Food and Nutrition
Year 9 GCSE Taster Booklet
<table>
<thead>
<tr>
<th>Food Curriculum Assessment Log</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

### DIET

- I can identify healthy eating advice
- I can describe current healthy eating advice
- I can explain current healthy eating advice and list the nutrients in food
- I can apply the current healthy eating advice to my own needs and describe the functions of nutrients in food.
- I can compare my diet to others with similar nutritional needs.
- I can identify the problems associated with malnutrition and obesity
- I can explain the differences between the nutritional needs of different groups of people.
- I can create recipes that cater for the nutritional requirements of others.
- I can develop recipes using nutritional analysis programmes to suit the nutritional needs of a variety of different groups.

### CONSUMER AWARENESS (Food Origins)

- I can identify food is produced in different ways
- I can describe the different influences on the availability of food e.g. seasonality
- I can explain the difference between organic and non-organic food.
- I can name the 6 R’s of sustainability
- I can describe the effect of the 6 R’s on food production and sustainability.
- I can explain the benefits of fair trade, organic farming and other moral, ethical issues.
- I can evaluate the effects of social, moral and ethical factors affecting food and its availability
- I can investigate information available to the consumer regarding food labelling, availability, traceability, animal welfare and assured food standards
- I can analyse future food predictions, which will be influenced by geography, weather and climate.

### FOOD CHOICE

- I can name factors that influence food choice, such as specialist diets
- I can explain the benefits of supermarket own brands, using greengrocers, butchers instead of large supermarkets.
- I can describe dietary influences on food choice.
- I can discuss the influence of role models and food marketing on food choice.
- I can develop a recipe for someone with a religious/dietary requirement
- I can compare the cost of making my own recipe to shop bought or eating out.
- I can create low cost recipes/products using leftovers where appropriate.
- I can analyse recipes/products for their suitability for a variety of different dietary needs.
- I can evaluate the role of lifestyle factors and advertising on food choice.
### FOOD LABELLING

<table>
<thead>
<tr>
<th>I can list the information found on a food label.</th>
<th>KS3</th>
<th>KS4</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can describe the information which is required by law.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can evaluate this information and explain how it helps to inform the consumer.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can discuss the difference between allergies and intolerance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can interpret different food labels.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can evaluate and compare different food labels.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can analyse food labels to make an informed choice.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can propose how food labelling is helpful to the consumer.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can evaluate various methods of informing consumers via food labels.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Cooking (Food preparation and handling skills)

| I can name, collect and safely use simple equipment with some help and degree of accuracy. |     |     |
| I can identify a range of preparation techniques.                                 |     |     |
| I can safely use most equipment with my level of accuracy increasing.             |     |     |
| I can demonstrate a wide range of preparation techniques and processes.          |     |     |
| I can work increasingly independently with a range of equipment to produce a quality finish to some of my products made. |     |     |
| I can work independently with a range of equipment and processes to produce a quality finish to most of my products made. |     |     |
| I can choose the right equipment and processes safely to produce a creative product with a quality finish. |     |     |
| I can select the right equipment and processes to creative and innovative product that has a professional finish. |     |     |
| I can choose from a wide range of equipment and processes independently with perfect accuracy, skills and precision to make a highly creative and professionally finished product. |     |     |

