

Research Record

<u>Date</u>	<u>What was researched</u>	<u>How it was researched</u>	<u>Source of information</u>
1st nov	I researched what kind of recipes you could have in a low fat diet.	I looked on the internet	was from the computer
8th nov	theory from textbooks	textbooks	food + nutritious
9th nov	products available from Supermarkets	we have done internet Research	WWW.mylsupermarket.co.uk
15th nov			
19th nov	Researched from textbooks	textbooks	food + nutritious
22nd nov	Recipes	textbooks	the complete low fat cookbook
15th dec	dvd	watching making notes	dvd

Questionnaire on low fat products.

Aims: To find out who buys low fat products and why.

- To find out how much people are prepared to spend.
- To find out if there is a gap in the market.
- To find out what age people eat low fat food.
- to determine peoples preferences.

1) What is your favourite low fat food ?

a) potato soup

b) noodles in a pot ✓ ✓ ✓

c) spice-rubbed chicken with pomegranate salad

d) other.....chicken dishes.....

Chicken curry - Tikka

Vegetable Lasagne ✓ ✓

2) What fat do you use on bread ?

a) margarine

b) butter ✓ ✓ ✓

c) low fat spread ✓ ✓ ✓ ✓

d) other

3) When buying low fat products , what do you normally buy ?

- a) snacks ✓
- b) drinks
- c) desserts ✓
- d) main meals ✓✓✓✓
- e) other ... Spreads ... milk

4) Which low fat ingredients do you regularly use ?

- a) vegetables ✓✓
- b) fish ✓✓
- c) poultry ✓✓✓✓
- d) fruit ✓✓✓✓
- e) spreads ✓✓✓
- f) milk ✓✓
- g) other

5) what fat do you use for cooking ?

- a) lard
- b) oil ✓✓✓✓
- c) margarine ✓
- d) butter
- e) other

6) What makes you want to buy low fat foods ?

a) to live a healthier style ✓✓✓✓

b) to improve image

c) to lower cholestrol ✓

d) other ✓

7) What portion size do you normally buy ?

a) duo ✓✓

b) family ✓✓✓✓

c) catering

d) single

e) other

8) What milk do you normally buy ?

a) semi - skimmed ✓✓✓✓

b) full fat

c) skimmed ✓✓

d) other

9) Which age category do you fall into ?

a) younger than 15 ✓

b) 15-25 ✓ ~~AAAA~~

c) 26-35 ✓

d) 36-45 ✓

e) 46-50

f) 50+

10) How often do you buy low fat products ?

a) once a fortnight

b) once a month

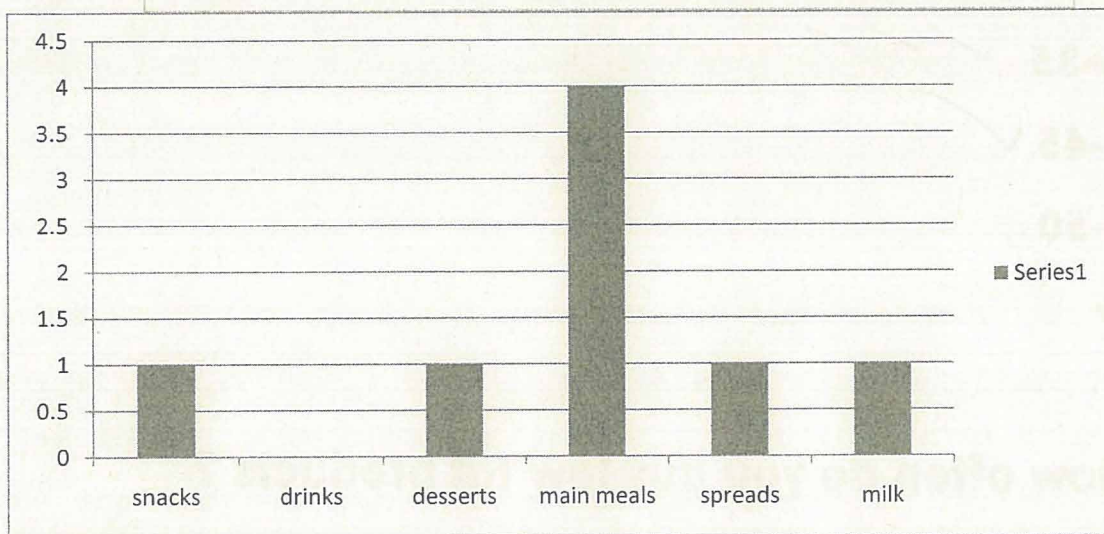
c) Once a week

d) less than once a week ✓ ✓ ✓ ✓

e) other

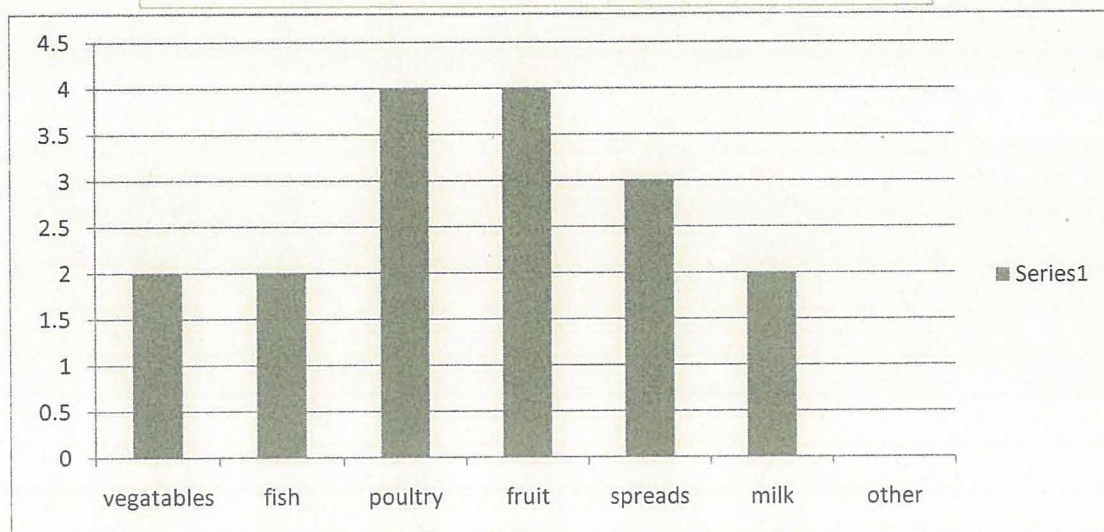
snacks	1
drinks	0
desserts	1
main meals	4
spreads	1
milk	1

when buying low fat products , what do you normally buy ?



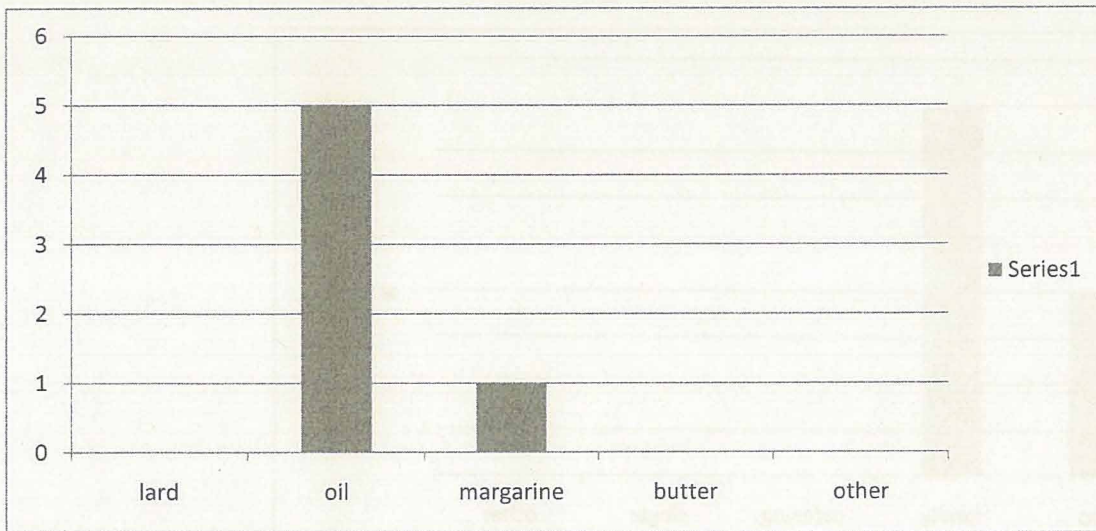
vegetables	2
fish	2
poultry	4
fruit	4
spreads	3
milk	2
other	0

which low fat ingrediants do you regulary use ?



