KEY STAGE 3 FOOD RUBRICS

	Food Science/ Nutrition theory	Practical Lessons/ Skills
Mastered	Your book work demonstrates sustained excellence over the key stage. You are perceptive in your explanations. Your written work is concise, and you give detailed explanations of the topic studied. You have a comprehensive understanding of the theory that under pins Food Preparation and Nutrition. Your work uses key terminology articulately. You consistently earn full marks on long answer questions and in tests.	You have demonstrated sustained precise and accurate skills in the preparation of food. You can demonstrate the ability to make complex skilled products to a high level of finish. You have worked consistently independently and in an organised manner.
Skilled	You are perceptive in your explanations. Your written work is concise, and you give detailed explanations of the topic studied. You have a comprehensive understanding of the theory that under pins Food Preparation and Nutrition. Your work uses key terminology articulately. You consistently earn high marks on long answer questions and in tests.	You have demonstrated precise and accurate skills in the preparation of food. You can demonstrate the ability to make complex skilled products to a high level of finish. You have worked consistently independently and in an organised manner.
Confident	You are accurate in your explanations. Your written work provides detailed explanations of the topic studied. You show an understanding of the theory that under pins Food Preparation and Nutrition. Your work uses key terminology. You mostly earn high marks on long answer questions and in tests.	You have demonstrated accurate skills in the preparation of food. You can demonstrate the ability to make complex skilled products to a high level of finish. You have worked consistently independently and in an organised manner.
Secure	You can give explanations of the topic studied. You have an understanding of the theory that under pins Food Preparation and Nutrition. Your work uses key terminology. You mostly earn good marks on long answer questions and in tests.	You have demonstrated accurate skills in the preparation of food. You can demonstrate the ability to make skilled products to a good level of finish. You have worked independently and in an organised manner.
Developing	You can give brief explanations of the topic studied. You have some understanding of the theory that under pins Food Preparation and Nutrition. Your work uses occasional key terminology. You earn some good marks on long answer questions and in tests.	You have demonstrated mostly accurate skills in the preparation of food. You can demonstrate the ability to make products to a good level of finish. You have worked mostly independently and in an organised manner.
Emerging	You can give some brief explanations of the topic studied. You have little understanding of the theory that under pins Food Preparation and Nutrition. Your work rarely uses key terminology.	You have demonstrated some skills in the preparation of food. You can demonstrate the ability to make products to a good level of finish. You have worked with support.

Year 9 Food Knowledge Organiser
FOOD SCIENCE

Tier 3 terminology

Raising agents	Chemical or mechanical methods used to make products rise in cooking.
Bicarbonate of soda	An alkali raising agent that when heated with an acid releases CO2.
Baking powder	Bicarbonate of soda and cream of tartar mixed together to make a raising agent.
Self-raising flour	Plain flour mixed with baking powder.
Neutralisation	When acid and alkali react together to result in a neutral pH.
Foam	Whisked eggs that have changed structure because of the air trapped between the molecules.
Coagulation	The setting of protein (eggs) when heated.
Aeration	Adding air into cakes by whisking.

Cakes that are made using the melting method are dense and sticky. This involves melting the butter to mix into the cake batter.

Swiss rolls are light cakes made by whisking air in the sugar and eggs until thick and creamy.

Victoria sponge is made using either the creaming or all in one method. The creaming method traps air by beating the sugar and butter together. This results in a lighter cake. The all-in-one method has less air and results in a flatter cake.

Mechanical raising agents add air into the mixture by hand. This includes sifting flour, whisking eggs or beating the butter and sugar together.

Chemical raising agents release CO2 when heated to raise cakes.

Yeast is a biological raising agent. This is a microorganism that releases CO2 when it ferments. For this to happen it needs time, food, moisture and warmth.

Frying is an example conduction heat transfer. The particles in the metal vibrate which cause the pan to heat up. The food needs to be direct contact with the metal to cook.

Convection heat transfer is when liquid or steam is used to cook the food. The food needs to be in direct contact with the food. The heat travels through the water in a circular motion.

Radiation heat transfer uses waves to cook the food. This is different to the other methods because the food does not need to be in direct contact.

Year 7 Food Knowledge Organiser: Nutrition

The Eatwell guide shows what a balanced diet looks like. Each section shows how much of each food group you should have. You need at least 5 pieces of fruit and vegetables each day to get the correct amounts of vitamins, minerals and fibre. Carbohydrates should make up 50% of your daily energy. You should aim to have two portions of oily fish each week and choose lean meat instead of fatty and processed cuts. Dairy products can be high in fat so choosing lower fat options can control this. Dairy alternatives examples are soya or rice-based products. Unsaturated fats are the healthier option.

Tier 3 terminology

Anaemia	A lack of iron in the diet.
Eatwell guide	The Eatwell guide shows what a balanced diet looks like
Fibre	Helps waste food to be digested.
Complex carbohydrate	High fibre carbohydrate that is more difficult to digest and gives slow-release energy.
Starch	Starchy foods **are our main source of carbohydrate** and have an important role in a healthy diet.
Protein	Good for muscle growth, maintenance and repair.
Amino acids	Building blocks of the body.
Vitamins	A group of organic compounds which are essential for normal growth and nutrition and are required in small quantities in the diet because they cannot be made by the body.
Minerals	Minerals are those elements on the earth and in foods that our bodies need to develop and function normally.
Coronary heart disease	Coronary heart disease (CHD) is **when your coronary arteries become narrowed by a build-up of fatty material within their walls**.
Calories	Calories are **the amount of energy released when your body breaks down (digests and absorbs) food**
Oedema	Oedema is excess fluid in the body caused by a lack of protein.
Mycoprotein	Mycoprotein is a meat alternative protein made from mushrooms.

