

Year 7 Revision for Summer exam

Revision Topics

- Healthy Eating
- Knife Skills and Washing up
- Plan of making
- Eatwell guide
- Bread, ingredients & function of ingredients
- Food hygiene
- Allergens
- Nutrients, specifically macronutrients

One piece of Government advice is to follow the 8 tips for healthy eating. Watch the clip, record the tips, why each is important plus ideas how to achieve the tip on the table on the sheet

<https://www.bbc.com/teach/class-clips-video/design-and-technology-gcse-eight-tips-for-healthy-eating/zby76v4>

Eight tips for eating well:

- 1) Base your meals on starchy carbohydrates
- 2) Eat lots of fruit and veg
- 3) Eat more fish
- 4) Cut down on saturated fat and sugar
- 5) Eat less salt
- 6) Get active and be a healthy weight
- 7) Don't get thirsty
- 8) Don't skip breakfast



Knife safety – rules and safe use



Knife safety

Two types of main knife holds for the preparation of food:

1. Bridge hold
2. Claw hold

Washing up

Work in a
team!

Washing up instructions

Stack **dirty**
things
on the side

Wash up in
hot
soapy
(detergent)
water

Dry up with a
clean tea towel



Wash the
cleanest
things first

Stack clean
items
upside
down on the
draining board

Use a brush
or scourer
for stubborn
stains

Change the water if it's
dirty or **cold**

Plan of making

What is a plan of **making and why is it important?**

It must include the following:

1. Timings of each stage
2. Order of work (including the method, equipment and techniques)
3. Special points (hygiene, safety or quality steps)

You must include equipment needed at each stage, estimate how long each stage will take, and add any special points related to hygiene/safety e.g. use oven gloves, wash up in hot water etc

Time	Order of work (including equipment used)	Special points

Key messaging

- The Eatwell Guide shows the proportions in which different groups of foods are needed in order to have a well-balanced and healthy diet.
- The proportions shown are representative of food eaten over a day or more, not necessarily at each meal time.
- Choose a variety of different foods from each food group to help get the wide range of nutrients the body needs to stay healthy .
- The Eatwell Guide divides foods into groups, depending on their nutritional role and shows the proportions of each of the groups needed for a healthy, varied diet.
- The Eatwell Guide applies to most people over the age of 2 regardless of weight, dietary restrictions/preferences or ethnic origin.
- Clip which explains this:

<https://www.youtube.com/watch?v=7MIE4G8ntss#t=21>

Lesson 5

Eatwell Guide

Check the label on packaged foods

Each serving (150g) contains

Energy	Fat	Saturated	Sugars	Salt
1046kJ 250kcal	3.0g	1.3g	34g	0.9g
	LOW	LOW	HIGH	MED
13%	4%	7%	38%	15%

of an adult's reference intake

Typical values (as sold) per 100g: 697kJ/167kcal

Choose foods lower in fat, salt and sugars

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

6-8 a day

Water, lower fat milk, sugar-free drinks including tea and coffee all count.

Limit fruit juice and/or smoothies to a total of 150ml a day.

Eat at least 5 portions of a variety of fruit and vegetables every day



Choose wholegrain or higher fibre versions with less added fat, salt and sugar



Eat more beans and pulses, 2 portions of sustainably sourced fish per week, one of which is oily. Eat less red and processed meat



Choose lower fat and lower sugar options



Choose unsaturated oils and use in small amounts



Eat less often and in small amounts

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

What are the 5 things you must do before a practical lesson starts?

1. Tie back long hair (boys and girls)
2. Remove blazer and jewellery/watches
3. Roll up long sleeves
4. Put on your apron/whites
5. Wash your hands

What is bread?

Bread is a food prepared from a dough of flour and water usually baked



What are the main ingredients in bread?

Basic main ingredients are: Flour, yeast, water, salt, fat



Now watch the following clip about how wheat is processed to make bread:

<https://www.youtube.com/watch?v=RwPzRMdMHOY&list=PLSXnX8IDffhQvzy4KNrTn7jOlnGB1rHt6&index=7>



FLOUR

Function of flour - framework for the bread, it has a high gluten content which when mixed with water forms a dough with an elastic, stretchy texture.

Strong white flour is used because of the high gluten content

What is gluten?

It is a protein formed from two separate proteins called glutenin and gliadin which combine when liquid is added to flour to make a dough. It gives plasticity (ability to be stretched and shaped) and elasticity (will shrink back) to a dough

Now watch the following clip about gluten and why it is so important in bread making:

<http://www.bbc.co.uk/programmes/p03qb4r3>

YEAST

Function of yeast - biological raising agent which ferments and produces bubbles of carbon dioxide that helps the bread to rise

Yeast is a micro-organism, one of the tiniest forms of life. If it is given warm, damp surroundings and starchy or sweet matter, it will start to multiply.



