑ Ingredients such as cocoa, coffee, syrup produced by fair trade farmers.

Food miles/ Carbon footprint

The distance the food or ingredients travel from production/growing to where it is consumed or sold. Transporting food long distances is harmful to the environment CO_2. Some foods can't be grown in this country due to climate. Click on the foot to watch a video. Click here to find out your carbon footprint for food items.

Packaging

- ❑ When buying the ingredients, Look for ingredients that have minimum packaging
- ❑ Look for ingredients that have packaging that can be recycled
- ❑ Use reusable carrier bags to transport the ingredients after buying
- ❑ We can recycle the plastic food packaging materials – if the label says so
- ❑ We can also recycle glass from bottles and jars, paper and cardboard from packaging (recycled paper cannot be used for food products)
- ❑ Plastic and polystyrene does not biodegrade – so recycling is the best way to dispose of it
- ❑ Metal – aluminium and steel and foil from cans and foil used in food preparation can be recycled
- ❑ Use the recycling bins for packaging.



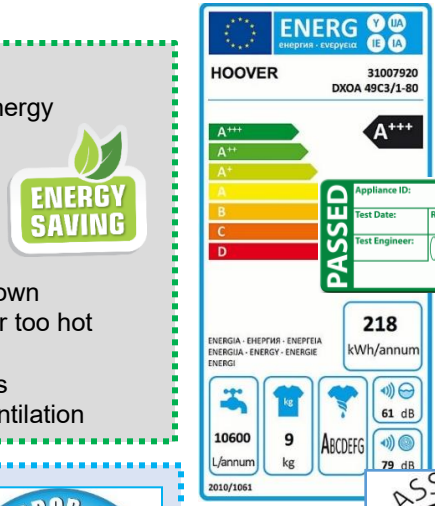
Preparation and cooking methods

- ❑ First in first out with ingredients in the fridge
- ❑ Do not trim and peel too much off the food- wastes food
- ❑ Conserve energy, put more than one thing in the oven, put lids on saucepans, do not put hot food in the fridge, turn off equipment when not using
- ❑ Conserve water, use minimum water when boiling (conserves nutrients too) use a bowl or plug when washing up , turn off taps
- ❑ Save peelings, bones, carcass to make stock, soup or sauce
- ❑ Use leftover bread to make breadcrumbs
- ❑ Use leftover fruit to make sauce, coulis.

The environment

Conserving Energy by:

- ❑ Keep equipment clean and maintained so it uses less energy including filters on ventilation and refrigeration
- ❑ Descale equipment used for boiling
- ❑ Keep lids on saucepans
- ❑ Energy efficient lighting, auto switch off
- ❑ Turn off equipment and lights when not in use
- ❑ Don't put hot food in fridges, uses more energy to cool down
- ❑ Energy efficient boilers etc for hot water, don't have water too hot (above 55 for legionella)
- ❑ Replace old equipment with more energy efficient models
- ❑ Gas heats up and cools down more rapidly but needs ventilation



REUSE
REDUCE
RECYCLE

Conserving Water by:

- ❑ Taps that disperse only short bursts of water
- ❑ Motion sensor taps
- ❑ Only use minimum water to cook food
- ❑ Use a steamer instead of boiling in water
- ❑ Reduce flow of taps, use a spray head for washing
- ❑ Have taps which turn themselves off
- ❑ Use a bowl, keep the plug in when washing up
- ❑ Full loads for washing machines and dishwashers
- ❑ Serve water on tables at customer's request
- ❑ Reduce flow rate to equipment such as potato peelers
- ❑ Low flow toilets and showers
- ❑ Water metering

Establishments can Reduce, Reuse and Recycle by:

- ❑ Only buy what is needed for preparation,
- ❑ Storage- check temperatures, use airtight containers label food with dates, use first in first out for ingredients
- ❑ Preparation- do not over trim, use carcasses and trimmings to make soups, stocks and sauces
- ❑ Portion sizes- do not offer excessive portion sizes people will leave lots of food, wastes energy in preparing food that is not going to be eaten
- ❑ Write menus that consider using offcuts such as chicken trimmings used to make a pie
- ❑ Turn dry fruit and veg into powders and seasonings
- ❑ Turn excess fruit and veg into chutneys, sauces, jams, pickles
- ❑ Freeze leftover food until it is used as ingredient- label
- ❖ Keep food in reusable containers
- ❖ Serve water in glass bottles or carafes
- ❖ Use refillable containers for condiments, salt and pepper, sauces etc instead of single serve
- ❖ Reusable table linens and serviettes that need washing instead of disposable ones
- ❖ Use food not served to make new meals e.g. colcannon with left over potato and green veg, stir fries with small pieces of veg, trifle with left over cake, meringue with left over egg white, soup with veg and meat leftovers, Bread and butter pudding or croutons with bread.
- ➢ Recycle sturdy containers for food storage
- ➢ Send food waste to be used for compost or animal feed instead of throwing It away
- ➢ Recycle used cooking oil. Some companies collect it for free and then turn it into bio diesel
- ➢ Recycle paper, cardboard, cans, glass bottles and jars , - councils collect for recycling
- ➢ Buy recycled glass, food grade plastic containers, recycled paper
- ➢ Use the recycling bins

Sustainability and Food Provence

FAIRTRADE

Fair Trade foods

are bought directly from the farmer, cutting out the middlemen. Farmers receive a fair and stable price for their products.