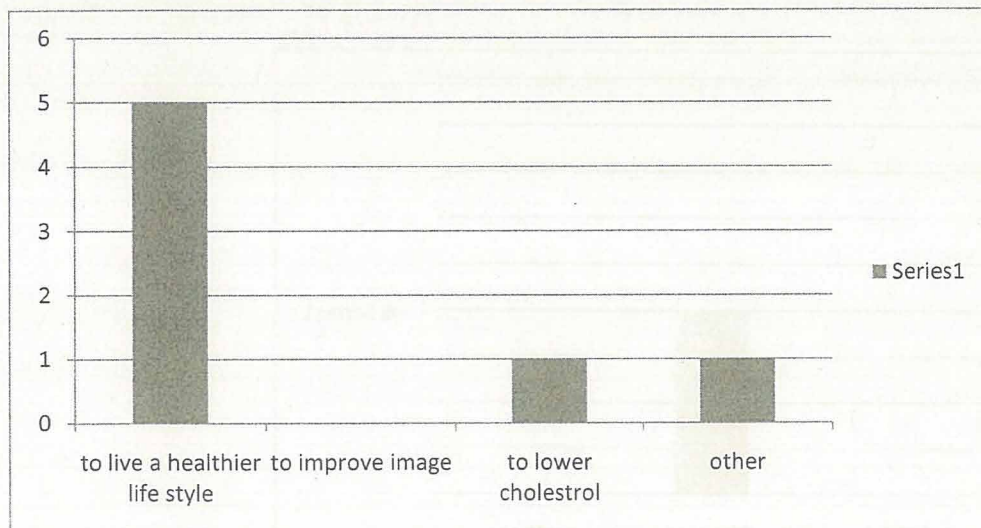
lard	0
oil	5
margarine	1
butter	0
other	0

what fat do you use for cooking ?



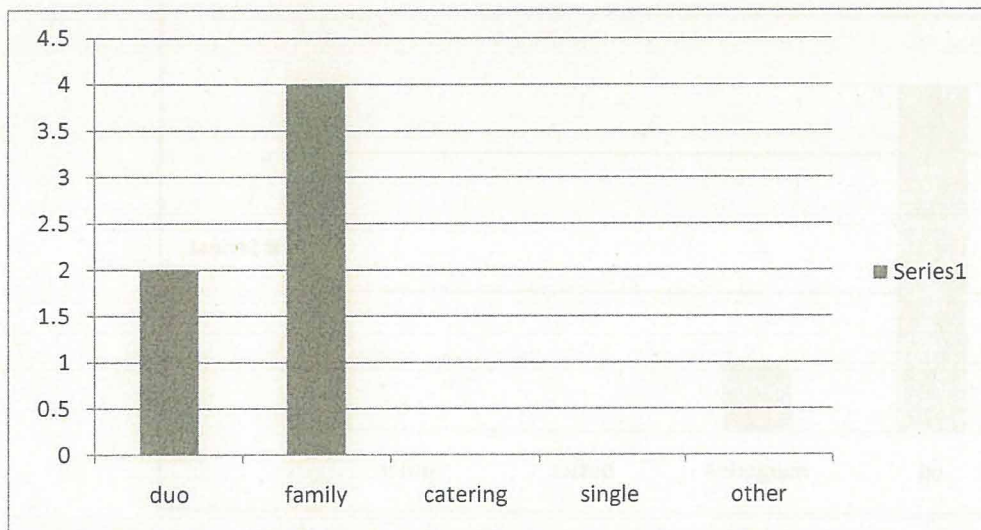
to live a healthier life style	5
to improve image	0
to lower cholestrol	1
other	1

what makes you want to buy low fat foods?



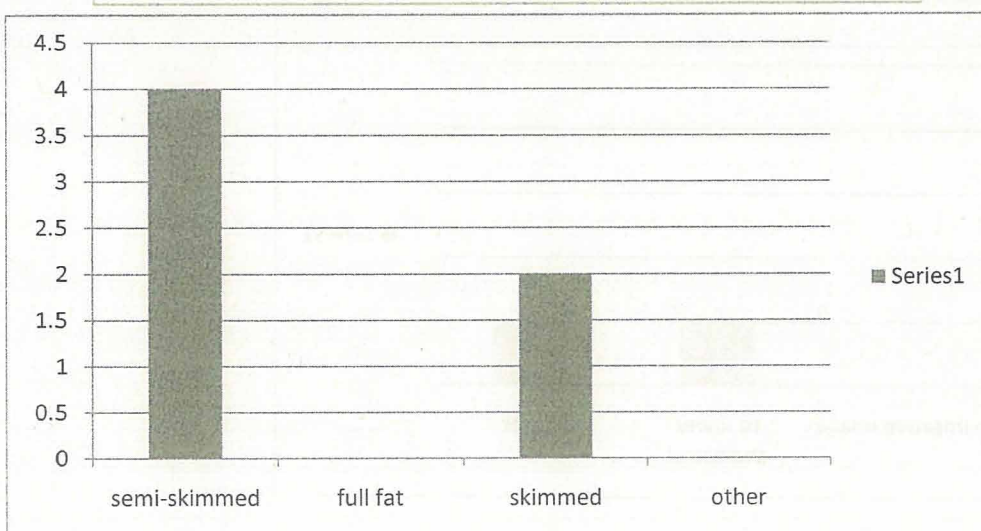
duo	2
family	4
catering	0
single	0
other	0

what portion size do you normally buy ?



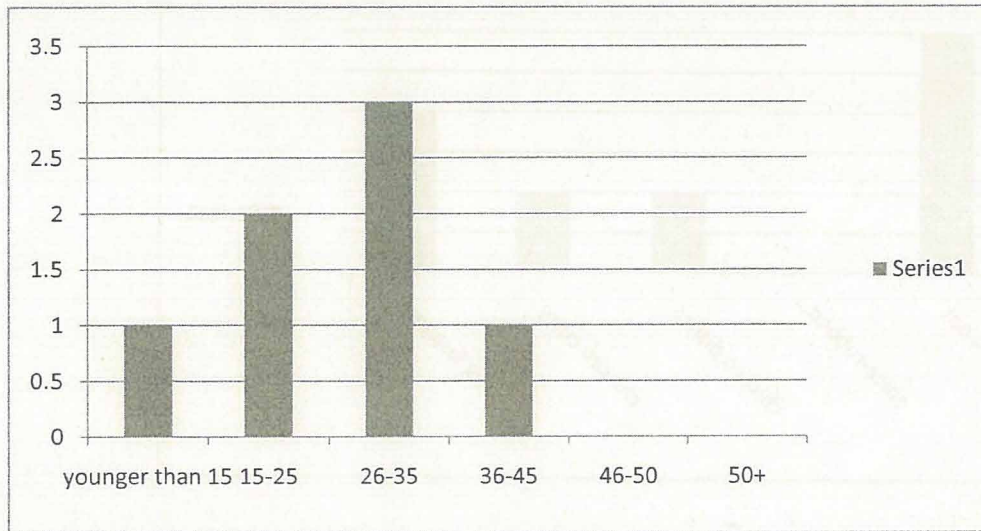
semi-skimmed	4
full fat	0
skimmed	2
other	0

what milk do you normally buy ?



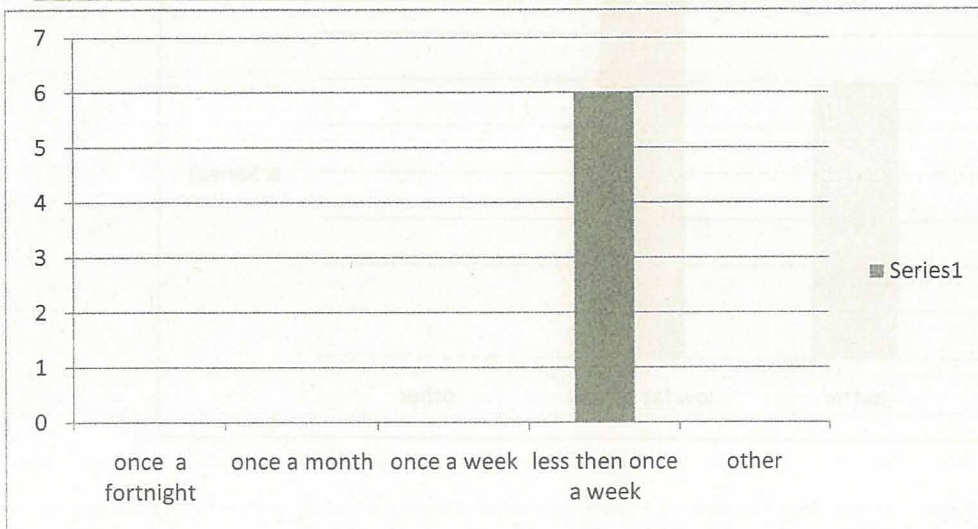
younger than 15	1
15-25	2
26-35	3
36-45	1
46-50	0
50+	0

which age category do you fall into ?