As the yeast multiplies, it turns starches and sugars to alcohol and produces carbon dioxide gas through the process of fermentation. It is this gas that adds the air into the dough, and makes it increase in size.

Yeast must be mixed with a warm liquid before adding it to flour. If the liquid is too cool, the yeast won't multiply; if it is too hot, the yeast will be killed.

Leavened bread – this is bread that has a leavening agent like yeast (we will be making bread rolls)

Unleavened bread – this is a bread that doesn't have yeast eg flat bread (we will be making soda bread)



WATER

Function of WATER - helps yeast ferment, binds the ingredients together and helps develop the gluten (too hot will kill the yeast, too cold slows down action of yeast), it needs to be warm.

SALT

Function of SALT - flavour for the bread, it also strengthens the gluten, but will kill the yeast if in direct contact.

FAT

Function of FAT - flavour for the bread, it also adds to the colour and helps to increase the shelf life. You can use butter or oil.

How many types of bread can you name?



Ciabatta



Focaccia



Brioche



Sourdough



Naan



Rye bread



Bagel



Soda bread



Pita



Whole meal

Some bread facts.....

- **Bread and bread products form the basis of our diet, and are staple products in our society.**
- **In the UK, we eat more than 9 million loaves of bread every day, and there are over 200 different varieties.**
- **Bread is an important source of carbohydrate, fibre, iron, calcium and thiamine.**
- **It is a versatile food – it can be served on it's own as well as being used to product a range of products that can form part of a main meal e.g. sandwich**
- **There are many different types and styles of bread available in the shops, bakeries and cafes due to the multicultural society we live in. The varieties of bread available have different textures for example: soft, chewy, crusty and airy.**
- **To make bread more interesting and varied, different ingredients are often added to add flavour e.g. cheese and herbs, as well as different toppings e.g. poppy seeds.**

Lesson 3

Ensure bread making sheet is fully completed and then use a green pen to self assess your work.

<i>1. Sieve flour into the bowl</i>	<i>2. Add oil, salt and sugar and mix with palette knife</i>	<i>3. Add yeast and stir well</i>	<i>4. Gradually add WARM water mixing with a palette knife</i>
What does sieving do?	Why are we using sugar?	Why is this added separately?	Why does it need to be warm? Why is it added gradually?
Sieving aerates the flour and removes any lumps	For an extra source of food for the yeast to ferment	Salt kills the yeast	Too hot will kill the yeast and too cold it won't activate the yeast Too much liquid will make the dough sticky

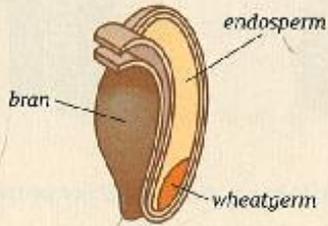
Lesson 3

<p>5. Knead the dough for 5-10 minutes until smooth and stretchy</p>	<p>6. Cut into 8 equal pieces and shape</p>	<p>7. Place into cold oven and turn to highest setting, cook for 15-20 mins</p>	<p>8. Remove from oven once cooked</p>
<p>What part of the hand is used? Why do we need to knead?</p> <p>The heel of the hand</p> <p>Kneading is required for the development of the gluten and to incorporate air bubbles. The gluten structure is also required to catch the gas bubbles produced during fermentation of the yeast.</p>	<p>Why do they need to be equal? What shapes could you make?</p> <p>So that they cook evenly</p> <p>Round, plait, swirls – list is endless!</p>	<p>What is proving?</p> <p>Some of the starch present in flour is broken down and is fermented by the yeast. This process leads to the production of carbon dioxide which causes the gluten network to expand and makes the dough rise; the produced gas is trapped in</p>	<p>How do you know they are cooked?</p> <p>Test for readiness by tapping the bottom, they should sound hollow which indicates the gluten framework has set</p>

Wheat grain:



Wheat is made from the wheat grain.



A grain of wheat

Endosperm is the main part of the wheat grain which is milled to make flour.

Bran is the outer coating of the wheat grain which provides fibre and B vitamins.

Wheatgerm is the part of the wheat that grows into the new plant. It contains fat and B vitamins.

What is the nutritional value of flour?

Flour contains starch and a little protein. White and brown flours have added calcium, iron, and the B vitamins thiamin and niacin.

