

# Year 9 Knowledge organiser– Pastry

## Ingredients in pastry

Ingredients have different functions depending on the type of pastry that is made. The ratio of each ingredient determines the end result in terms of texture, taste and finish. The three ingredients in all pastries are:

Flour- Flour forms the structure of the pastry.

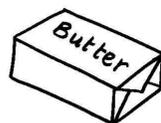
Soft plain flour (low gluten content) used in shortcrust to give a short crumb.

Strong plain flour (high gluten content) used in flaky/rough puff pastry to give the pastry its elasticity.

Fat—In shortcrust pastry the fat coats the flour granules resulting in a crumbly texture.

Fat traps air between the layers in flaky/rough puff pastry  
Adds colour and flavour

Water- Binds the dry ingredients together.



## Baking blind

**When making tarts, quiches and flans you often bake the pastry 'blind'. This is when you line the raw pastry with greaseproof paper and baking beans to prevent the pastry from rising. After 15 minutes you remove the paper and beans and cook the pastry case for 5 – 10 minutes more until it is golden brown.**



## Top tips when making shortcrust pastry

Use the rubbing in method– make sure the butter is cold, your hands are cold, and water is cold.

Add the cold water slowly so the dough is not too wet

When rolling the pastry out dust the surface and rolling pin with flour

Do not over work the dough.

Type of pastry	Examples of products	Characteristics of the pastry
Shortcrust pastry	Bakewell tart , Lemon meringue pie, quiche	Crumbly texture, pale in colour Ratio -fat to flour 1:2
Choux pastry	Profiteroles, eclairs, choux buns	Darker in colour, liquid turns steam when baked, light and airy. Can be filled. Ratio– fat to flour 2:3.
Filo pastry	Spring rolls, apple strudel , Filo parcels	Very thin, crispy, delicate
Rough puff pastry	Sausage rolls, savoury tarts, pies,	Flaky pastry, high quantity of fat ratio fat::flour—3:4.
Hot water crust	Pork pie.	Dark in colour, made using boiled fat and water mixed with flour.

Fault	Cause
<b>Shortcrust pastry</b>	
Pastry is hard and has a tough texture	Over kneading and heavy handling Incorrect proportions of ingredients (too much water/not enough fat) Incorrect oven temp – too cool
Pastry is blistered	Oven too hot Fats not mixed with flour properly Uneven addition of water
Pastry is fragile and crumbly	Too much fat Not enough water Over mixing the fat into the flour
Pastry has shrunk during cooking	Pastry over worked during kneading and rolling
<b>Flaky/puff</b>	
Pastry has not flaked well	Oven too cool, not enough liquid added, pastry folded and rolled unevenly Pastry not rested enough in a cool place Pastry folded too thinly

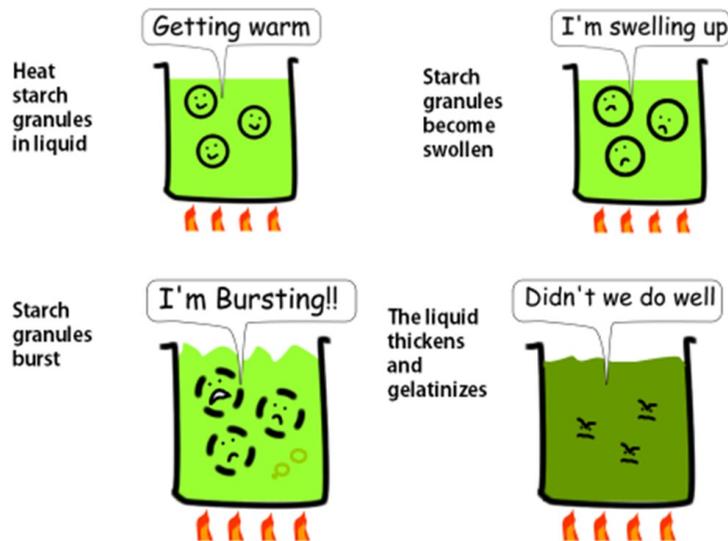
# Year 9 Knowledge organiser Food and Nutrition



## Functions of ingredients

**Gelatinisation:** Gelatinisation occurs when starch (flour, cornflour or arrow-root) granules swell and absorb a hot liquid.

- At around 60°C the starch granules begin to absorb liquid.
- At around 85°C the granules will absorb around 5 times their volume of liquid.
- Eventually so much liquid is absorbed that the granules swell, burst
- The granules remain dispersed throughout the liquid- this is gelatinisation



- **Wheat flour (plain flour)** Makes a thick white sauce e.g. macaroni cheese
- **Arrowroot** Clear transparent glaze e.g. on fruit flans
- **Cornflour** Makes an opaque gel used for sweet and savoury sauces e.g. custard,

## Functional Properties of eggs:

- Binding:** hold ingredients together so they hold their shape when cooked
- Coating:** Beaten eggs are used to coat products and enable dry ingredients to be attached e.g. breadcrumbs
- Foaming:** Beaten eggs form a structure which enables a mixture to hold air (e.g. meringues)
- Setting:** On heating, eggs can set a mixture e.g. quiche

## Sensory Properties of eggs:

1. Garnish- eggs can be cooked and used as a garnish to products (e.g. sliced hard boiled egg)
2. Glazing- beaten whole egg or yolk can be used to create a shiny glaze on pastry. Egg white and sugar creates a crystallised glaze

## Nutritional Properties of eggs:

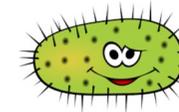
Eggs are a valuable source of high biological value protein, B group vitamins, calcium and phosphorus.

## Storage of eggs:

Eggs should be stored in a cold place like a fridge or pantry. When eggs are mixed with a food product they will freeze suc-

Raw and partially cooked eggs can contain Salmonella bacteria. Therefore it is advised that eggs should be fully cooked if they are to be eaten by babies, the elderly, pregnant women or frail people.

\*Manufacturers often use dried or pasteurised egg to be on the safe side, like for mayonnaise.



Key word	Definition
<b>Coagulation</b>	<p>The change in the structure of protein brought about by heat, mechanical action or acids</p> <p>Used in:</p> <ul style="list-style-type: none"> <li>• Lemon tart</li> <li>• Quiche</li> <li>• Egg custard</li> </ul>