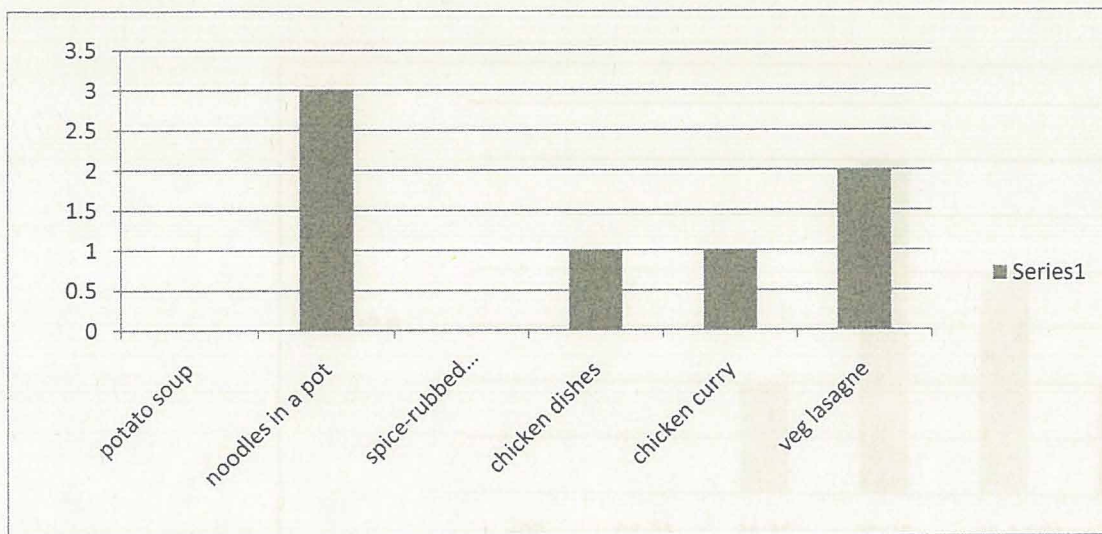
once a fortnight	0
once a month	0
once a week	0
less then once a week	6
other	0

how often do you buy low fat products ?



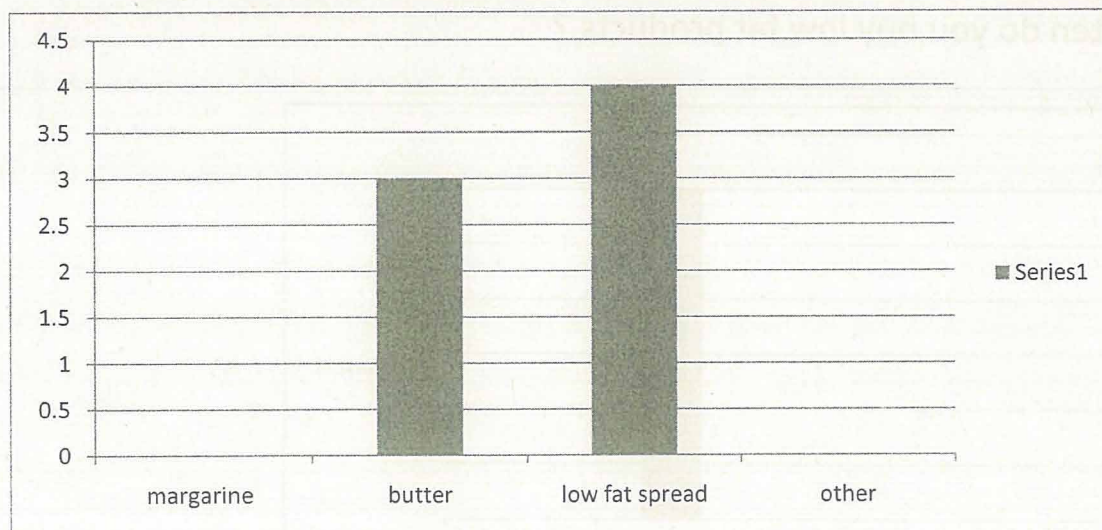
potato soup	0
noodles in a pot	3
spice-rubbed chicken	0
chicken dishes	1
chicken curry	1
veg lasagne	2

what is your favourite low fat food?



margarine	0
butter	3
low fat spread	4
other	0

what fat do you use on bread?



Evaluation of questionnaire

I carried out a questionnaire on low fat products. I asked 7 people to complete my survey. My aims on my questionnaire was to find out how much people are prepared to spend, to find out if there is a gap in the market, to find out what age people eat low fat food, to determine peoples preferences.

The most favourite low fat dishes was noodles in a pot and chicken dishes, chicken curry tikka and vegetable lasagne.

The most popular fat on bread is low fat spread and butter.

When buying low fat products the popular thing that people buy is snacks desserts main meals spreads and milk.

The popular low fat ingredients that people use regularly is vegetables, fish, poultry, fruit, spreads and milk.

The popular fat people use for cooking is oil and margarine.

My evaluation of supermarket survey

i carried out a supermarket survey to compare the range of chilled and frozen foods on the market at Tesco's . I went online at www.mysupermarket.co.uk and carried out a price check comparison. My aim was also to find out if there is a gap in the market and to look at the packaging of the various products.

I found that there was a big range of chilled and frozen meals on the market in all supermarkets. For example weight watchers cottage pie.

The average price for a chilled frozen meal which would serve 4 people was £2.50.

What makes people want to buy low fat products is to live a healthier style and to a lower cholesterol.

The popular portion size that people buy is duo and family.

The most popular milk people buy is semi-skimmed and skimmed.

The most popular age category of what people fall into is younger than 15 , 15-25 , 26-35 and 36-45.

The popularity of when people often buy low fat products is less than once a week.

In conclusion i will try and develop more low fat main meals and desserts and use low fat products such as skimmed milk and low fat spread.

Supermarket survey



Weightwatchers cottage pie

(400g)

(59.3p / 100g)

Cost £2.37



Weightwatchers chicken tikka and coriander rice (400g)

(59.3p / 100g)

Cost £2.37p



Weightwatchers chicken, potato and leek soup (295g)

(22.7p / 100g)

Cost 67p



Weightwatchers macaroni cheese (400g)

(59.3p / 100g)

Cost £2.37



Weightwatchers spaghetti Bolognese (320g)

(46.9p / 39.1p / 100g)

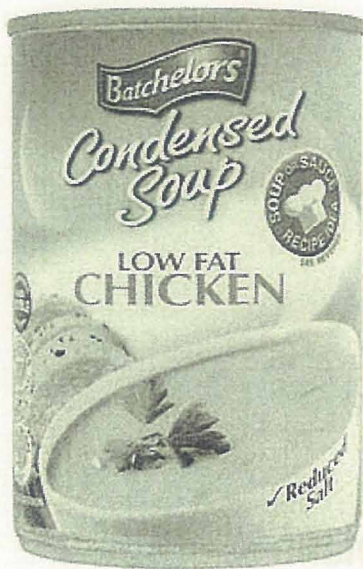
Cost £1.50p



Weightwatchers chicken hotpot (320g)

(46.9p / 39.1p / 100g)

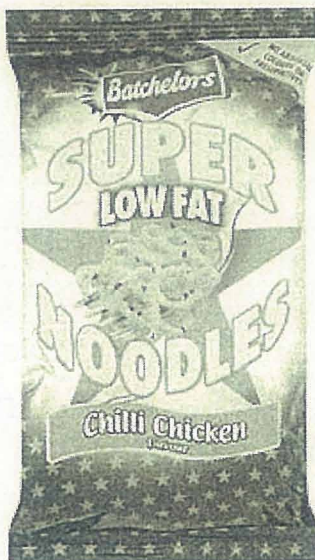
Cost £1.50



Low fat chicken soup

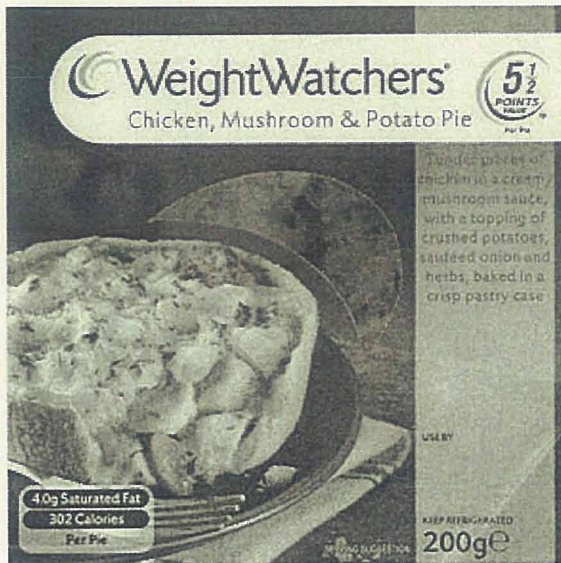
(25.1p / 100g)

Cost 74p



Super noodles low fat chilli chicken (85g)

(71.8p / 100g) cost 61p



Weightwatchers chicken

mushroom and potato pie (200g)

(75p / 100g)

Cost £1.50p



Weightwatchers Spaghetti in tomato sauce with parsley

(400g) (12.8p / 100g)

Cost 51p

The supermarket selling the cheapest products was Tesco's.

