

N5

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National 5 HOSPITALITY: PRACTICAL CAKE CRAFT

BrightRED Study Guide

Curriculum for Excellence

N5

HOSPITALITY: PRACTICAL CAKE CRAFT



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INTRODUCING NATIONAL 5 PRACTICAL CAKE CRAFT

Hospitality: Practical Cake Craft sits within the Social Studies curriculum area of the Curriculum for Excellence.

The course focuses on the development of practical, technical and creative skills in cake baking and cake finishing. It will enable you to develop an understanding of the scientific nature of cake production, how to adapt basic recipes and create new flavour combinations, as well as develop and demonstrate highly imaginative techniques in the design and production of a range of cakes and other baked items.

It is a predominantly practical course that links to the growth industry of artisan bakery and confectionary. During the course, you will develop a range of artistic techniques and, drawing on all aspects of design such as shape, colour, texture, balance and precision, you will be given the opportunity to create and produce a variety of individualised products and to creatively interpret a design brief.

This book focuses on the core content of the National 5 syllabus for Practical Cake Craft. There are two mandatory units: Cake Baking and Cake Finishing. In addition, there is a section on the course assessment which must be passed to gain the course award.

EXTERNAL ASSESSMENT

At the end of the course, you will be assessed externally by one component:

- Component 1 – Practical Activity – 100 % of total mark

The purpose of the course assessment is to assess added value. The practical activity draws on the knowledge, understanding and skills developed across the course. The assessment requires you to demonstrate your knowledge and understanding of cake baking, finishing and evaluating in response to a given design brief.

PRACTICAL ACTIVITY

The purpose of the practical activity is to assess your ability to apply the skills required to bake and finish a cake to a given design brief.

It has three stages:

- Designing 15 marks (includes producing a design illustration and a plan of work).
- Implementing 75 marks (includes baking and finishing the cake according to the plan).
- Evaluating 10 marks (includes reflection on the quality of the finished result).

A cake design brief will be provided by SQA.

The practical activity will be carried out under supervised conditions to ensure that the work presented is your own work, and will be quality assured by SQA (Scottish Qualifications Authority).

INTERNAL ASSESSMENT

During the course, you will be assessed on a wide range of skills, including the ability to:

- bake a range of different cakes and baked products
- use specialist tools and equipment with dexterity and flair
- creatively apply finishing techniques to cakes and other baked items
- demonstrate creativity and resourcefulness in the overall presentation of the finished cake
- demonstrate effective organisation and time management skills
- interpret and carry out a practical activity to meet the requirements of a design brief
- work safely and hygienically
- evaluate both the product and the process.

COURSE CONTENT

The course has two mandatory units: Cake Baking and Cake Finishing.

CAKE BAKING

The aim of this unit is to enable you to develop the ability to bake a range of cakes and other items safely and hygienically, while demonstrating specialist skills, techniques and processes. You will also learn about the value of accurate weighing and measuring, the function of different ingredients and how to combine these using different methods of cake production.

This unit will develop your ability to prepare equipment and ingredients effectively and efficiently, which in turn will help your final product to be successful.

To promote personalisation and choice, this unit provides opportunities to investigate baking trends and allows you to apply this knowledge in a range of practical contexts.

CAKE FINISHING

The aim of this unit is to develop your ability to finish a range of cakes and other baked items safely and hygienically. During the finishing processes, you will produce and apply a range of different coatings and fillings, plus apply specialised skills and creative techniques including piping, modelling, stencilling, crimping and embossing. To promote personalisation and choice, this unit allows opportunities to investigate trends in cake finishing and allows you to apply this knowledge in a range of practical contexts.

This book has been developed using an interactive, contemporary approach which acknowledges the fast-paced technological society we live in. Its broad range of activities and visual appeal have been devised to offer you lots of choice, enabling you to engage with a range of abilities and learning styles. It is also an effective tool for independent study.



ONLINE

This book is supported by the Bright Red Digital Zone. Visit www.brightredbooks.net/N5PCC and register to unlock extra content, tests, videos and more.

CAKE BAKING

CHEMISTRY OF COOKING

THE IMPORTANCE OF TEMPERATURE

You can do everything perfectly – select the correct ingredients, carefully weigh and measure, and prepare and deposit your cake into the tin – but if the baking temperature isn't controlled correctly then there is still a chance that your cake might fail. Many ingredients change their properties with temperature: think about what happens when fat melts, or when you add egg to a hot melted gingerbread mixture – if it's too hot, the egg cooks straight away.