Whole grains provide plenty of fibre, so it is best to eat foods made from whole wheat such as bread and pasta.

Gluten

Gluten is a form of protein found in wheat, rye, barley and oats. Gluten gives the structure for bread and cakes. Some people have an intolerance of gluten and buy gluten-free products. Here are some examples of gluten-free flours. They are made from cereals and legumes which don't contain gluten.



Wheat allergy

True wheat allergy is extremely rare, but the number of people who believe they may suffer from food intolerance is rising. Wheat-based foods normally contain a mixture of ingredients, any of which could cause an adverse reaction.

Coeliac



•People with Coeliac Disease CAN'T eat a protein called GLUTEN as it stops them from absorbing other nutrients.

•Coeliac's CAN'T eat normal bread or pasta.

•They have to get STARCH and FIBRE from other foods e.g. rice, potatoes or gluten free alternatives

Gluten is the protein that is found in a number of grains including wheat, barley and rye. Some people with coeliac disease are also sensitive to oats.

Look for this symbol on the label



Around 1 in 100 people in the UK suffer from Coeliac Disease.

Its a life long condition and there is no cure.

Symptoms range from vomiting and weight loss to tiredness, anaemia and breathlessness. It can also cause certain cancers and growth problems in children.

Food Hygiene

Food hygiene is necessary in order to produce and supply food which is safe to eat and this involves more than just being clean. A simple way to remember is the 4 C's:

- Cleaning;
- Cooking;
- Chilling;
- Cross contamination.



Bacteria Bites - Food Standard Agency Food (FSA) Hygiene Video
This 8-minute video demonstrates the importance of good food hygiene, focusing on the 4 Cs – complete the sheet as we go

<https://www.bing.com/videos/search?q=you+tube+bacteria+bites+video&view=detail&mid=F4515F16BA5CF6725AA7F4515F16BA5CF6725AA7&FORM=VIRE>

Cleaning:

Cleaning the kitchen is important to keep food safe and prevent bacteria from spreading.



'Clean as you go' means people make sure that they clean the area and utensils they have been working in or with, as they prepare food which avoids build up of mess and leads to better hygienic conditions.

Areas which need particular attention are:

- surfaces that come into contact with food, e.g. chopping boards, utensils
- surfaces that come into contact with hands, e.g. cupboard and fridge doors

Remember personal hygiene – washing hands, cover cuts, clean apron etc

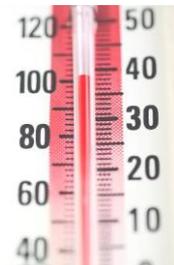
Cooking:

Hot food must be served piping hot, above 75°C. (CORE TEMPERATURE)



Bacteria will begin to die when the temperature rises above 60°C.

Some foods change colour when they are cooked.



If you have to reheat food, make it piping hot all the way through and only reheat it once

If you are 'hot holding' cooked food, it must be stored above 63°C

Chilling:

Reducing the temperature below 5°C slows the reproduction of bacteria.



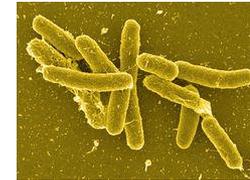
- **Fridge temperature is 0-5°C (slows growth of bacteria)**
- **Freezer temperature is -18°C (stops growth of bacteria)**
- **The temperature between 5°C– 63°C is sometimes called the ‘danger-zone’ this is because it is the temperature at which bacteria like the best and grow the most quickly**
- **Keep the fridge door closed as much as possible.**
- **Wait for food to cool down before it is placed in the fridge.**
- **Do not overload – if the fridge is full, the cool air will not circulate around the food.**

Cross contamination:

The process by which bacteria are transferred from one area to another.

The main carriers of bacteria and causes of cross contamination are:

- humans;
- rubbish;
- pets and other animals;
- food, e.g. raw meat or poultry.



salmonella

- Keep raw meat separate from ready – to eat food.
- Do not let raw meat drip onto other food – keep it in sealed containers at the bottom of the fridge.
- Never use the same chopping board for raw meat and ready to-eat food without washing the board (and knife) thoroughly in between.
- Do not wash meat before cooking it, this will not remove harmful germs and may spread germs onto work surfaces

4.7 Allergens

What is a food allergy?

An **allergen** is a substance or food that may cause an **allergic reaction**. Some food allergies are mild, but others can be very serious if the correct treatment is not given quickly.

In the worst cases of food allergies, some people suffer severe reactions which can stop them breathing. They need an injection of adrenaline from an EpiPen to help them recover.

Foods that people may be allergic to are shown in the diagram below, however, other foods can also cause allergies e.g. strawberries.