The types of packaging used where cardboard and metal.

In conclusion I have found that there is vast range of chilled and frozen meals on the market. The cheapest products can be found in Asda. There is a gap in the market for fresh products. Most meals are packaged in cardboard and the materials are recyclable which has given me ideas form my final product.

By Paige Kidman

Text Book Research

Author:	Helen McGrath	Jane girt jenny hotson and Gary Littlewood	Jenny ridgwell
Book title:	All about food	Design and technology Food technology	Examining food and nutrition
Name of publisher and year of publication:	Oxford university press 1997		Jenny ridgwell 1996 first published 1996
Chapter number:	Chapter 1	Chapter 2	chapter 3
Page numbers:	Page 16-17	Page 20	Page 10
Information researched:	We advised to eat less fat. Especially animal fat. If we do this we need to know which foods contain a lot of it.	The eat well plate is the healthy eating model for the uk it is made up of five different groups.	The key message of the balance of good health is that there should be a balance of foods which should be consumed to achieve a good healthy diet.
Key points:	Protein is needed for growth and repair of the body. a variety of plant foods can supply all of the protein you need.	The eat well plate is based on the governments guidelines for a healthy diet which are:	The balance of good health is based upon five commonly accepted food groups which are:
Value of information:	Fat for energy comes from vegetable oils nuts, seeds, olives and dairy products.	1-based your meals on the starchy foods e.g. Potatoes, pasta, rice, 2- Fats lots of fruit and vegetables.	.bread, other cereals and potatoes .fruit and vegetables .milk and dairy foods .meat ,fish and alternatives .fatty and sugary foods.

Food Labelling DVD

(classroom video)

- The law is to label the food
- Food label to regulation
- Food standards agency
- Trade descriptions 1998
- Food labelling and the law
- Description
- Bar code
- Cooking name
- Name and address
- Tells if suitable to a diet
- Energy
- Fat
- Sodium
- Salt
- Protein
- Sugar
- Saturates
- Shops e.g. Tesco's
- Sainsbury's Asda
- Trademark
- Logos
- Recycling information
- ~~mark~~ Safety labels
- Trademark protection
- The picture on the package

The video showed me some of the facts why they do the packaging and how they get people to buy it because they make the product packaging ^{look} eye catching and the video was well explained

analysis of packaging

15.12.10

- name of product
- ingredients
- bar code
- nutrition
- Guideline daily amounts
- Dietary & Allergen information
- storage
- cooking instructions
- Refund & Replace
- picture
- Litterman Symbol
- weight
- use by date / sell by / display / best before
- price

★ equals Required by law.

* Name of product

* Description

* weight e.g. 100g (estimated)

* ingredients

* special claims dietary needs

* nutritional value

* bar code

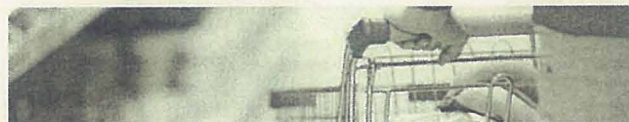
* address

* Recycle

* address

**Home****Assessing Your Weight and Health Risk****Control Your Weight****Eat Right**

[Healthy Eating Plan](#)
[Menus and Menu Planner](#)
[Food Exchange Lists](#)
[Shopping Tips](#)
[Portion Distortion](#)
[Recipes](#)
[Daily Food and Activity Diary](#)
[Tip Sheets](#)

Be Physically Active**Healthy Weight Tools****Key Recommendations****Healthy Weight Resources for Parents/Families (We Can!)****Health Professional Resources****Low-Calorie, Lower Fat Alternative Foods**

These low-calorie alternatives provide new ideas for old favorites. When making a food choice, remember to consider vitamins and minerals. Some foods provide most of their calories from sugar and fat but give you few, if any, vitamins and minerals.

This guide is not meant to be an exhaustive list. We encourage you to read labels to find out just how many calories are in the specific products you decide to buy.

Dairy Products

Higher Fat Foods	Lower Fat Alternative
Evaporated whole milk	Evaporated fat-free (skim) or reduced-fat (2%) milk
Whole milk	Low-fat (1%), reduced-fat (2%), or fat-free (skim) milk
Ice cream	Sorbet, sherbet, low-fat or fat-free frozen yogurt, or ice cream
Whipping cream	Imitation whipped cream (made with fat-free [skim] milk)
Sour cream	Plain low-fat yogurt
Cream cheese	Neufchatel or "light" cream cheese or fat-free cream cheese
Cheese (cheddar, Swiss, jack)	Reduced-calorie cheese, low-calorie processed cheeses, etc. Fat-free cheese
American cheese	Fat-free American cheese or other types of fat-free cheeses
Regular (4%) cottage cheese	Low-fat (1%) or reduced-fat (2%) cottage cheese
Whole milk mozzarella cheese	Part-skim milk, low-moisture mozzarella cheese
Whole milk ricotta cheese	Part-skim milk ricotta cheese
Coffee cream (1/2 and 1/2) or nondairy creamer (liquid, powder)	Low-fat (1%) or reduced-fat (2%) milk or fat-free dry milk powder

Cereals, Grains, and Pastas

Higher Fat Foods	Lower Fat Alternative
Ramen noodles	Rice or noodles (spaghetti, macaroni, etc.)
Pasta with white sauce (alfredo)	Pasta with red sauce (marinara)
Pasta with cheese sauce	Pasta with vegetables (primavera)
Granola	Bran flakes, crispy rice, etc. Cooked grits or oatmeal Reduced-fat granola

Healthy Weight Tip

Replacing high calorie/high fat foods with lower fat/lower calorie choices is a great way to lose or maintain weight and build healthy lifetime habits. Some changes can be made gradually. For example, start by replacing whole milk with 2 percent milk, then gradually make the switch to 1 percent or fat-free (skim) milk.

Looking for easy-to-use information for losing and maintaining weight?

The *Aim for a Healthy Weight* booklet includes portion and serving size information, sample reduced calorie menus, tips on dining out, a sample walking program, a weekly food and activity diary, and more.



Meat, Fish, and Poultry

Higher Fat Foods	Lower Fat Alternative
Coldcuts or lunch meats (bologna, salami, liverwurst, etc.)	Low-fat coldcuts (95 to 97% fat-free lunch meats, low-fat pressed meats)
Hot dogs (regular)	Lower fat hot dogs
Bacon or sausage	Canadian bacon or lean ham
Regular ground beef	Extra-lean ground beef such as ground round or ground turkey (read labels)
Chicken or turkey with skin, duck, or goose	Chicken or turkey without skin (white meat)
Oil-packed tuna	Water-packed tuna (rinse to reduce sodium content)
Beef (chuck, rib, brisket)	Beef (round, loin) (trimmed of external fat) (choose select grades)
Pork (spareribs, untrimmed loin)	Pork tenderloin or trimmed, lean smoked ham
Frozen breaded fish or fried fish (homemade or commercial)	Fish or shellfish, unbreaded (fresh, frozen, canned in water)
Whole eggs	Egg whites or egg substitutes
Frozen TV dinners containing more than 13 grams of fat per serving	Frozen TV dinners containing less than 13 grams of fat per serving and lower in sodium
Chorizo sausage	Turkey sausage, drained well (read label) Vegetarian sausage (made with tofu)

Baked Goods

Higher Fat Foods	Lower Fat Alternative
Croissants, brioches, etc.	Hard french rolls or soft brown 'n serve rolls
Donuts, sweet rolls, muffins, scones, or pastries	English muffins, bagels, reduced-fat or fat-free muffins or scones (choose lowest calorie variety)
Party crackers	Low-fat crackers (choose lowest in sodium) Saltine or soda crackers (choose lowest in sodium)
Cake (pound, chocolate, yellow)	Cake (angel food, white, gingerbread)
Cookies	Reduced-fat or fat-free cookies (graham crackers, ginger snaps, fig bars) (choose lowest calorie variety)