Sunken cake

HEAT TRANSFER

Heat is transferred from its source to food in three main ways: conduction, convection and radiation.

CONDUCTION

Conduction is when heat passes from one hot area of an object to another. As the molecules in the food absorb heat, they vibrate and pass heat along to the next molecule and so on. Direct contact is needed for heat transfer by conduction – for example, cooking a pancake on a hot griddle.

Some baked goods are baked in a 'water bath' – for example, cheesecake. Water is slow to conduct heat so using a water bath helps the cheesecake to bake slowly and evenly.

It's worth remembering that heat conduction can be fast or slow depending upon the material that the cake tin or baking tray is made of, and how thick it is. For example, a sturdy, heavy cake tin will conduct heat more slowly, but it is often more effective because it transfers heat more evenly.

Aluminium is a good conductor of heat, and is low in cost, so it is often used to make baking trays and cake tins. However, a word of warning: it's easy to burn cakes baked in aluminium cake tins, so it's a good idea to line them with greaseproof paper.

Silicone is not a good conductor of heat. Because of this, cakes bake more slowly and brown more evenly. Silicone products are non-stick and have the ability to be used in both the oven and freezer so are extremely versatile. Just watch out when removing a silicone tin from the oven – because it's flexible and 'bendy', it's a good idea to keep it stable by putting it on a baking tray.

CONVECTION

Convection is all about heat transfer through liquids and gases. It works because warmer liquids and gases are less dense and therefore rise, while colder liquids and gases are more dense and therefore sink. This results in a constant movement – that is, a convection current. In an oven, the hot air rises to the top, but with a fan-assisted oven the hot air is forced to circulate, which should mean more even cooking in all shelves of the oven.

If you are using a fan oven, it's important to remember that they often cook 10–20° hotter than conventional ovens, so take this into account when setting the temperature. Pre-heating the oven is vital when baking cakes as the oven needs to be at the correct temperature so it can start cooking straight away. Pre-heating can take between five and 15 minutes, depending upon the temperature to be reached.

contd

Use the following conversion guide if your recipe doesn't give you the oven temperature for the oven you're using:

°C (CELSIUS)	°F (FAHRENHEIT)	GAS MARK
140°C	275°F	1
150°C	300°F	2
160°C	325°F	3
170°C	335°F	3/4
180°C	350°F	4
190°C	375°F	5
200°C	400°F	6
210°C	410°F	6/7
220°C	425°F	7
230°C	450°F	8
240°C	475°F	9



RADIATION

Radiation is the rapid transfer of heat through space from a warm heat source to the surface of a cooler one. Once the molecules on the surface of the food absorb the heat rays, they vibrate rapidly, which generates more heat within the object. In radiation, the food doesn't usually come into contact with the heat source – for example, as when bread is grilled. In an oven, heat is radiated off hot oven walls, creating hot spots along the oven walls. To prevent uneven baking, it's a good idea to place tins/trays in the centre of the oven away from the walls. In a gas oven, it's really important not to place the tray too close to the flame at the back.

Radiation is also the way heat is transferred in a microwave. When microwaving food, heat is generated when the food particles heat up and the molecules move about frantically. Heating with microwaves is fast because the radiant waves penetrate into the centre of the food. Just remember that you need to use microwave-safe containers to bake cakes – silicone is fine. To ensure that you get a successful outcome, it's a good idea to cook on 80 per cent of full power. Remember that the cake will still be cooking after it comes out of the oven. A standard microwave will not brown the top of the cake, so chocolate cakes are usually more successful than other types of sponges made in microwaves.



TOP TIP

If you are baking a batch of cookies and you need to divide them between two or more baking trays, try to put the same number of cookies on each tray so that they cook at the same rate. Ideally, switch the trays around half way through the cooking time. If you need to cook a second batch straight away, **do not** put the raw cookie dough onto the hot tray – let it cool down first. A hot baking tray might make the raw cookies spread, which will result in thin, irregular-sized cookies.

VIDEO LINK

Watch the clip at www.brightredbooks.net/N5PCC to find out more about cooking in a water bath or bain-marie.

DON'T FORGET

Even when the pan is removed from the heat source, conduction continues, so the food will continue to cook.