### Food Safety

<p>| I can name basic food safety principles.                                       |     |     |
| I can get myself ready to cook following these principles and be aware that food purchased and cooked needs to be stored in different conditions. |     |     |
| I can recognise that some foods have a greater risk of food poisoning and contamination than other. |     |     |
| I can recognise the importance of preparing and cooking food safely and hygienically. |     |     |
| I can implement the principles when preparing, cooking and storing food.       |     |     |
| I can explain the principles of food safety and hygiene and implement them individually. |     |     |
| I can describe what are date marks and storage instructions on food and drink labels and why they are used. |     |     |
| I can plan and carry out food storage, preparation and cooking in a safe and hygienic manner. |     |     |
| I can explain the principles of cleaning, preventing cross |     |     |</p>
<table>
<thead>
<tr>
<th>Active Lifestyles</th>
<th>contamination, chilling, cooking and reheating food.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I can identify how an active lifestyle is good for health.</td>
</tr>
<tr>
<td></td>
<td>I can explain why I need to drink more when active and what happens if I become dehydrated.</td>
</tr>
<tr>
<td></td>
<td>I can describe how much physical activity I should do in a day and what the benefits are.</td>
</tr>
<tr>
<td></td>
<td>I can identify the basics of how physical activity affects health.</td>
</tr>
<tr>
<td></td>
<td>I can identify why it is important to include a variety of activities in everyday living.</td>
</tr>
<tr>
<td></td>
<td>I can describe how different activities can affect health in different ways.</td>
</tr>
<tr>
<td></td>
<td>I can explain how physical activity contributes to physical, social and mental wellbeing.</td>
</tr>
<tr>
<td></td>
<td>I can explain the links between when and what to eat and drink before, during and after exercise.</td>
</tr>
<tr>
<td></td>
<td>I can understand how water is used by the body during physical activity and how extra water is needed, before, during and after physical activity.</td>
</tr>
</tbody>
</table>

**TEACHER GRADE**

---

**My Progress - Unit: Y9 Taster- Types of flour**

<table>
<thead>
<tr>
<th>Know</th>
<th>I know the names of different flours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding</td>
<td>I can name the plants flour is made from.</td>
</tr>
<tr>
<td>Doing</td>
<td>I can explain the function of different flours in various food products.</td>
</tr>
</tbody>
</table>

**Catch up activity**

**Now focus on...**
### My Progress - Unit: Y9 Taster- Raising agents

<table>
<thead>
<tr>
<th></th>
<th>Start</th>
<th>During</th>
<th>End</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I know that raising agents affect food products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understand</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How raising agents work to enhance various food products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can explain how raising agents work and give examples where they are used</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Catch up activity

Now focus on...

### My Progress - Unit: Y9 Taster- Food choice- breads of the world

<table>
<thead>
<tr>
<th></th>
<th>Start</th>
<th>During</th>
<th>End</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I know why people eat different foods in different countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understand</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>That produce gown in different countries influences food choice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can explain why people eat different foods in different countries.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Catch up activity

Now focus on...
## Practical Skills used in your Food Preparation and Nutrition Unit

<table>
<thead>
<tr>
<th>Skill</th>
<th>Techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Practice skills</strong></td>
<td></td>
</tr>
<tr>
<td>Weigh and measure</td>
<td>Accurate measurement of liquid and solids</td>
</tr>
<tr>
<td>Select and adjust cooking times</td>
<td>Select and adjust the cooking process and length of time to suit the ingredient for e.g.: to match the cut of meat and alternatives</td>
</tr>
<tr>
<td>Test for readiness</td>
<td>Skewer, visual colour check to establish whether an ingredient or recipe is ready</td>
</tr>
<tr>
<td>Judge and modify sensory properties</td>
<td>Change the taste and aroma through the use of herbs and spices. Presentation of food through garnishes and careful assembly.</td>
</tr>
<tr>
<td><strong>Knife Skills</strong></td>
<td></td>
</tr>
<tr>
<td>Fruit and Vegetables</td>
<td>Bridge hold, claw grip, peel, slice, dice, and cutting to even sizes.</td>
</tr>
<tr>
<td>Meat or alternatives</td>
<td>Prepare raw and cooked meat or alternatives (such as tofu, halloumi or cheese).</td>
</tr>
<tr>
<td>Preparing fruit and vegetables</td>
<td></td>
</tr>
<tr>
<td>Preparing fruit and vegetables</td>
<td>Grate, peel, wash and dry where appropriate</td>
</tr>
<tr>
<td><strong>Use of the cooker</strong></td>
<td></td>
</tr>
<tr>
<td>Using the grill</td>
<td>Use a range of foods such as vegetables, meat, or alternatives, such as halloumi to grill or toast.</td>
</tr>
<tr>
<td>Using the oven</td>
<td>Baking</td>
</tr>
<tr>
<td><strong>Use of equipment</strong></td>
<td></td>
</tr>
<tr>
<td>Using equipment</td>
<td>Use of food processor, mixer, microwave oven.</td>
</tr>
<tr>
<td><strong>Cooking methods</strong></td>
<td></td>
</tr>
<tr>
<td>Water based methods using the hob</td>
<td>Boiling and simmering</td>
</tr>
<tr>
<td>Dry heat and fat based methods using the hob</td>
<td>Shallow frying, stir frying.</td>
</tr>
<tr>
<td>Prepare, combine and shape</td>
<td></td>
</tr>
<tr>
<td>Prepare, combine and shape</td>
<td>Roll, wrap, mix, coat, layer ingredients, whilst demonstrating the technical skill or preventing cross contamination and handling high risk</td>
</tr>
</tbody>
</table>
foods correctly.
Sensory Word Bank

