

# Year 8 Food Tech Knowledge Organiser (Week 1)

## Hazards in the kitchen

**Trip/slip hazards** - kitchen Cupboards/drawers/oven left open, Pan handles facing outwards on hobs and worktops, stools not tucked in, bags on the floor, spilt liquids not mopped immediately.

**Food not stored correctly. Unsanitary work area** - hands not washed, hair not tied back, work surfaces not cleaned before use, **cross contamination** using incorrect chopping boards/utensils for raw/cooked ingredients (red boards)

**Burns/ Cuts** - not concentrating whilst using knives, not using oven gloves to take hot items out the oven, metal spoons in hot pans;

**Fires** - items left close to an open flame, hot oil in pans left unattended.

**Equipment not used properly** - electric whisk/hand blenders blades/ beaters turned on/off before touching bottom of bowl and not held upright, fingers/hair/ties in reach of beaters.

**Use-by-date**  
You've got until the end of this date to use or freeze the food before it becomes too risky to eat.

USE BY:  
25/08/20  
KEEP REFRIGERATED

**Best-before-date**  
You can eat food past this date but it might not be at its best quality.

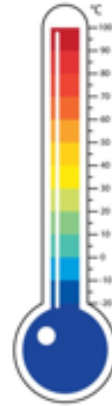
BEST BEFORE:  
25/08/21  
STORE IN A COOL DRY PLACE

**High risk food** - Proteins/fats such as dairy products, meat, fish, eggs, and cooked rice and pasta if not cooled quickly after cooking & stored below 5°C

**Food poisoning** illness caused by eating food /drinks contaminated with harmful bacteria.

**Temperatures to remember**  
To reduce the risk of food poisoning, good temperature control is vital:

- 5-83°C – the danger zone where bacteria grow most readily.
- 37°C – body temperature, optimum temperature for bacterial growth.
- 8°C – maximum legal temperature for cold food, i.e. your fridge.
- 5°C (or below) – the ideal temperature your fridge should be.
- 75°C – if cooking food, the core temperature, middle or thickest part should reach at least this temperature.
- 75°C – if reheating food, it should reach at least this temperature. In Scotland food should reach at least 82°C.







**Bacterial growth and multiplication**  
All bacteria, including those that are harmful, have four requirements to survive and grow:

- food;
- moisture;
- warmth;
- time.



## Understand the 4 C's Concept

-  **C** – Good Hygiene practice prevents Cross Contamination
-  **C** – Effective Cleaning removes harmful bacteria and stops them spreading
-  **C** – Effective Chilling prevents harmful bacteria multiplying
-  **C** – Thorough Cooking kills bacteria

# Week 2 KO - Food Preservation

## Food Preservation



Preserving food extends the shelf life by preventing bacteria to multiply

There are many different methods of preserving:

- Adding sugar (jam, jellies, sauces and chutney making)
- Adding vinegar (pickling)
- Smoking (meats and fish byprocess of flavoring, browning, cooking, or preserving food by exposing it to smoke from burning or smoldering material, most often wood)
- Curing (by the addition of salt with the aim of drawing moisture out of the food to prevent bacterial growth)
- Freezing (storing foods below -18°C and -24°C to make bacteria 'sleep')

## Week 3 KO – Food Processing

Before reaching our plates, various things (processing) are needed to prepare food to make it safe to eat, appetising, palatable and ready to transport to the shops ready for use by the consumer.

**Farm to fork** - 4 stages; **Agriculture, manufacture, distribution and consumption**

There are two main stages to food processing:

**Primary processing** is when foods are processed straight after harvest or slaughter to get them ready to be eaten or used in other products:

- wheat milled into flour.
- crops sorted, washed, trimmed and packaged and labelled.
- meat/poultry/fish - blood drained, internal organs, heads, feet and skins removed, cut into joints.
- Milk - heat treated, pasteurised or skimmed.