DON'T FORGET

It's important not to overload an oven as there needs to be space between the baking trays for hot air to circulate and cook the baked goods evenly.

DON'T FORGET

Never open the oven door before the cake is ready because cool air will rush in and may cause the cake to sink.

THINGS TO DO AND THINK ABOUT

1 If you are going to be using the same oven for a regular period, it's a good idea to know whether it has any hot spots. To find out, you will need to make a batch of cookie dough. Why not try this simple shortbread?

Put 100 g plain flour, 75 g butter and 25 g caster sugar into a food processor. Blitz until a dough is formed. Set the oven to 180°C/Gas mark 4. Cut the cookie dough into even-sized pieces and space out around two greased and lined baking trays. Bake for approximately 10 minutes. Carefully remove from the oven, remembering which tray was placed in which position in the oven. Note down any differences in colour between the cookies nearest the oven walls and those farthest from the walls. What do these results tell you about whether there are hot spots in your oven or not?

2 Why not produce a poster that explains cooking in a 'bain-marie' or 'water bath'.

VIDEO LINK

Watch the clip on how to make a really quick sponge cake in the microwave at www.brightredbooks.net/N5PCC

ONLINE TEST

How well have you learned this topic? Take the 'Chemistry of cooking' test at www.brightredbooks.net/N5PCC

CAKE BAKING

STORAGE AND PREPARATION OF ESSENTIAL INGREDIENTS

Effective baking actually begins long before a cake reaches the oven. Taking care of, and paying attention to, the preparation stages can make all the difference to the end result.

And remember – the final product is only as good as the component parts used to make it, so if you can, always try to buy good quality ingredients.

FLOUR

PREPARATION

Flour needs to be sieved before use. This will remove any lumps and add air.

STORAGE

To maximise the shelf life of your flour, place the bag of flour into a sturdy plastic bag. You can actually freeze for 48 hours which will kill off any weevils in the flour. Store in a sturdy plastic container with a tight fitting lid. Keep in a cool, dark place. By doing so, the flour should have a shelf life of around six months.



FAT

Fat adds moisture, flavour and keeping qualities to baked goods, but also add calories and can be bad for health. However, some baked goods just cannot be made without fat. Ideally, use unsalted butter in your recipes where possible.

PREPARATION

If the fat is to be used in a creamed mixture, take it out of the fridge and allow it to come to room temperature to soften first.

For rubbed-in mixtures, it's better to use the fat straight from the fridge and cut into small pieces with a knife to avoid handling with hot hands.

STORAGE

Fats and oils can develop 'off' (or rancid) flavours when exposed to heat, light and air – mostly from oxidation. To prevent oxidation/rancidity, keep out moisture and light by covering the fat tightly. Store butter in a fridge at 0–5°C. If wrapped in a plastic bag, butter can actually be stored in the freezer for six to nine months.



EGGS

PREPARATION

Recipes usually ask for eggs to be at room temperature before using. Cold eggs straight from the fridge do not whisk as well as eggs at room temperature, and therefore do not trap as much air. Eggs at room temperature also whisk up more quickly, as the protein in the whites is less elastic when cold.



You may find that a cold egg will not bind as well with other ingredients, so a batter can curdle, resulting in a flat cake.

Eggs tend to be easier to separate when cold, so use straight from the fridge if you plan to whisk egg white to make meringue. Remember, there must be **no** yolk in with the egg white, because the fat will inhibit the egg's ability to trap air.

Older egg white is thinner and will whip more easily to a greater volume than thicker, fresher white. However, once whipped, the foam from the older, thinner white is less stable, due to the liquid draining more easily from the bubbles. The rule of thumb is to use the freshest eggs possible for meringue.

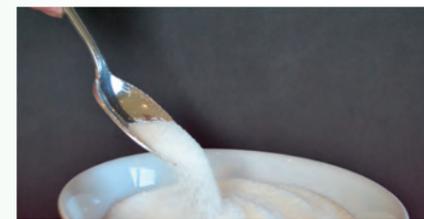
STORAGE

Eggs should be kept at a constant temperature of below 20°C. Refrigerated, they will keep for approximately three to five weeks. Eggs can also be frozen, but **never** freeze whole eggs in their shells. Pierce the yolk and add a sprinkle of sugar (if it is to be used for sweet dishes) or salt (if it is to be used for savoury dishes).