- Attractive
- Bright
- Colourful
- Cracked
- Crispy
- Crumbly
- Crunchy
- Delicate
- Dry
- Dull
- Firm
- Flaky
- Fragile
- Fresh
- Heavy
- Moist
- Pale
- Smooth
- Soggy
- Spongy
- Stringy
- Wet
- Artificial
- Bland
- Floral
- Fruity
- Minty
- Natural
- Nutty
- Plain
- Rich
- Salty
- Smokey
- Sour
- Spicy
- Sweet
- Stale
- Yeasty
- Zesty

Aroma

The nose detects volatile aromas released from food.
The intensity can also be recorded.

Appearance

- Acidic
- Aftertaste
- Artificial
- Bitter
- Bland
- Creamy
- Dry
- Fruity
- Overpowering
- Plain
- Rich
- Savoury
- Sharp
- Sickly
- Stale
- Sweet
- Sugary
- Tangy
- Tasteless
- Zesty
- Yeasty

Texture

- Bitty
- Brittle
- Bubbly
- Chewy
- Crispy
- Dry
- Firm
- Flaky
- Fluffy
- Grainy
- Hard
- Lumpy
- Moist
- Rubberby
- Smooth
- Soft
- Soggy
- Spongy
- Stodgy
- Tough
- Wet

Sensory Vocabulary

Sensory evaluation involves using one or more tests to determine different characteristics of food.
Foods can be evaluated for:
- Appearance
- Aroma
- Taste
- Texture

When food is placed in the mouth, the surface of the tongue can detect texture.
Different sensations are felt as the food is chewed.

The tongue can detect four basic tastes: sweet, sour, salt and bitter.
The intensity can also be recorded.

A product’s size, shape, colour and surface texture can be described.
The UK government recommends to eat as outlined on the ‘Eatwell guide’.

**Where do you find important nutrients?**

<table>
<thead>
<tr>
<th>Nutrients</th>
<th>Food examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbohydrates- starch</td>
<td></td>
</tr>
<tr>
<td>Carbohydrates- sugar</td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td></td>
</tr>
<tr>
<td>Fat</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Fibre</td>
<td></td>
</tr>
<tr>
<td>Micro Nutrients</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nutrients</th>
<th>Food examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin C</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td></td>
</tr>
</tbody>
</table>
Protein Information

Complete the word gap task:

Proteins assist with _______ and _______ of the body. Proteins are found in __________ products like meat, fish, cheese, milk and eggs. Vegetable sources include soya-bean products, _______ and _______.

Protein rich foods are classified into High Biological Value (HBV) and Low Biological Value (LBV).

HBV protein rich foods, mainly from animal sources, contain large numbers of amino acids and can be absorbed by the body quickly.

LBV rich foods, mainly from plant sources, contain less amino acids than HBV foods and need to be eaten with other (complementary) foods, so the body can absorb them. (examples: Beans on toast, Macaroni cheese)

Complete the table using the list of foods below. Classify them as animal or non-animal proteins and whether they are HBV or LBV.