▲ Ingredients which can cause food allergies/reactions

Allergen information for these 14 foods must be highlighted in **bold** in the main ingredients list on the back of a food packet.

INGREDIENTS

Water, Carrots, Onions, Red Lentils (4.5%), Potatoes, Cauliflower, Leeks, Peas, Cornflour, **Wheat**flour, Cream (**milk**), Yeast Extract, Concentrated Tomato Pastes, Garlic, Sugar, **Celery**, Sunflower Oil, **Nuts**, Herb and Spice, White Pepper, Parsley

ALLERGY ADVICE

For allergens, see ingredients in **bold**

▲ Example of highlighted allergen ingredients on a food label

What is a food intolerance?

Food intolerances are much more common than food allergies. The symptoms of an intolerance are noticed after the food has been eaten, and include bloating and stomach pain.

Lactose intolerance is one of the most common types of intolerance of foods. People with lactose intolerance are not able to digest lactose – this is the natural sugar in milk and other dairy products.

About one in a hundred people suffer from an intolerance to gluten known as **coeliac disease**. Gluten is found in wheat flour and other cereals such as rye, oats and barley. People with coeliac disease react to gluten when it is eaten; their body attacks the healthy tissue in their body by mistake. Common symptoms are diarrhoea, bloating and weight loss.

Knowledge check



- 1 What is an allergen?
- 2 What can happen to someone who accidentally eats a food they are severely allergic to, such as nuts?
- 3 Name five ingredients which are allergens.
- 4 How can someone who has an allergy check the food they want to eat is safe for them?
- 5 What is coeliac disease?

Extension

- 6 Use the internet to find out about dairy-free alternatives to milk. Make a table to show how dairy foods can be substituted with non-dairy equivalents. You may find these websites useful:

- www.alpro.com
- www.ariafoods.com

Watch this



<https://www.youtube.com/watch?v=KEcXoQInysl>

Nutrients: protein & fat

An introduction to nutrients

The components found in food are called nutrients. The food you eat should provide your body with the nutrients it needs to stay alive and healthy.

There are two main types of nutrients:

- **macronutrients** are needed in large amounts by the body and are called protein, fats (lipids) and carbohydrates.
- **micronutrients** are needed in smaller amounts and are called vitamins and minerals.

Protein

Protein is one of the five nutrients, and is an essential part of your diet.

It is needed for growth, repair, maintenance and energy. Some groups of people need more protein than others. For example, children and pregnant women need more protein for growth, and everyone needs more protein after injury to repair the body.

Fat is one of the **five nutrients** and is an essential part of your diet. However, many people eat too much fat, which is not good for their health.

Fats may also be called oils or lipids. Fats such as butter are solid at room temperature. Oils are liquid at room temperature.

Why is fat important in the diet?

- It keeps the body warm.
- It provides energy.
- It protects and cushions internal organs by covering them with fat.
- It provides **fat-soluble vitamins**.

Fats may be either:

- **animal fats** – butter, lard, suet, cream, hard cheese. Animal fats are usually **saturated**.
- OR
- **vegetable fats** – sunflower oil, olive oil, rape seed oil, nuts. Vegetable fats are usually **unsaturated**.

Nutrients: carbohydrates

Carbohydrate is one of the five nutrients and is an important part of your diet. Carbohydrates are divided into three groups:

- 1 **Sugar** – all sugars, treacle and syrups, honey, jam and marmalade. These are called either simple sugars (e.g. glucose) or double sugars (e.g. sucrose).
- 2 **Starch** – potatoes, rice, pasta, bread and yams. These are also called complex carbohydrates as they are made up of many simple sugars joined together.
- 3 **Dietary fibre** – found in the cell walls of fruits, vegetables and cereals. This is also called a complex carbohydrate as it is made up of many simple sugars joined together.

Free sugars are **added sugars** such as sugar, syrup and honey, which are more harmful to your health.

Fruit sugars are natural sugars in the cell walls of plants.

The main function of carbohydrates is to provide energy for the body.

What happens if we eat too many carbohydrates?

- If the diet contains more carbohydrate than the body needs, it will be turned into fat and stored by the body. This can lead to **obesity**.
- If too much sugar is eaten, this can lead to tooth decay.

Why is fibre important?

Fibre is important as it keeps the **digestive system** healthy by helping the food waste travel through the body more easily.

If you don't eat enough fibre, this can cause **constipation**, which can eventually lead to cancer of the bowel.

Fibre can reduce your chances of getting heart disease and type 2 diabetes.

The recommended amount of fibre for adults is 30g a day.