SUGAR

PREPARATION

Sugar needs very little preparation before it is used in baked goods. You might need to sieve it to remove any lumps. It can be stirred into mixtures, creamed with fat to incorporate air, whisked with egg to trap air or melted and stirred into a mixture.



STORAGE

Sugar should ideally be stored in an airtight container. This not only helps to prevent the sugar picking up odours, but it also reduces the risk of the sugar absorbing moisture. This is particularly important with brown sugar, which tends to clump. To de-clump brown sugar, warm it gently in a microwave before passing it through a sieve.

Syrups with a high moisture content, such as maple syrup, should be stored in a fridge to prevent yeast and mould growth. It's best not to refrigerate other syrups as it can cause them to crystallise.

+ DON'T FORGET

Remove eggs from the fridge 30 minutes before using.

+ DON'T FORGET

If egg white needs to be warmed to reach room temperature, warm very gently over a hot water bath, stirring constantly. If overheated, the protein will coagulate and will not whip.

+ DON'T FORGET

All sugars are **hygroscopic** – that is, they pick up water from moist air, so they must be stored in a cool, dry place.

▶ VIDEO LINK

Head to www.brightredbooks.net/N5PCC and watch the video clip on how to cream together butter and sugar.

✓ ONLINE TEST

How well have you learned this topic? Take the 'Storage and preparation of essential ingredients' test at www.brightredbooks.net/N5PCC

▶ VIDEO LINK

Check out the clip at www.brightredbooks.net/N5PCC which shows how to store flour.

+ DON'T FORGET

Low-fat spreads contain a high water content and are generally not suitable for baking.



THINGS TO DO AND THINK ABOUT

- 1 To find out if your egg is fresh or stale, place the whole egg into a glass of water. If the egg is stale, it will float, and if it sinks, it is fresh. Use www.egginfo.co.uk to find out why this is the case.
- 2 Do some research into the proper procedures for handling and storing honey. Display your results in a poster.

SAMPLE RECIPES

RECIPES 1

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BATTENBURG CAKE (SERVES 8)

(approximate cost per recipe = £3.30)

INGREDIENTS

175 g margarine	Filling and coating
225 g self-raising flour	2 × 15 ml spoons lemon curd
1 lemon – grated rind and juice	450 g marzipan
175 g caster sugar	Caster sugar for dredging
3 eggs	
few drops pink food colouring	



METHOD

- 1) Preheat oven to 180°C/Gas mark 4. Grease and line two 450 g loaf tins.
- 2) Wash the lemon, zest, then squeeze the juice.
- 3) Cream the margarine and sugar until light and fluffy. Gradually beat in the eggs. Add the lemon juice. Fold in the sieved flour.
- 4) Divide the mixture into two portions. Add the lemon zest to one portion and pink food colouring to the other. Deposit the mixtures separately into the two prepared tins.
- 5) Bake for approx 30 minutes – or until a skewer comes out clean. Cool on a wire rack.
- 6) Trim the edges. Cut each piece of cake in half lengthways, giving four strips.
- 7) Sandwich alternate colours together with the lemon curd in two layers.
- 8) Sprinkle some caster sugar onto the work surface and roll the marzipan to a 20 cm × 37 cm oblong. Spread the outside of the cake with lemon curd. Place the cake in the middle of the marzipan. Ease the marzipan around the cake.
- 9) With the join underneath, pinch the edges and dust with caster sugar before serving.

TOP TIP



If your marzipan has become a little hard, it will become soft and pliable if heated in the microwave for a few seconds on HIGH.

BLACK FOREST GATEAU (SERVES 6)

(approximate cost per recipe = £2.00)

INGREDIENTS

75 g plain flour	50 g chocolate
15 ml spoon cocoa	2.5 ml spoon baking powder
75 g caster sugar	3 eggs
150 ml whipping cream	3 × 15 ml spoons cherry pie filling