<table>
<thead>
<tr>
<th>Animal</th>
<th>HBV or LBV</th>
<th>Non-animal</th>
<th>HBV or LBV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Grains</td>
<td>Grains</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LBV</td>
<td>LBV</td>
</tr>
<tr>
<td>Nuts</td>
<td>Poultry</td>
<td>Tofu</td>
<td>Meat</td>
</tr>
<tr>
<td>Fish</td>
<td>Dairy</td>
<td>Eggs</td>
<td>Soya</td>
</tr>
<tr>
<td>Pulses</td>
<td>Grains</td>
<td>TVP (textured Vegetable Protein)</td>
<td>Cereals</td>
</tr>
</tbody>
</table>

What is Quorn?

What are the benefits of eating Quorn over meat?
Carbohydrate Information

Complete the word gap task:

Carbohydrates are needed to give the body _______. There are two types of carbohydrate - _________ and ___________. Starch is found in ____________, cornflour, potatoes, pasta and flour. Sugar is found in ____________, vegetables, honey, milk and malt products.

2a. When might the body need fast release (sugary) carbohydrates?

__________________________________________________________________

2b. When might the body need slow release (starchy) carbohydrates?

__________________________________________________________________

3. Complete the table using the list of foods below. Classify them as fast or slow release carbohydrate.

<table>
<thead>
<tr>
<th>Fast (aka simple carbohydrate)</th>
<th>Slow (aka complex carbohydrate)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruit</td>
<td>Sugary Cereal</td>
</tr>
<tr>
<td>Jam</td>
<td>Oats</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Honey</td>
</tr>
<tr>
<td></td>
<td>Potatoes</td>
</tr>
<tr>
<td></td>
<td>Energy Drinks</td>
</tr>
<tr>
<td></td>
<td>Peas</td>
</tr>
<tr>
<td></td>
<td>Rice</td>
</tr>
<tr>
<td></td>
<td>Lentils</td>
</tr>
<tr>
<td></td>
<td>Milk</td>
</tr>
</tbody>
</table>

Which type of foods contain gluten?

If you were gluten intolerant (coeliac) which foods could you get your carbohydrates from?

-------------------------------------------------------------------------------------------------
**Fats Information**

1. Complete the word gap task:

<table>
<thead>
<tr>
<th>butter</th>
<th>insulate</th>
<th>saturated</th>
<th>energy</th>
<th>plant</th>
</tr>
</thead>
</table>

Fats help to provide concentrated sources of ________ and help to _________ the body in cold weather. There are two main types: _____________ fats are usually obtained from animal sources, for example __________ and lard. Unsaturated fats come from _____________ sources, such as sunflower oil.

Complete the table using the list of foods below. Classify them as saturated or unsaturated fats.

<table>
<thead>
<tr>
<th>Saturated Fats</th>
<th>Unsaturated Fats</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meat</th>
<th>Nuts</th>
<th>Cream</th>
<th>Olive Oil</th>
<th>Vegetable Oil</th>
<th>Eggs</th>
<th>Oily Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Response:

**Health Risks:**

.................................................................................................................................
.................................................................................................................................

**Changes to diet:**

.................................................................................................................................
.................................................................................................................................

What health risks does this boy face? If you were his parent, how would you change his diet?
Honeycomb Method

AIM: to use bicarbonate of soda to produce honey comb

Equipment:
digital weighing scales, saucepan, wooden spoon, food thermometer, baking tray

Ingredients:
- 200g caster sugar
- 50ml runny honey
- 1tbsp liquid glucose
- 1tsp bicarbonate of soda

Method

1. Place the sugar, honey, glucose and 50ml of water into a saucepan and bring to the boil

2. Continue to cook until the temperature reaches 150° C on a food thermometer. H&S- very hot! It should be a rich amber colour-not too dark. If you drop some into a glass of cold water it should set into a firm ball quickly.

3. Remove from the heat, allow to cool for 30 seconds so the bubbles disperse, then quickly beat in the bicarbonate of soda, stirring constantly. Science happening here! See next page

4. Pour into an aluminium or silicone-lined baking sheet and leave to cool for 30 minutes.

5. Break into shards and store in sealed container until you want to serve it.
The Science

Sodium bicarbonate (NaHCO₃), sold as bicarbonate of soda, is generally used in cake making to encourage the cake to rise by formation of carbon dioxide.