Snacks and Sweets

Higher Fat Foods	Lower Fat Alternative
Nuts	Popcorn (air-popped or light microwave), fruits, vegetables
Ice cream, e.g., cones or bars	Frozen yogurt, frozen fruit or chocolate pudding bars
Custards or puddings (made with whole milk)	Puddings (made with skim milk)

Fats, Oils, and Salad Dressings

Higher Fat Foods	Lower Fat Alternative
------------------	-----------------------

Regular margarine or butter	Light spread margarines, diet margarine, or whipped butter, tub or squeeze bottle
Regular mayonnaise	Light or diet mayonnaise or mustard
Regular salad dressings	Reduced-calorie or fat-free salad dressings, lemon juice, or plain, herb flavored, or wine vinegar
Butter or margarine on toast or bread	Jelly, jam, or honey on bread or toast
Oils, shortening, or lard	Nonstick cooking spray for stir-frying or sautéing As a substitute for oil or butter, use applesauce or prune puree in baked goods

Miscellaneous

Higher Fat Foods	Lower Fat Alternative
Canned cream soups	Canned broth-based soups
Canned beans and franks	Canned baked beans in tomato sauce
Gravy (homemade with fat and/or milk)	Gravy mixes made with water or homemade with the fat skimmed off and fat-free milk
Fudge sauce	Chocolate syrup
Avocado on sandwiches	Cucumber slices or lettuce leaves
Guacamole dip or refried beans with lard	Salsa

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National Heart, Lung, and Blood Institute



National Institutes of Health



Department of Health and Human Services

Breads

- Whole grain bread, cereal, rice, and pasta are low in saturated fat, and are also best for the heart. Make sure that the first ingredient listed on the package says "whole grain" or "whole wheat." White breads, which are listed as containing "enriched flour," are still low in saturated fat, although they are not as good for you in other ways as whole grains are. Eat up to 11 servings a day of a variety of cereal, loaf bread, pita bread, oatmeal, rice, crackers, pasta, bagels, and English muffins.

Dairy

- Dairy products made with whole milk should be limited, as they contain high levels of saturated fat. Look for dairy products that are made with skim milk, 1 percent milk fat, or are non-fat. Examples include buttermilk, skim or 1 percent milk, non-fat yogurt, frozen yogurt, cottage cheese, sherbet, non-fat sour cream, and cheese that is made with skim milk. Eat two to three servings of these a day. Pregnant and nursing women should eat up to four servings.

Fruits and Vegetables

- Fruits and vegetables are a healthy food choice, as they naturally do not contain saturated fat. The only way vegetables and fruits can contain saturated fat is as a result of the way in which they are prepared or packaged. Do not cook vegetables in butter and sauces. Steam them instead. Avoid canned fruits, as most contain syrups which contain saturated fat. Frozen fruits and vegetables are healthier than canned ones, but try to eat the fresh whole versions whenever possible. Eat a minimum of five fruits and vegetables per day.

Peas and Beans

- If you are a vegetarian, you still need to be aware of certain beans and other alternatives you eat, as some contain saturated fat. Opt for dried peas and beans. These include black beans, black-eyed peas, chickpeas, lentils, lima beans, navy beans, pinto beans, soy beans, and tofu. There is no recommended daily limit.

Snacks

- the optimum snack choice would be one from one of the aforementioned food groups, but there are a few packaged foods that you can have as a snack without saturated fat. Examples, according to the Mountain States health Alliance, are angel food cake, animal crackers, cocoa, fig bars, graham crackers, Jell-O, juices, pretzels, and popcorn.

Spices and Condiments

- Specific spices and condiments to use with foods contain little to no saturated fat. The American Heart Association recommends using oils derived from canola, corn, olives, and soy beans. Also, use margarine as opposed to butter. Garlic, Italian seasoning, onion powder and Mrs. Dash do not contain saturated fat. When choosing condiments, use ketchup, mustard, or vinegar instead of mayonnaise.

information about low fat food

The healthiest type of diet plan is a balanced diet which includes foods from all food groups in the Food Pyramid. According to the food pyramid, all fats and oils should be eaten sparingly. This means your diet should be low in fat, especially saturated fat. As a rough guide, no more than about 30 percent of your calories should be eaten in the form of fat.

A Low Fat Diet is better for Your Health and Weight

- Better for Low Cholesterol and Your Heart, says the American Heart Association
- Better for Prevention of Cancers, says the World Cancer Research Fund
- Better for Your Health and Weight, says the American Dietetic Association and the FDA.

Although most kids get too much fat in their diets, there is one age group of kids for which you shouldn't limit fat intake -- infants and toddlers under age two years. These children are still growing and need more fat in their diet than older kids. That doesn't mean that you have to go out of your way to give your 18 month old French fries or have to avoid naturally low-fat foods, including most fruits and vegetables, but they shouldn't drink low-fat milk, eat commercially made fat-free foods, or be put on a low fat diet.

- Choose lower-fat dairy foods such as semi-skimmed, 1% fat milk or skimmed milk – and look out for yoghurts and cheese that are lower in fat.
- The more white you see on meat, the more fat it contains.
- Go for polyunsaturated or mono-unsaturated spreads where possible, instead of dairy based spreads.
- Look out for coatings and creamy and buttery sauces which may increase saturated fat levels.
- Crisps and savoury snacks cooked in sunflower and sun seed oils tend to be lower in saturated fat than those cooked in unspecified vegetable oils.

Facts about packaging

- Packaging contains the contents so that they can be transported, stored and displayed easily. The shape and size must suit the filling method as well as the crates, trays or pallets used to transport the packages.
- Packaging helps stop the tampering of goods. Products are sometimes contaminated by people opening the packaging, tampering, with the contents, and then reclosing the package.
- Packaging protects food products from:
- Physical damage during transportation and storage so that the products reaches the customer in perfect condition.
- Deterioration due to high or low humidity, the effects of temperature changes, insect or rodent attack, mould growth, oxidation and moisture lost. It guarantees food safety and hygiene.
- Good packaging design gives a brand image and links other products in the range, increasing sales appeal.
- Packaging materials and methods have changed over the years as new technologies have been introduced.
- There are four main materials used in food packaging. Each as its own properties.
- Oven able paperboard is designed for use in microwave ovens.
- Heath-resistant plastics are designed to be put in the oven used to be made of aluminium.

- Paper, board, glass metals and plastics are the main materials used for food packaging.
- Oven able paperboard and heat-resistant plastics have been developed for 'ready-meal' products.

The functional requirements of packaging

The food manufacturer needs to match the type of food with the most appropriate type of packaging. It is important to develop a clear design specification for the packaging.

- The type of packaging used for food is determined by the nature of the product.
- Customers expect packaging to be environmentally friendly.
- In many packages different materials need to be combined together.
- Environmentally issues are important when designing packaging.
- Making packaging requires energy and uses up natural resources such as trees, oil, sand, and metal ores.

Government food regulations

These state that food packaging must not :

- Be hazardous to human health
 - Bring about the deterioration of the food
 - Cause unacceptable changes in its natural substance or quality.
-
- Billions of pounds are spent each year on packaging food products. Sixty per cent of all packaging produced is for the food industry.

- The purpose of packaging

Although it is eventually thrown away, packaging has a number of important functions.

To be effective packaging must protect, contain, preserve, and identify the product, and prevent tampering.

Product analysis of Packaging and labelling information

<u>Name of product</u>	Sweet and sour chicken with Rice
<u>Description of product</u>	A chinese restaurant favourite. tender pieces of chicken breast in a classic sweet and sour sauce served with chinese styled Rice
<u>Type of packaging</u>	<u>Inner:</u> plastic tray <u>Outer:</u> cardboard box
<u>Functions of the packaging</u>	Plastic tray to hold the food Cardboard box to hold the plastic tray and to stack.
<u>Date marks (sell by / use by / best before)</u>	Display until 05 feb use by 05 feb
<u>Special claims</u>	
Price	£2.49
Cooking, Care & Storage	Preheat oven, Remove sleeve, Pierce film, Place on baking tray, 20mins, Defrost thoroughly before use, Do not Reheat
Ingredients	chicken (24%) • vegetables (carrots, Red pepper, onion) • water • pineapple • tomato ketchup • sugar • white wine vinegar • soy sauce (with soybean wheate flour, preservative E202) ect
Bar code	its for stock and pricing.
Contains	cows milk, eggs, soya, wheat, gluten, sesame products
Nutrition	tells you how much energy, protein carbohydrate, fat, fibre sodium, equivalent as salt in it.
name and address of manufacturer	The name of it the address Baker Street. london. England ect and the manufacturer

Product Analysis

Aim: to analyse a re ready made low fat product
to get ideas for designing

Product Name	Cottage pie
Product Description	lean minced beef and lightly sauteed onions cooked in a rich, hearty gravy with tender pieces of carrot topped with a fluffy layer of washed potato
Target Group	Low fat
Cost	£1.29
Portion Size	1
Weight	400g
Storage / shelf life	keep refrigerated below 5°C
Ingredients	potato (47%) minced beef (18%) water, carrot, onion, beef stock.
Appearance of product	potatoey
Smell of product	meaty
Taste of product	not potatoey
Packaging	Plastic tray
Other information	Suitable for Lowfats

Product analysis evaluation

I carried out a product analysis of a low fat cottage pie to determine its quality ,the ingrediants used to make the product and how it is packaged and labelled.