METHOD

- 1) Preheat oven to 220°C/Gas mark 7. Thoroughly grease and line two 15 cm sandwich tins.
- 2) Sieve flour, baking powder and cocoa into a small mixing bowl.
- 3) In a large glass bowl, whisk the eggs and caster sugar until the mixture is light and fluffy and leaves a 'ribbon trail' on the surface.
- 4) Gently fold in the flour mixture with a metal spoon.
- 5) Divide the mixture equally between the two prepared sponge tins and bake for approximately 10 minutes – until risen and springy to touch.
- 6) Turn out, remove the paper and cool on a wire tray.
- 7) Whisk up the cream and spoon into a piping bag fitted with a star nozzle.
- 8) Gently melt the chocolate. It can either be spread onto greaseproof paper and cut into small triangles when set, or can be placed into a greaseproof piping bag and made into chocolate run-outs. There is also the option of doing a chocolate collar around the outside of the cake (remember a chilled board is needed to be successful here).
- 9) Sandwich the sponges together with half the cherry pie filling. Spread the remainder on the top of the sponge.
- 10) Pipe small rosettes of cream around the edge of the cake and decorate with the chocolate triangles/run-outs/chocolate collar.

CHERRY CAKE (SERVES 8)

(approximate cost per recipe = £1.95)

INGREDIENTS

200 g self-raising flour	3 eggs
125 g caster sugar	100 g glacé cherries
125 g margarine	2.5 ml vanilla or almond essence



METHOD

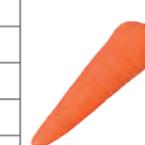
- 1) Preheat oven to 180°C/Gas mark 4. Grease and line an 18 cm round cake tin (or a 2 lb/900 g loaf tin could be used).
- 2) Cream the margarine and sugar. Add the beaten eggs with a little of the flour. Add the vanilla or almond essence.
- 3) Fold in the remaining flour.
- 4) Wash, half and coat the cherries in a little flour (to prevent them from sinking) and add to the mixture.
- 5) Place the mixture into the prepared tin. Bake for approximately an hour.
- 6) The cake is ready when well risen, golden brown on top and a skewer inserted comes out clean.

CARROT CUBES (SERVES 8)

(approximate cost per recipe = £2.90)

INGREDIENTS

2 carrots, grated	2.5 ml cinnamon
2 eggs	200 g cream cheese
200 g self-raising flour	20 g icing sugar
150 g caster sugar	1 g angelica
150 ml oil	50 g fondant icing
50 g walnuts	Orange food colouring



METHOD

- 1) Preheat oven to 160°C/gas mark 3. Grease and line a 20 cm square tin.
- 2) Wash and coarsely grate the carrot.
- 3) Place the oil and sugar in a large bowl. Add the beaten egg and whisk with a balloon whisk.
- 4) Sieve the flour into the bowl, along with the cinnamon and grated carrot. Chop and add the walnuts. Mix together. Add to the prepared tin.
- 5) Bake for approximately 30 minutes or until risen, and a skewer comes out clean after being inserted into cake.
- 6) Remove from oven and leave to cool in the tin for 5–10 minutes, before transferring to a wire rack to cool completely.
- 7) To make the topping, beat together the cream cheese and icing sugar and spread over the top of the cake. Colour the fondant icing orange and make eight small carrots. Use a small piece of angelica for a leaf.
- 8) Cut the cake into nine squares and decorate each with a sugarpaste carrot. The cake will keep in an airtight container in a cool place for up to three days.

DON'T FORGET

There is the option to add a mixture of dried glacé fruits instead of just cherries. The addition of some grated lemon/orange zest will add to the flavour.



TOP TIP

The cherries will be very easy to cut up if you use a pair of sharp kitchen scissors that have had their blades dipped in boiling water.

HOSPITALITY: PRACTICAL CAKE CRAFT

Pam Thomas

This BrightRED Study Guide is just the thing you need to tackle your course and gain the skills essential to succeed at National 5 Practical Cake Craft. Written by trusted author and experienced teacher Pam Thomas, this book is packed with brilliant recipes, examples, tasks and advice. It is the ultimate companion to your studies.

- ▶ **Contains all of the essential course information**, arranged in easily digestible topics.
- ▶ **Designed in full colour, highly illustrated, accessible and engaging** to make sure all that study sticks!
- ▶ **A dedicated chapter of useful recipes** to practise and perfect your baking skills.
- ▶ **Don't forget!** pointers offer advice on key facts and on how to avoid common mistakes.
- ▶ **Things to do and think about** sections at the end of each topic allow for further practice and research.
- ▶ **Top tips on technique** will give you expert knowledge to apply to your own cake creations.
- ▶ **A glossary of key terms** helps you really learn and revise important course concepts.

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