In cakes, and model volcanos, this decomposition to carbon dioxide occurs due to the presence of an acid.

Sodium Bicarbonate + acid = Carbon dioxide

In this recipe it is mainly the heat of the sugar that causes the bicarbonate of soda to break down releasing carbon dioxide making your runny syrup bubble furiously. It is really important to make sure the sodium bicarbonate is well mixed or else your honeycomb may taste a bit salty. (for excess sodium)

There are two types of candy, crystalline and non-crystalline. In crystalline candy the syrup is cooled slowly and either forms large crystals or a grainy texture or small crystals for a smooth texture.

In non-crystalline candy like honeycomb we don’t want the sugar syrup to form crystals, so we cool it quickly by putting it on a baking tray. This creates a hard brittle texture similar to boiled sweets.

1) Which ingredient in cakes causes the bicarbonate of soda to break down releasing carbon dioxide?

2) Which ingredient in the honeycomb recipe causes the bicarbonate of soda to break down releasing carbon dioxide?

3) Evaluation:

EBI:

Skills used:
Science Investigation - Raising Agents in Scones

AIM: Making a batch of scones, and investigating the most effective raising agent in terms of external and internal appearance, texture, degree of rise and flavour.

Equipment:

You will need for each variation:

Digital scales, Mixing bowl, Sieve, Small knife, Flour dredger, Rolling pin, Scone cutter, ruler or Scone rolling guides, Palette knife, Measuring jug, Pastry brush, Baking tray, Oven gloves, Cooling rack, Digital timer / stopwatch / clock with a second hand, Serrated knife

Ingredients:

Control – 115g plain flour, pinch of salt, 5g baking powder, 15g butter, 70ml fresh milk.

Repeat the above experiment with the following variations:

Variation 1 – 115g self-raising flour, pinch of salt, 15g butter, 70ml fresh milk.

Variation 2 – 115g plain flour, pinch of salt, 15g butter, 2.5g bicarbonate of soda, 5g cream of tartar, 70ml fresh milk.

Variation 3 – 115g plain flour, pinch of salt, 15g butter, 5g bicarbonate of soda, 70ml fresh milk.

Method:

1. Preheat oven to 230°C (210°C if using a fan oven)
2. Sift the flour, salt and raising agent/s into the mixing bowl.
3. Cut the butter into small pieces, then use your fingertips to rub it into the flour until the mix resembles fine breadcrumbs.
4. Add the milk all at once and mix quickly to form a soft dough.
5. Knead gently for a few seconds until the dough becomes smooth, and then roll out onto a lightly floured surface to a 2cm height.
6. Cut into rounds using a scone cutter, making sure that you use the same size cutter for each variation and that each scone is rolled out to the same thickness.
7. Glaze the tops, not the sides, with milk.
8. Bake at 230°C (210°C if using a fan oven) for 10 minutes.
9. Remove from oven and transfer to a cooling rack. Make sure that the scones are clearly labelled so that they do not become muddled up.
10. Use a serrated knife to cut one scone from the Control and each Variation in half, so that you have 2 half-moon shapes.
11. Measure the height of each one with a ruler. Examine the texture and appearance (including the colour), and then taste the scones
Results Compare your findings in the table below:

<table>
<thead>
<tr>
<th>Comments</th>
<th>Control</th>
<th>Variation 1</th>
<th>Variation 2</th>
<th>Variation 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>External appearance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal appearance/texture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree of rise</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flavour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) Conclusions Summarise your findings here. You should consider the following:

Rank samples in order of preferred rise ......................................................................................................

Rank samples in order of preferred appearance................................................................................................

Rank samples in order of preferred texture.....................................................................................................

Rank samples in order of preferred flavour .....................................................................................................

2) In your opinion, which is the most successful sample? Explain your answer.
...........................................................................................................................................................................

3) Write a paragraph explaining the action of the raising agents when scones are baked.
...........................................................................................................................................................................
...........................................................................................................................................................................
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...........................................................................................................................................................................

Extension: What happens to your scones if too much raising agent is added?
...........................................................................................................................................................................

