

Starter Activity One

Using different coloured pens, match the correct term with the definition and the example provided.

Caramelisation	This happens when the uncoiled protein strands, called amino acids, re-join and form a solid mass, the protein then changes from a liquid state to a solid one.	The golden colour on the top of scones resulting from brushing them with milk prior to baking.
Emulsification	This occurs when starch granules are combined with liquid and then heated. The starch's cell walls soften and absorb the liquid, and when a high temperature is achieved, the starch granules burst, and a thicker liquid is produced.	Rice that has been cooked in a rice cooker.
Denaturation	This occurs when another ingredient is used to assist with mixing two ingredients that would not blend under 'normal' conditions.	Carrots turning a golden colour when roasted.
Dextrinisation	This occurs when tiny air pockets are forced into food due to the addition of mechanical action, chemical and biological raising agents.	The egg white and yolk becoming firm.
Gelatinisation	This occurs when protein and sugar are heated to above 155°C.	A sandwich toasted in the sandwich toaster.
Maillard Reaction	This occurs when the tight coils of amino acids in foods containing protein, unravel and the bonds holding them together become weaker, resulting in one long strand of amino acids.	Making fluffy savoury pancakes using buttermilk and bicarbonate of soda.
Aeration	This occurs when the sugar in food is heated; water escapes in the form of steam, and the sugars present break down into simpler sugars.	Egg yolk helping the butter and lemon juice combine in a hollandaise sauce.
Coagulation	This occurs when dry heat is applied to starch.	Minced meat

Starter Activity Two

Identify the functional properties of the ingredients in the food products listed.

Carbohydrate in toast

Starch in savoury muffins

Rice in soup

Mustard in homemade mayonnaise

Egg in a fluffy omelette

Pineapple juice in a meat marinade

Vinegar when poaching eggs

Scones with a milk glaze

Starter Activity Three

In the diagram below, identify the differences and similarities between dextrinisation, caramelisation and the Maillard reaction.