### Milk Production

#### Primary and secondary processing of milk

The processing of milk starts on the farm. The farmer milks the cows two to three times daily.

Milk is then transported from the farm to the factory to be processed.

The milk is then pasteurised. This means that it is heated to a high temperature to kill bacteria, it is then cooled again.

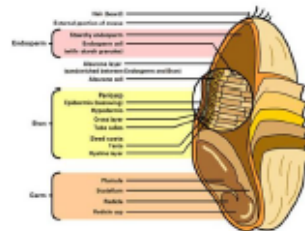
The cream is then separated from the milk. It is added back into the milk depending on what type of milk is required – skimmed, semi-skimmed or full fat.

The final step is homogenisation. This ensures the cream (or fat) is evenly distributed through the milk which will now have a smooth consistency and is ready to be sold.

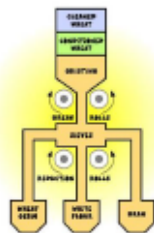


### Wheat Production

**Primary processing** is the conversion of raw materials into food commodities – for example, milling wheat into flour.



**Secondary processing** is when the primary product is changed to another product – for example, turning wheat flour into bread.



**Secondary processing** is when primary processed foods are either used on their own or mixed with other foods and turned into another food products such as:

- wheat flour into bread or pasta.
- Milk into cheese or yoghurt
- Fruit into jam/Vegetables into chutney

## Week 4 KO – Specific Dietary choices, needs & trends

Some people choose to eat a specific diet whilst others have no choice due to allergies. Eating specific foods could be fatal. There are 14 main allergens in the UK. **Food allergy** - allergy is a reaction your body has to a particular food or substance. Special dietary needs to consider...

- **Vegetarian**- do not eat meat, but generally eat dairy products.
- **Lacto-vegetarian** - eat dairy products, plant based foods - do not eat meat, eggs, fish/shell fish.
- **Lacto-ovo vegetarians** - eat dairy, eggs, plant based foods - do not eat, fish, shellfish.
- **Vegan** - plant based diet, no products from animals.
- **Coeliac**- gluten intolerant of any food containing gluten e.g. wheat, oat, barley, rye, flour, bread, cakes, pastries and biscuits.
- **Lactose/dairy intolerant** - milk and milk products.
- **Low fat/sodium/sugar diets** - avoid foods high in these.
- **Nut allergy**- anaphylaxis is an extreme reaction to eating/contact with nuts
- **Religious considerations.**

Religion	Pork	Beef	Lamb	Chicken	Fish
Islam	x	Halal only	Halal only	Halal only	✓
Hinduism	x	x	✓	✓	✓
Judaism	x	Kosher only	Kosher only	Kosher only	✓
Sikhism	x	x	✓	✓	✓
Buddism (strict)	x	x	x	x	x
Seventh-day Adventist Church	x	x	x	✓	✓
Rastafari movement	x	x	x	x	x

**Kosher** - only fish with fins and scales on and animals that chew the cud (grass) and have split hooves (sheep and cows) can be eaten. **Halal** - Islamic law states that poultry birds and meat animals (not pork as forbidden) be slaughtered in a special ritual.

### Veganism - why is it such a growing trend?

- **For the animals** - to prevent exploitation
- **For health reasons** - proven benefits linked to lower blood pressure and cholesterol, lower chance of heart disease, some cancers and type 2 diabetes.
- **For the environment** - meat production places a huge burden - methane gases, increased demand on crops, land and water to feed livestock. Plant based diets requires 1/3 amount of land compared to meat and dairy farming.