I thought that the product was good value for money because it tasted nice and was cheap for a main meal.

The things i like about the product was the taste of it because the taste was nice for the price and tasted different.

The things i didnt like about the product was the carrots because there were a bit hard.

The product could be improved by less hard carrots and the look of it.

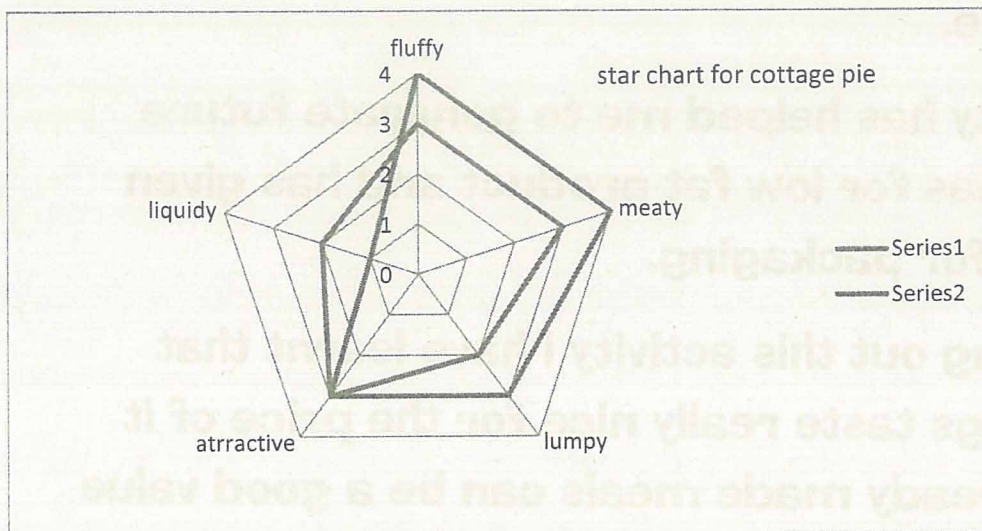
The product didnt look like the picture on the box because it wasnt as cooked and it look mooshed.

The packaging made me want to buy the product because it looked really nice and i like cottage pie.

The activity has helped me to generate future design ideas for low fat product and has given me ideas for packaging.

By carrying out this activity i have learnt that some things taste really nice for the price of it and that ready made meals can be a good value of money.

fluffy	3	4
meaty	3	4
lumpy	2	3
attractive	3	3
liquidy	2	1



Analysis of research

Research carried out	Why I carried out this area of research	What I found out	How this information will help me in the development of my final product
questionnaire	I carried out this research to find out if how many people are prepared to spend and to find out if there is a gap in the market and what age people eat low fat food and to determine people's preferences.	I found out what people's favourite dishes where and what ingredients they get including the most popular fat on bread is low fat spread and butter and the popular low fat ingredients that people use regularly is vegetables fish, poultry, fruit, spreads and milk and the popular fat people use for cooking is oil and margarine and the popular portion size that people buy is duo and family.	It will help me to decide on recipe ideas so that I take into account peoples preferences. I will make dishes using the low fat ingredients that they regulaly use.
Supermarket survey	I carried out a supermarket survey to find out the packaging of each meal and find out how much it costs and what kind of meals they have and how many people would have it.	I found out what kind of low fat dishes there was including weightwatchers chicken tikka which is £2.37 and weightwatchers cottage pie which is £2.37 as well. There was a large range of products available. The average price of a meal is £2.50.	It will help to give me product ideas and the price structure for products. This will ensure I am competitive with my price for my final product. Also by looking at the packaging materials this will help me for my final product.

Textbooks magazines	I carried out this research to find out what kind of low fat recipes there are and the types of fats we should and should not eat.	I found many recipes in the magazines which were useful for my design ideas. From the textbooks I found out information on the different types of fat and that the healthiest to use is polyunsaturated.	This information has helped me find out ways to reduce fat in the diet, the best types of fat to use in cooking which is polyunsaturated fats, and recipe ideas.
leaflets	I looked at leaflets on fat which gave me ideas for the best fats to use in cooking.	I found that the healthiest fats to use are oils and polyunsaturated margarines.	This information tells me what fats to use when producing my design ideas.
The internet	I looked at different fats and I looked at recipe ideas.	I found that different recipes had different amount of fats and sugars.	This information helps me found out what different fats there is.
packaging	I carried out research into packaging to find out the types of packaging materials used and which ones can be recycled.	I found that they are many materials used such as cardboard, plastics, foil, and glass. The cardboard and plastics can be recycled.	This has given me ideas for my final product.
Product analysis	I carried out two product analysis to give me ideas for low fat product and the type of ingredients' in them and the packaging used.		

The taste of the both product was good and the price was cheap. The appearance of the products could be improved by adding garnishes. This has given me ideas for my design ideas and to make sure that they are well presented.

Design specification

Below is the design criteria for my low fat products.

Each of my design ideas will meet the criteria.

- **the target group is slimmers.**
- **it will be a sweet product.**
- **occasion - family meal**
- **price will be no more than £2.99p**
- **attractively presented, decorated**
- **the portion size will serve 3 to 4 people**
- **it will have an appealing flavour**
- **the target group the product is designed for slimmers (low fat)**
- **packaged appropriately**
- **the product will be low in fat**
- **it will be suitable to mass produced**
- **it will be suitable to sell in a supermarket**
- **it will be stored in the fridge or a tight container**