RSPCA ASSURED

The RSPCA Assured label makes it easy to recognise products from animals that have had a better life. RSPCA inspect indoor as well as outdoor farms, including free range and organic.
They require good water quality and careful handling which ensure the health and welfare of farmed fish.

SOIL ASSOCIATION ORGANIC

Soil association

Less use of artificial fertilizers or pesticides. Crops are grown in rotation, so less fertilizer is added to the soil. No Genetically modified ingredients. Animals are not overcrowded and not given drugs to make them grow faster.

How menu meets customer needs- Nutritional

Cooking methods

Some cooking methods add fat, adding too much fat to food increase the calories (energy content) drastically and is also thought to be a risk factor in cardiovascular disease. Cooks should be minimising their use where possible. These include:

- Frying - deep (submerging food in hot fat)
- Frying – shallow (frying food in 1cm or less of fat in a pan)
- Roasting (cooking in fat in the oven)



Healthier cooking methods only add small amounts of fat, or do not add fat to food at all. They can be dry (cooking without the use of water) or moist (cooking with water or steam). Healthier cooking methods include:

- Stir frying (cooking quickly in a small amount of oil at very high temps)
- Poaching (cooked gently in simmering liquid)
- Boiling (cooking food submerged in vigorously boiling 'rolling boil' water
- Steaming (holding food above boiling water to be cooked by the steam)
- Grilling – on a cooker or on a BBQ (food cooked by radiant heat from a flame or glowing element)
- Baking in the oven (dry heat)
- Stewing (slow-cooking on hob or in slow-cooker with liquid)
- Casseroling (slow-cooking in oven with liquid)
- Braising (slow-cooking **pre-sealed** meat and vegetables in oven with liquid)

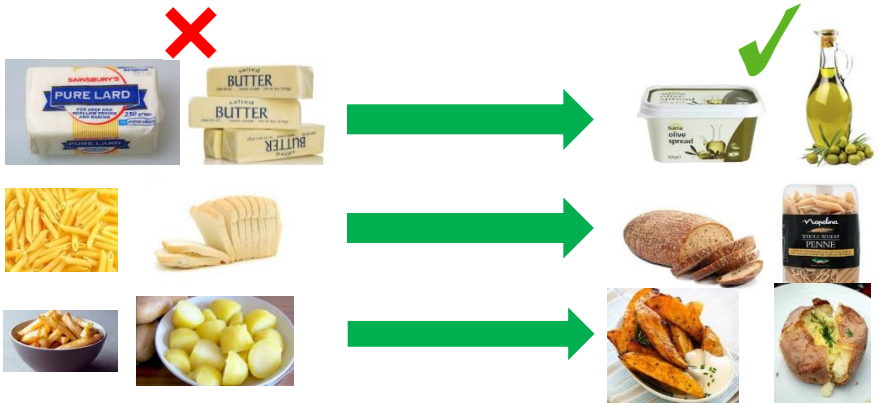






Preparation methods

- Do not add too much extra fat when preparing/marinating or cooking
- Trim fat off excess fat from meat where possible (leaving some is fine for flavour)
- Do not add too much extra salt when seasoning/marinating foods before cooking
- Do not add too much sugar when marinating foods



CHANGE THE INGREDIENTS USED:

- ✓ Avoid saturated fats such as butter, lard and dripping - Use heart healthy unsaturated fats such as olive oil, avocado oil
- ✓ Avoid using white flour where possible – use wholegrain or brown versions for extra fibre and B vitamins
- ✓ Leave the skin on potatoes for extra fibre and vitamin C
- ✓ Replace cream in recipes with reduced fat crème fraiche
- ✓ Replace mild cheeses with stronger ones, and use less
- ✓ REDUCE sugar content of recipes by using naturally sweet ingredients such as fruits
- ✓ Add **extra VEGETABLES, FRUITS, NUTS and SEEDS** into recipes where possible, **for extra fibre, vitamins and minerals** - these can be blended into sauces to 'hide' them for fussy eaters

How menu meets customer needs- ORGANOLEPTIC

Changes to make dishes healthier can affect OTHER aspects of the finished dishes in several ways….