## Week 5 KO – Reasons for choice

### Factors that affect what we choose to eat:

- ❖ Medical conditions/allergies – coeliac disease, lactose intolerance, nut allergy etc
- ❖ Social and economic reasons – Cost, Availability/seasonality, Time (to buy, prepare & cook)
- ❖ Time of day (availability to cook, restricted through lack of resources e.g. school lunch box.)
- ❖ Food preferences (likes and dislikes, choose to follow a specific diets – vegan/vegetarian
- ❖ Culture/traditions.)
- ❖ Ethical/moral/religious values and beliefs prevent eating some food groups.
- ❖ Physical activity levels (athletes need more energy)
- ❖ Food provenance – Celebrations – weddings/birthdays/ bbq etc.
- ❖ Attitudes towards healthy lifestyle/nutrition.
- ❖ Lifestyle – prefer indoors gaming or outside walking , prefer cooking or eating out.
- ❖ Peer pressure
- ❖ Enticements and celebrity endorsements – adverts, special offers.

### Food Provenance

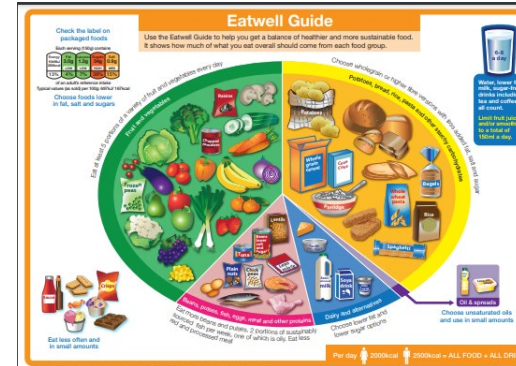
- **where food originates** from before they reach food manufacturers, shops, restaurants and our plates.
- food is either **grown** (crops); **reared** ( livestock and poultry); **caught** (wild animals like deer, boar, rabbit) or **gathered** ( wild foods such as herbs -wild garlic, fungi, berries and seaweed).
- it is important to know where our food comes from to ensure that it is safe to eat and morally and ethically to know that animal welfare has been considered; food hygiene standards have been met; and environmental protection has been considered (sustainability/carbon footprint/food miles). Foods with these assurances will display the relevant logo.



**Fairtrade logo** - Farmers and workers from under developed countries get paid a fair price for their work and produce.

**Red Tractor logo** and RSPCA assured scheme promote higher standards for quality products, safety and welfare of animals been looked after.

## Week 6 – Eatwell Guide (If Needed)



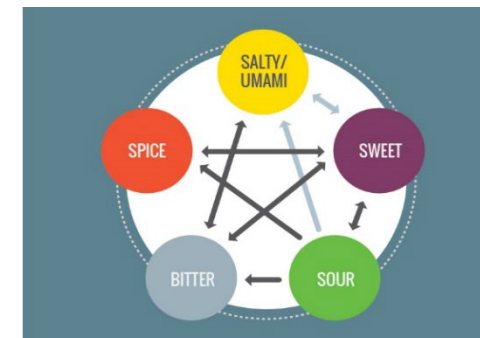
Remember the **5 key nutrients** needed to maintain good health; **Carbohydrate ( energy), Protein (growth & repair), Fat ( warmth, protection of organs & energy), Vitamins and Minerals.**

The Eatwell guide shows the different types of foods and drinks we should consume - and in what proportion.

### Tips for healthy, balanced diet:

- Eat at least 5 portions of fruit and vegetables every day.
- Base meals on starchy carbohydrates such as rice, pasta, potatoes, cereals, choosing wholegrain varieties where possible.
- Have some dairy or dairy alternatives (such as soya); choosing lower fat and lower sugar options.
- Eat beans, pulses. Fish, eggs. Meat and other proteins ( including 2 portions of fish every week, one of which should be oily) choose leaner cuts of meat and poultry, removing all visible fat/skin.
- Choose unsaturated oils and spreads and eat in small amounts.
- Drink 6-8 glasses of fluid per day, ideally water-based drinks
- Reduce the amount of sugar, fat and salt in your meals..

### The Flavour Star - 5 tastes



**ENHANCES**  
Brings out the other flavor

**BALANCES**  
Counteracts the other flavor. If your dish is experiencing too much of one flavor, use a balancing flavor to level it out.