Design ideas

Low fat foods

Fruit sponge

Fruit roulade

Lemon sponge

Jam sponge

Chocolate chip cookies

Fruit crumble

Chicken curry

Fruit pie

Cheese cake

Chocolate and berry tray cake

Lemon and rosemary cupcakes

Oat apple and cinnamon cookies

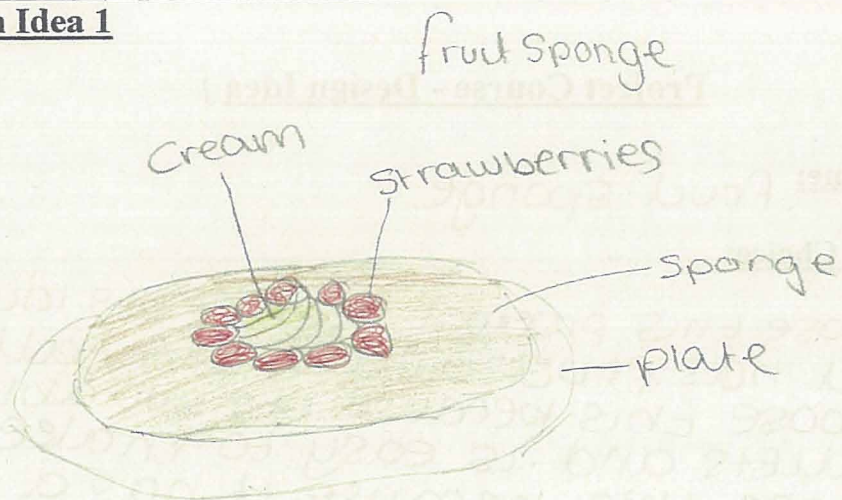
Limoncella tart

Macaroni cheese

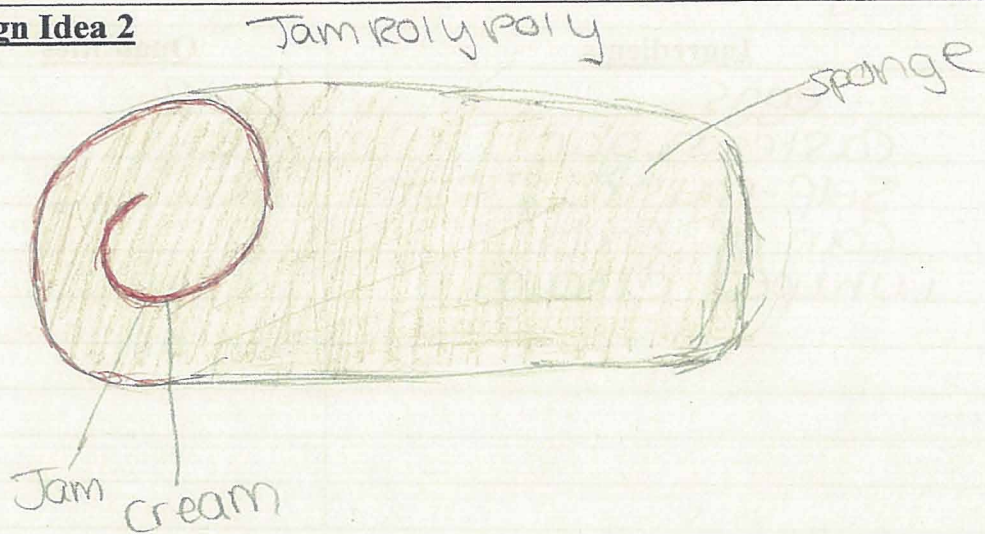
Banana muffins

Design Ideas

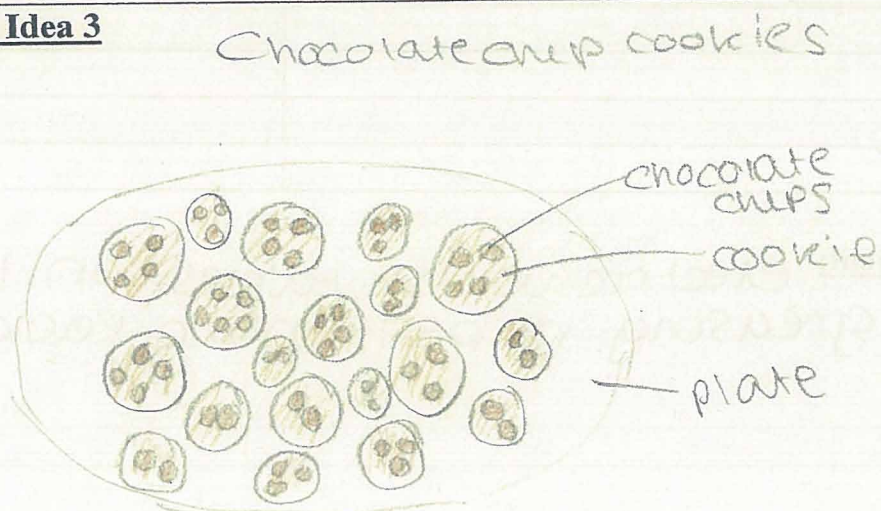
Design Idea 1



Design Idea 2



Design Idea 3



Project Course - Design Idea 1

Product Name: fruit sponge

Reasons for Choice:

- I chose this product because its low in fat and it has fruit which is healthy.
- I choose this because its suitable for low fat diets and is easy to make
- I chose this because it has a Low fat Sponge.

<u>Ingredients</u>	<u>Quantities</u>
eggs	2
caster sugar	50g
Self-raising flour	50g
Can of fruit	1
whipped cream	125ml

Equipment: electric whisk, tablespoon, 18cm Sandwich tin, greasing paper, cooling rack

Skills:

whisking method, fruit preparation, piping cream

Evaluation of design ideas

My design idea met the design brief because I chose to do fruit sponge because fruit sponge equals to low fat.

The methods and techniques I used to make the product were the whisking method.

The methods I used were not successful because it took quite a long-time to whisk the eggs and sugar together.

I used the following items of labour saving equipment which was the whisk.

I did not have the following problems when making my product because I followed the recipe.

I recorded my results by carrying out a star profile rating test.

My product tasted fruity and spongy.

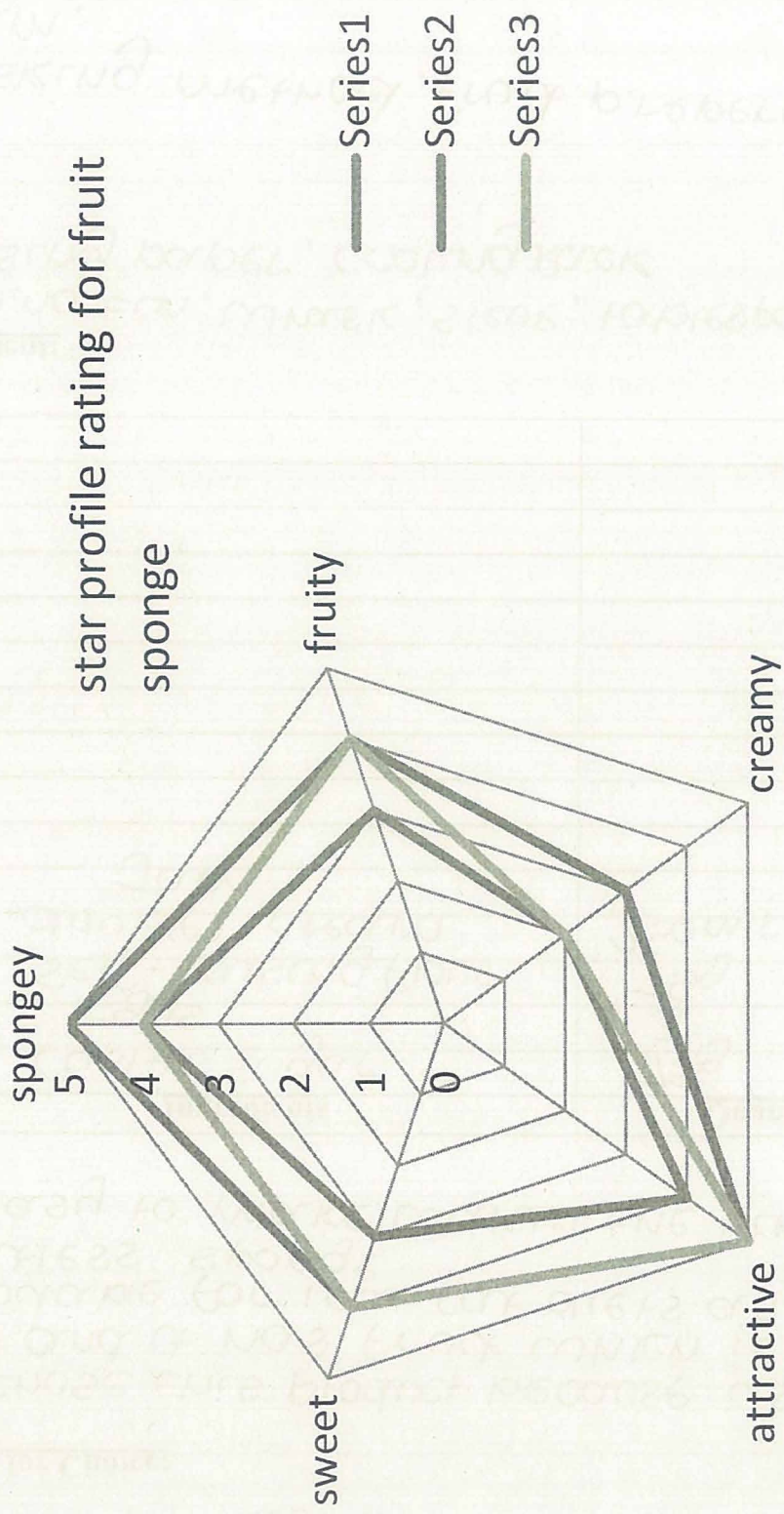
The appearance of my product was golden brown and soft.

The product was finished by cram to make it look more attractive and appealing.

The product had the following textural qualities soft.

Further changes I could make to improve the texture/flavour/colour/size, shape, finish are making it creamier.

star profile rating for fruit



Project Course - Design Idea 2

Product Name: Fruit Roulade

Reasons for Choice:

- I chose this product because its low in fat and it has fruit which is healthy
- Suitable for low fat diets as it is a fatless sponge
- easy to make within the time.

<u>Ingredients</u>	<u>Quantities</u>
Caster Sugar	75g
eggs	3
Self-raising Flour	75g
double cream	250mls
Jam	

Equipment:

baking tin, whisk, sieve, tablespoon, knife, greasing paper, cooling rack

Skills:

whisking method, fruit preparation, piping Cream.

My product specification for fruit roulade (jam roly poly)

- My product is a fruit roulade
- It will serve 3 to 4 people
- It is sweet
- It will be suitable for low fat
- It is low fat as the sponge is fatless
- It will be packaged in a plastic container
- The jam i will use is raspberry jam

Evaluation of design idea 2

My design idea met the design brief because i chose to do jam roly poly because jam roly poly equals to low fat.