Macronutrients

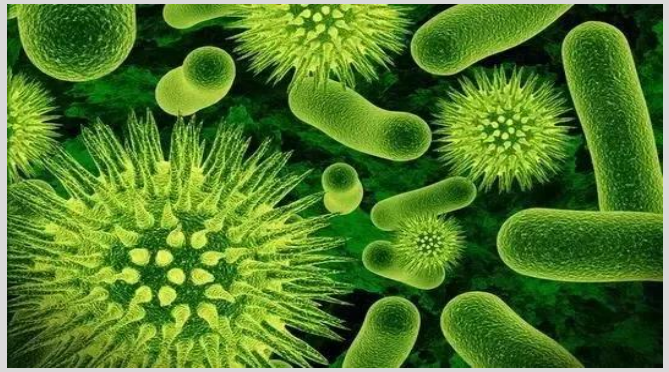
FAT	Needed for fat soluble vitamins, insulation and to protect bones and organs.
PROTEIN	Needed for muscle growth, repair and maintenance.
CARBOHYDRATES	Needed for energy.

Athletes need carbohydrates to given them energy for their event.

Body builders have a high protein diet to build their muscles.

Children need a diet high in calcium to help keep their teeth and bones strong. they need more protein than adults in proportion to their body size because they are growing

Year 7 Food Knowledge Organiser
FOOD SAFETY



Bacteria needs the following conditions to grow:

1. **Warm temperature**
2. **Moisture**
3. **Food**
4. **Time**
5. **The correct pH**

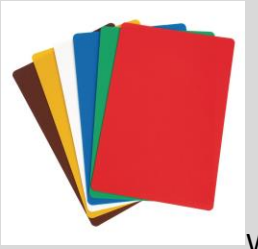
If you remove one of the conditions, then the bacteria cannot multiply as easily.

Condition	Control
Time	Use by dates
Correct pH	Acid/ pickling
Moisture	Drying, e.g. pasta
Food	Covering food
Temperature	Fridge/ freezer

Tier 3 terminology

Cross-contamination	Cross-contamination is what happens when bacteria or other microorganisms are unintentionally transferred from one object to another.
Bacteria	Bacteria are microscopic, single-celled organisms that exist in their millions, in every environment, both inside and outside other organisms.
Salmonella	An infection is usually caused by eating raw or undercooked meat, poultry, and eggs or egg products or by drinking unpasteurized milk.
Pathogenic	Pathogenic bacteria are bacteria that can cause disease.
Temperature probe	A piece of equipment for testing the temperature of the inside of food.

How to avoid cross-contamination



Use different coloured equipment.

Wash hands and equipment thoroughly.

Keep raw meat away from cooked food.

Symptoms of food poisoning include:

- **feeling sick (nausea)**
- **diarrhoea**
- **being sick (vomiting)**
- **stomach cramps**
- **a high temperature of 38C or above**
- **feeling generally unwell – such as feeling tired or having aches and chills**

The symptoms usually start within a few days of eating the food that caused the infection.
Sometimes they start after a few hours or not for a few weeks.

A fridge should be kept between 1 and 5 degrees. This slows down the multiplication of bacteria.

A freezer should be kept between 0 and -18 degrees. This stops the multiplication of bacteria. If food is defrosted, then the bacteria can multiply once more.

Food needs to be cooked to 75 degrees or more for bacteria to be killed.

Year 7 Food Knowledge Organiser
FOOD SCIENCE

Tier 3 terminology

Gelatinisation	The process when starch granules are heated in a liquid, causing them to swell and burst, which results in the liquid thickening.
Starch	Starch is a carbohydrate naturally found in many grains and vegetables, such as wheat.
Roux	Roux is a mixture of flour and fat cooked together and used to thicken sauces.
Yeast	A microorganism used to make bread dough rise.
Gluten	A protein found in flour.
Rubbing in method	The process of rubbing fat over flour with your fingertips.
Short	A word for crumbly.
Kneading	Working the dough with your hands to activate the gluten.
Proving	Leaving the dough in a warm place to rise. This gives the yeast time to release CO2.

'Short' (a technical term for crumbly foods) products are made by using the rubbing in method. This involved rubbing the fat over the flour with your fingertips.

Foods that are made using this technique are apple crumble, shortcrust pastry and shortbread.

Rubbing the fat over the flour creates a water-proof coating that prevents gluten from forming in the dough. Gluten would make the pastry rubbery and tough.

A starch-based sauce is made with fat, flour and liquid. When starch is heated in liquid is swells and burst which results in a thicker sauce.

Foods that are made using this technique are macaroni cheese and the white sauce in lasagne.

The process of making this sauce is gelatinisation.

Bread dough is made with strong flour which has extra gluten. This makes the dough stretchy. The yeast males the dough rise by releasing CO2.

Bread can be used to make lots of different products such as pizza and Chelsea buns.

Yeast needs time, food, moisture and warmth to ferment and release CO2. Kneading the dough activates the gluten and makes it more elastic. Proving the dough gives the yeast time to release CO2.