Extension: What happens to your scones if too little raising agent is added?
...........................................................................................................................................................................
**Title of Experiment:** What conditions do Yeast need to act as a raising agent in bread making?

**Description of Experiment:**

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

**Hypothesis:** What do you think will happen?

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

**Draw what you think will happen**
**Food Science Investigation: Flour**

**AIM:** Determine the suitability of flours in bread making.

Investigate the amount of gluten formed in dough made from different flours.

<table>
<thead>
<tr>
<th>Type of flour</th>
<th>Strong Plain Flour</th>
<th>Self Raising Flour</th>
<th>Cornflour</th>
<th>Gram Flour</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weight in grams before investigation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Weight in grams after rinsing out the starch</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>% of gluten</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Height of gluten ball in mm after being cooked</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Width of gluten ball in mm after being cooked</strong></td>
<td></td>
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</tr>
</tbody>
</table>

Did any of the balls disappear? If so, why do you think this is?

Were any of the samples more... might this be?
What do you know about bread?

1. The name of the protein that helps to make bread dough stretchy and elastic is ____________________________

2. Some people can't tolerate ___________________, the condition is called_____________________

3. Alternatives to wheat flour are: ______________________________

4. The best flour for making bread is
   □ self raising flour   □ plain flour   □ strong plain flour
   Because ________________________________________________________

5. The ingredient in bread that produces carbon dioxide is ________________

6. The correct way to write the chemical formula for carbon dioxide is
   □ CO   □ CO²   □ co2   □ CO

5. What is the function of yeast?
   ________________________________________________________________
   ________________________________________________________________

6. The 4 conditions that yeast needs to grow are:
   1 …………………
   2 …………………
   3 …………………
   4 …………………

7. Yeast is □ an animal   □ a vegetable   □ a plant

8. The correct spelling is □ doe    □ doh    □ dough
# Product Analysis – Existing Bread Products

<table>
<thead>
<tr>
<th>Name of Product</th>
<th>Origin</th>
<th>Description of Product</th>
<th>Taste</th>
<th>Texture</th>
<th>Good points / improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
Naan bread

Ingredients and functions

110g plain flour .........................................................
1 tsp caster sugar .........................................................
pinch salt .................................................................
½ tsp baking powder .........................................................
60-65ml milk ............................................................
1 tbsp vegetable oil .........................................................
Optional: 1 tbsp butter to serve ........................................

Preparation method

1. For the naan bread, sift together all the dry ingredients in a bowl and mix until well combined.
2. Mix the milk and vegetable oil in a jug and pour into the dry ingredients. Combine the mixture and knead on a clean work surface for 6–8 minutes.
3. Place the dough into a bowl, cover with a damp tea towel and leave in a warm place for 15 minutes.
4. Divide the dough into 2-3 balls and roll them out on a floured work surface into circles.
5. Rub the dough circles with oil and place into a heavy-based frying pan over a medium heat for 1–2 minutes on each side. (You may need to do this in batches.)
6. Brush the bread with melted butter and serve immediately.
<table>
<thead>
<tr>
<th>Dish/Dishes:</th>
<th>Date cooking:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Shopping list</th>
<th>Equipment list</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butcher:</td>
<td>Preparation:</td>
</tr>
<tr>
<td>Grocer:</td>
<td>Equipment:</td>
</tr>
<tr>
<td>Green grocer:</td>
<td>Serving dishes:</td>
</tr>
<tr>
<td>Dairy:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Order of work</th>
<th>Special points</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
Evaluation ........................................date........
...to be completed in full sentences

Comment on the aroma, appearance, taste and texture of your Food product

Aroma ..............................................................................................................................

Appearance ...................................................................................................................

Taste ...............................................................................................................................

Texture ..........................................................................................................................

1) Use the word bank for sensory descriptive words to complete the star diagram.
2) List the skills you have used below:

..............................................................
..............................................................
..............................................................
..............................................................
..............................................................
Fresh Pasta Recipe

Ingredients:

- 100g flour (or grade 00 Italian flour), extra for rolling out
- 1 egg
- A pinch of salt
- Water, if needed

Method

1. Make mound with the flour on your work surface and scoop out a well in the middle. Pour the eggs into the hole, add the salt, and work the eggs and the flour together till you have a smooth dough, adding just a drop of water if necessary, and no more. Knead the dough for ten to fifteen minutes, until it is smooth, firm, and quite elastic. Don’t skimp on the kneading or the dough will tear while you’re rolling it out.