Organoleptic means the qualities of food that people experience with their senses. There are 5 senses: sight, smell, taste and sound. To enable people to enjoy their food, it is important that the menu planning, preparation, cooking serving food is carried out well so that food is **appetising.**

SIGHT: *Appearance and presentation of the meal*

- Adding vegetables to a dish to increase fibre, vitamins and minerals may also affect the **colour** of the dish.
- Adding greens such as green peppers or green beans will **create a fresher,** more vibrant look.
- Adding tomatoes/red peppers to a dish will make it look brighter.

Remember – **contrast in colours** within a dish is good, makes dishes look more appealing and delicious!

- **Changing carbs to wholegrain or skin-on versions** may also change the colour of the dish, however this time may increase the presence of brown in the dish, which is considered a 'dead' or dull colour, and will need brightening up in other ways…
- Type of **serving dishes.**
- **Garnishing**
- Think cut, shape and form of food.
- Make sure plates and dishes are clean
- before serving food, to remove drips and splashes.







TOUCH: Texture *(how food feels in the mouth)*

- **Use fresh food-** stale food lose texture e.g. fruit, vegetables and fish.
- **Prepare food well to remove edible parts** e.g. shell, bones, stalk, tough skin.
- **Cook food well to avoid** unexpected textures e.g. lumps in a sauce, under cooked egg white, under cooked cake.
- **Cook food at correct temperature** and for correct time to allow textures to develop e.g. when melting chocolate, baking cake or bread, frying chicken.
- Reducing fat content in recipe may alter the texture, making it drier or more brittle.
- Adding vegetables or fruits to dishes can bring crunchiness, softness, chewiness.
- Changing the cooking method will also alter the texture – frying or roasting food in fat creates crispy crunchy textures, whereas replacing frying/roasting with the healthier methods of steaming, boiling, stewing etc will create soft textures. Grilling and barbecuing will also create chewy/crispy textures.

How menu meets customer needs- ORGANOLEPTIC

TASTE

- **There are 5 basic flavours: salty, sweet, bitter, sour and umami (savoury)**
- **Use fresh food-** stale food loses its flavour.
- **Cook food carefully** to avoid damaging flavours.

- **Reducing fat** content in recipe may alter the taste – it can reduce creaminess aka 'mouth feel'.
- **Reducing the fat** content of baked goods can also alter the taste – making them taste less rich.
- **Adding vegetables** to dishes can alter the taste in many ways depending on what fruit/vegetables is added – e.g. red peppers will bring sweetness, adding kale will bring an earthy taste, adding broccoli will add a fresh taste etc…
- **Changing carbs to wholegrain** or skin-on versions will affect the taste, making the dish have a 'nuttier' flavour
- **Adapting the cooking method** may also change the taste of a dish:
- **Steaming or poaching** will preserve the flavours of the original food whereas barbecuing or grilling food will also impart charred flavours.
- **Sautéing vegetables** in butter or oil bring out the flavour.
- **Making stock** from meat, poultry or fish bones plus vegetables, herbs and spices.
- **Roasting root vegetables** intensifies their flavour by evaporating water and caramelising the natural sugars they contain.
- **Using natural flavours** e.g. citrus fruit zest, fresh herbs and spices.
- Avoid using too much flavouring
- Take care with delicate foods like fresh- less is more.

Top tip: always taste test before serving- REMEMER FOOD

Five Basic tastes

SOUND

- The sound of food can make it more appealing.
- Certain foods you expect to sound in a particular way e.g. crisp to crunch, biscuits to snap and food being fried to make a sizzling sound.
- To preserve these sounds food needs to be cooked and stored correctly to maintain its texture.



SMELL - *Aroma*

- **Use fresh ingredients-** stale ones lose ability to produce aromas.
- **Using natural foods** that produce a strong aroma e.g. fresh/ dried herbs and spices, garlic orange and lemon zest and cooking methods that develop aromas e.g. grilling, roasting, baking and frying.
- Plan and **select combination of foods** to produce a mixture of aromas, but avoid using too many, as the overall effect will be spoiled.

How menu meets customer needs- Cost

For this part you need to explain how you will keep the costs of the dishes reasonably low . Your reasons could be….

- Buy **food in season** so it is not imported and expensive
- Buy **food locally** so that you don't have to travel too far to buy it and reduces carbon footprint e.g. support local business.
- **Minimise the waste** produced in both food and resources.
- **Control the portion** size so that you do not waste food that people are not going to eat, and everyone gets the same size portion.
- **Not buying ready prepared** ingredients because it is cheaper to prepare them from scratch.
- **Buying cheaper** cuts of meat, this can affect the quality and fat content.
- Buy **non branded** food- supermarket own brands are cheaper.
- **Freeze left** over foods or use in other dishes.
- Store the ingredients at the **correct temperature** so they don't go off.
- **Buying organic, free-range, fair-trade** foods will cost more but is better for the environment and improved taste e.g. free-range eggs, chicken, chocolate, bananas.