2. While kneading, the gluten in the wheat is stretched, giving the dough elasticity so it can stay together when rolled out. (Gluten is a protein composite that appears in foods processed from wheat and related species, including barley and rye).
3. You are now ready for the hard part: separate the dough into two pieces. Flour your work surface and start to roll out the dough, rolling from the middle, flipping it occasionally, and flouiring it as necessary to keep it from sticking. Roll out as thin as you can, the pasta will almost double in thickness while cooking.

4. Once you've rolled out the sheet, either use it to make stuffed pasta such as ravioli or tortellini, for cannelloni, lasagna, or cut it into strips.

**Cooking instructions:**

Cook the pasta in salted, boiling water. Since it's fresh, it will cook in three to five minutes. Do not let it overcook! Soft wheat flour has much less gluten than the durum wheat used in commercially prepared dry pastas, and will consequently become flabby if it overcooks.

**Tomato ragù**

A basic tomato sauce that can used with pasta, meatballs, or on grilled chicken or lamb.

**Ingredients and Functions**

- 1 x 400g/28¼oz can of plum tomatoes ...........................................
- 1 celery stick ........................................................................
- 1 carrot ........................................................................
- 1 onion ........................................................................
- 1 bay leaf ........................................................................
- handful of basil leaves ......................................................
- 1 glass of water ...................................................................
- 1 tbsp tomato purée ...........................................................
- 2 tbsp olive oil ...................................................................
- salt and freshly ground black pepper .................................

**Preparation method**
1. Finely chop the celery, carrots and onions, fry them gently in a large tall pan in olive oil until softened and golden-brown.
2. Add the tomatoes, basil, bay leaves, tomato purée, water, salt and freshly ground black pepper.
3. Mix well, cover with a lid and allow to simmer on a low heat for approximately 2 hours. (Make sure you stir occasionally
Comment on the aroma, appearance, taste and texture of your Food product

<table>
<thead>
<tr>
<th>Aroma</th>
<th>Appearance</th>
<th>Taste</th>
<th>Texture</th>
</tr>
</thead>
</table>

3) Use the word bank for sensory descriptive words to complete the star diagram.

4) List the skills you have used below:

.................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................
Bread Research
What happens inside the bread? Fill in the gaps using the words below.

<table>
<thead>
<tr>
<th>Kneaded Structure</th>
<th>Gas</th>
<th>Proving</th>
<th>Carbon Dioxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>The dough is ...... to give the bread its texture. The protein in the flour is stretched to make an elastic dough and pockets of ............ are formed.</td>
<td>Whilst the dough is ................. (resting), bubbles of carbon dioxide gas are formed from the yeast action. These help to stretch the dough and make it rise.</td>
<td>In the oven the gas bubbles (............... and air) expand with the heat. This makes the bread rise further.</td>
<td>Eventually the heat sets the loaf giving it a well risen ............ and a light and spongy texture.</td>
</tr>
</tbody>
</table>

What yeast needs to work: Fill in the gaps using the words below.
What yeast needs to work | Where it gets it from
---|---
Warmth is needed so that yeast cells can grow and multiply | ......................... water
The yeast needs feeding to grow | ......................... which is added to the recipe
The dough needs to become elastic so that it will stretch and rise when the yeast starts to ferment | The ......................... action
Time for the yeast to do its work and to produce carbon dioxide gas which raises the dough | The bread is set aside for a period of ......................... (about 15 minutes)
A flour improver may be used to speed it up | Ascorbic Acid (.........................)

Function of Ingredients

Read the functions below and select the most important ones for your recipe.

Flour

Wheat flour is the most important ingredient in home baking. There are many different types of flour, such as stone ground, wholemeal and cookie flour. Flour as an ingredient has many different and important functions?

- Provides fibre (especially if wholemeal)
- If Self-Raising, makes mixtures rise
- Thickens sauces
- Forms the bulk of bread, pastry and cake mixes
- If wholemeal, provides colour and texture
- Gluten in flour produces a stretchy dough
- Provides carbohydrate, Vitamin B, calcium and iron

Sugar
Ever tasted a sugar-free cookie? Not nice. Some people may even cringe at the thought of having no sugar to dip their strawberries into! Well, although it does it well, making things sweet isn't the only thing that sugars good for. Yes... really!

- Provides sweetness
- If brown, provides colour and texture
- Large amounts prevent micro-organism growth (for example, jam/marmalade)
- Caramelises to produce a brown colour
- Retains moisture
- Helps to trap air in cake mixtures
- Provides carbohydrate

**Raising Agents:**
- **Yeast:** is a fungus, which needs warmth to develop.
- **Bicarbonate of soda:** this alkali releases its raising agent when combined with acidic ingredients such as yoghurt or milk.
- **Baking powder:** a combination of bicarbonate of soda and cream of tartar. Adding liquid to it causes it to bubble and expand and make cakes rise.

**Eggs**

From an Egg Mc Muffin, to a lemon meringue pie... You can use them for anything!

- Hold air when beaten
- Coagulate (sets) when heated
- Add colour to mixtures
- Thickens sauces, custards, etc.
- Glaze bread, scones and pastry
- Bind ingredients together
- Provide protein, fat, iron and Vitamins A, B, and E

**Fats/Oils**

They may not be that good for you, but fats and oils are definitely essential ingredients in many, many dishes.
- Provide flavour
- Keep products moist and extend shelf-life
- Add colour to foods
- Make pastry 'short' by coating the flour to stop gluten developing
- Hold air when creamed with sugar
- Oil forms an emulsion with liquids (for example, mayonnaise)
- Provide energy and Vitamins A and D

Food Packaging

Food Packaging has a number of different **functions**:  
- To contain the product
- To protect the food from damage
- To protect the food from contamination
- For convenience
- To identify what the product is
- To provide information
- To extend the shelf life (preserve)
- To make the product easy to handle

There are a number of different **types** of packaging:
Packaging and Labelling Questions

1. Why is food packaged?
   - To ........................................... the food (help it keep longer)
   - To ........................................... the food from damage.
   - To ........................................... what the product is
   - To provide .............................................

2. What materials are used to package food?
   - Paper
   - C...........................................
   - M...........................................
   - G...........................................
   - P...........................................
   - T...........................................
3. What information MUST be on a food label by law?

- N...................... of food product.

- Description of the .................

- List of ing....................., listed in order from largest quantity to smallest quantity.

- B....................... b..................... date.

- Special s....................... instructions.

- Manufacturers’ n..................... and c..................... details.

- The process used in m......................

- C....................... / heating instructions.

- W....................... of the product (not for all foods e.g. bread)

Food Labelling

Labels help me to make choices about the food I buy.

Food labels provide me with lots of important information.

The following information is found on food labels by law:
Learning Objective

By the end of this activity you should know the 4C’s for good food hygiene.

**Keywords:** hygiene, food poisoning, cross-contamination, temperature, try using the word *bacteria* rather than germs.

Food hygiene is about preventing food poisoning. Food poisoning bacteria can grow very quickly in food if it is not handled properly, cooked properly or stored properly. There are laws which control how food manufacturers can prepare and sell food. Statistics show that you are more likely to get food poisoning from a home-made meal than you are from a bought one. What are the symptoms of food poisoning?

Make a list of the types of food that are most likely to give you food poisoning. These are called ‘high risk foods.’

**Video**
Watch the video from the Food Standards Agency and read brochure titled *Preventing Food Poisoning*. Write food hygiene rules of each of the 4C’s. (http://www.flyonthewall.com/FlyBroadcast/FSA/BacteriaBiteBusiness/) 

**The 4C’s**

1. C____________

2. C____________

3. C____________

4. C____________
Y9 Taster
Food and Nutrition

Name...........................................................................
Group...........................................................................
Teacher.......................................................................