ASDA Butcher's Selection Beef Mince (Typically Less Than 20% Fat)
1kg Price £4.00

ASDA Butcher's Selection Lean Beef Mince (Typically Less Than 5% Fat)
1kg Price £6.19

ASDA Extra Special Aberdeen Angus Mince
500gPrice £4.00

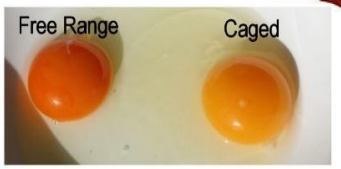
The **quality of the product** can affect its price and therefore can affect which people choose to purchase it. To the left are three minced beef packets from ASDA. The cheapest is a 20% fat mince, the next a 5% fat mince and the most expensive is made from an Aberdeen angus cow – one of the most luxurious beef products.

Portion control

Portion control is extremely important. Customers need to feel they are getting 'value for money' and having the same size portion as everyone else.

It helps the caterer when planning (how many portions will these ingredients make?) calculating selling price (how much should I charge to cover costs and make a profit?) and avoids waste.

Using standard recipes can help a caterer by determining how many ingredients will make 10, 20, 30 or more portions.



Production Plan – 2 dishes dovetailed together

Mise en place (preparation)

- Wash hand, tie up hair/ hair net, remove all jewellery
- Clean apron on
- Collect ingredients from the fridge, freezer, store cupboard.
- Weigh and measure
- Wash vegetables
- Peel and chop
- THINK everything before you combine ingredients.

Special points

- Coloured chopping board – use correct colour
- High risk food in fridge until ready e.g. chicken
- Use bridge and claw technique to prevent injury.
- Wash hands to prevent cross-contamination.
- Dough should bounce back when pressed, if not, continue kneading.
- Make sure knives are cleaned separately to prevent cuts.
- Use hot washing up liquid to kill off bacteria such as E. Coli. Temperature of water needs to be
- Use oven gloves to prevent burns.
- Dough needs to double in size, if not prove longer
- Ensure plate is clean to prevent food poisoning.
- Ensure garnishes are free from soil to prevent contamination from Clostridium Botulinum. Are they cut evenly?
- Wash all vegetable to remove soil and prevent E.coli
- Ensure table top is clean before rolling to prevent cross contamination.
- Temperature of cooked food 75 c for at least 2 minutes using a food probe (kills bacteria)
- Correct storage- fridge, freezer when and why
- Food waste- scrap all mixture off the bowl to prevent this.

Contingences:

- Include spare ingredients encase it goes wrong, a range of serving dishes to choose from.
- Explain what you would do if its not cooked properly i.e. cook it for 5 minutes longer and then test.

Plating and severing (last box on plan)

- Allow at least ten minutes at the end.
- Explain what you will serve it on.

Example of Production Plan

Ingredients for dish 1
Starter: Carrot soup with crotons
- *450g carrots peeling and chopped, etc,*

Ingredients for dish 2
Main: Sheppard's pie
- 250g white potatoes
- Etc.

Equipment
- Chopping board, peeler, Saucepan, Peeler etc.
- *You need to list everything you will use. Even better if you can colour code.*

Time	Method	Special points & contingences
8.30	**Mise en place.** Set up table. Collect serving dishes. Peel and chop potatoes. Prepare garnishes and decorations (whip cream, fan strawberries). Chop parsley. Peel and chop onion, dice bacon, chop mushrooms. Tidy table for starter.	Refrigerate perishables (chicken and cream). Potatoes in water to prevent discolouration. Light oven Gas 6 or 200C.
9.00	Gateaux- make sponge using whisking method. (Whisk eggs and sugar till think, fold in flour). Divide between 2 tins.	Fold in gently. Bake- Gas 6 – 20 mins.
9.20	Chicken chasseur, fry chicken to seal. Remove and place on plate. Fry bacon and onion, add flour, tomatoes, stock, puree etc. Re-add chicken pieces and mushrooms. Simmer.	Use tongs to turn chicken. Very low heat for at least 45 mins.
9.40	Check gateaux base- remove from oven if cooked. Turn onto wire rack.	Should feel 'springy' in centre. Use oven gloves.
9.45	Wash up. Put potatoes onto boil, once boiling reduce the heat and simmer. Simmer 20 mins on low heat.	Stir chasseur. Add tsp salt.