The methods and techniques i used to make the product were whisking methods.

The methods i used were not successful because it took a bit of a long time to whisk the eggs and sugar together.

I did not have the following problems when making my product because i followed the recipe.

I recorded my results by carrying out a star profile rating test.

My product tasted jammy, spongy and creamy.

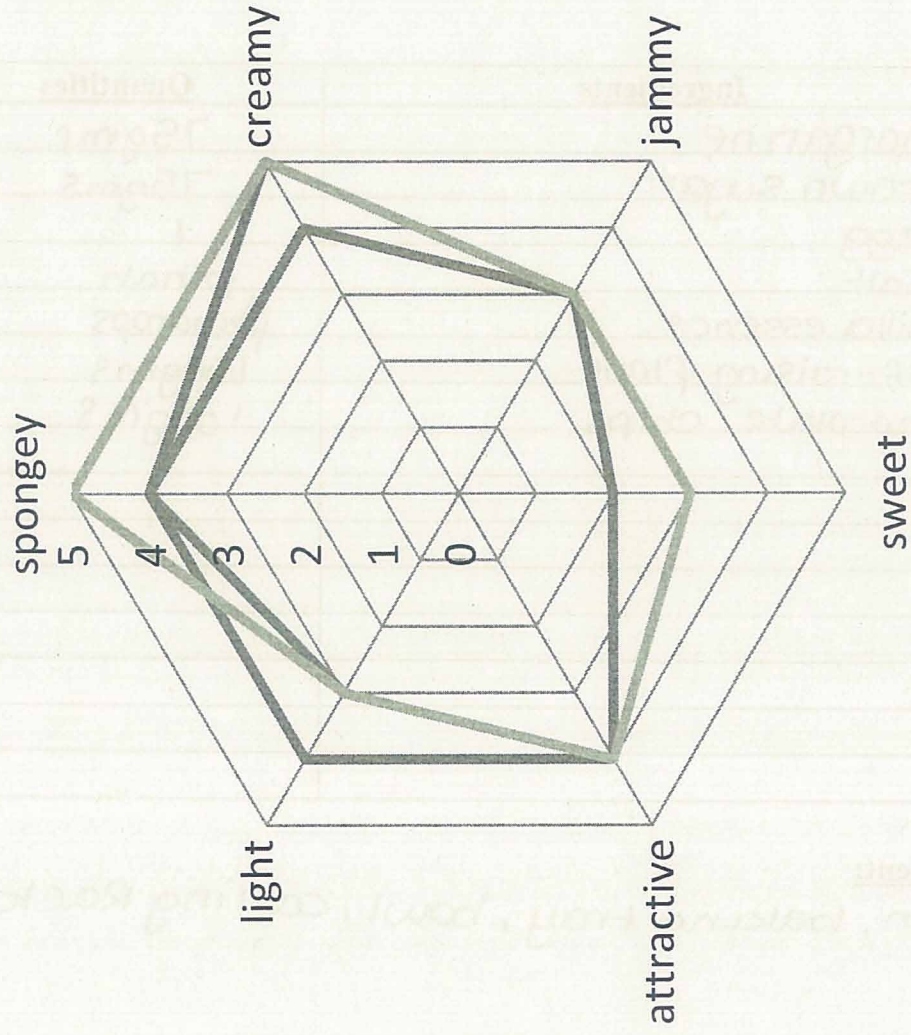
The apperance of my product was golden brown and soft.

The product was finished by cream to make it look more attractive and appealing.

The product had the following textural qualities were soft.

Further changes i could make to improve the texture/ flavour/colour/shape, size finish is more jam.

star profile rating
test for jam roly poly



Series1
Series2
Series3

Project Course - Design Idea 3

Product Name: Chocolate Chip cookies

Reasons for Choice:

- I chose this product because it's low in fat
- I chose this because it is easy to make
-

<u>Ingredients</u>	<u>Quantities</u>
Margarine	75gms
brown sugar	75gms
egg	1
Salt	pinch
Vanilla essence	few drops
Self-raising flour	150gms
chocolate chips	100gms

Equipment:

Spoon, baking tray, bowl, cooling rack

Skills:

Creaming, beating, stirring method

My product specification for chocolate chip cookies.

- my product is chocolate chip cookies
- it will serve a family
- it is sweet
- it will be suitable for low fat
- it is low fat as the cookie is low fat and the chocolate chips are low fat
- it will be packaged in a plastic container
- the chocolate chips I will use is low fat chocolate chips

Evaluation of design idea 3

My design idea met the design brief because I chose to do chocolate chip cookies, and I have put low fat chocolate in it.

The methods and techniques I used to make the product was the whisking method.

The methods I used were quite successful because it didn't take long to make.

I used the following items of labour saving equipment which was the whisk.

I did not have the following problems when making my product because I followed the recipe.

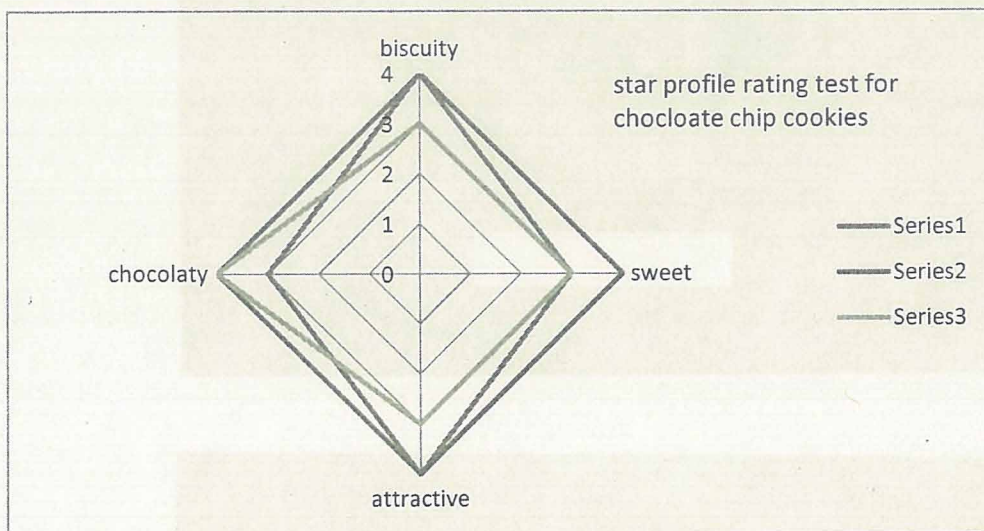
I recorded my results by carrying out a star profile rating test.

My product tasted soft and biscuit.

The appearance of my product was soft.

Further changes I could make to improve the texture/flavour/colour/size, shape, finish are making it making it bigger.

biscuity	4	4	3
sweet	3	4	3
attractive	4	4	3
chocolaty	3	4	4



Design Ideas



Development Ideas

Monday 31st January
Roll

Fruit sponge

- Change the fruits (pears, grapes) strawberries
- Change the colour
- Strawberry sponge
- Icing
- 2 layered

Fruit Roulade (Jam Roly poly)

- different jam (strawberry)
- whole grain flour
- Change the sugar
- Change colour of cream
- change flavouring

Chocolate chip cookies

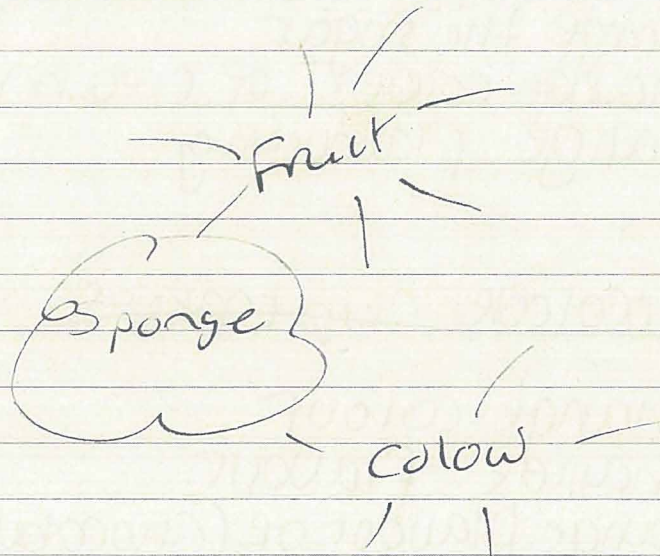
- Change colour
- Change flavour
- change flavour of (chocolate chips e.g white dark milk)
- Type of sugar
- Size

Monday 31st January 2011

Fruit Sponge

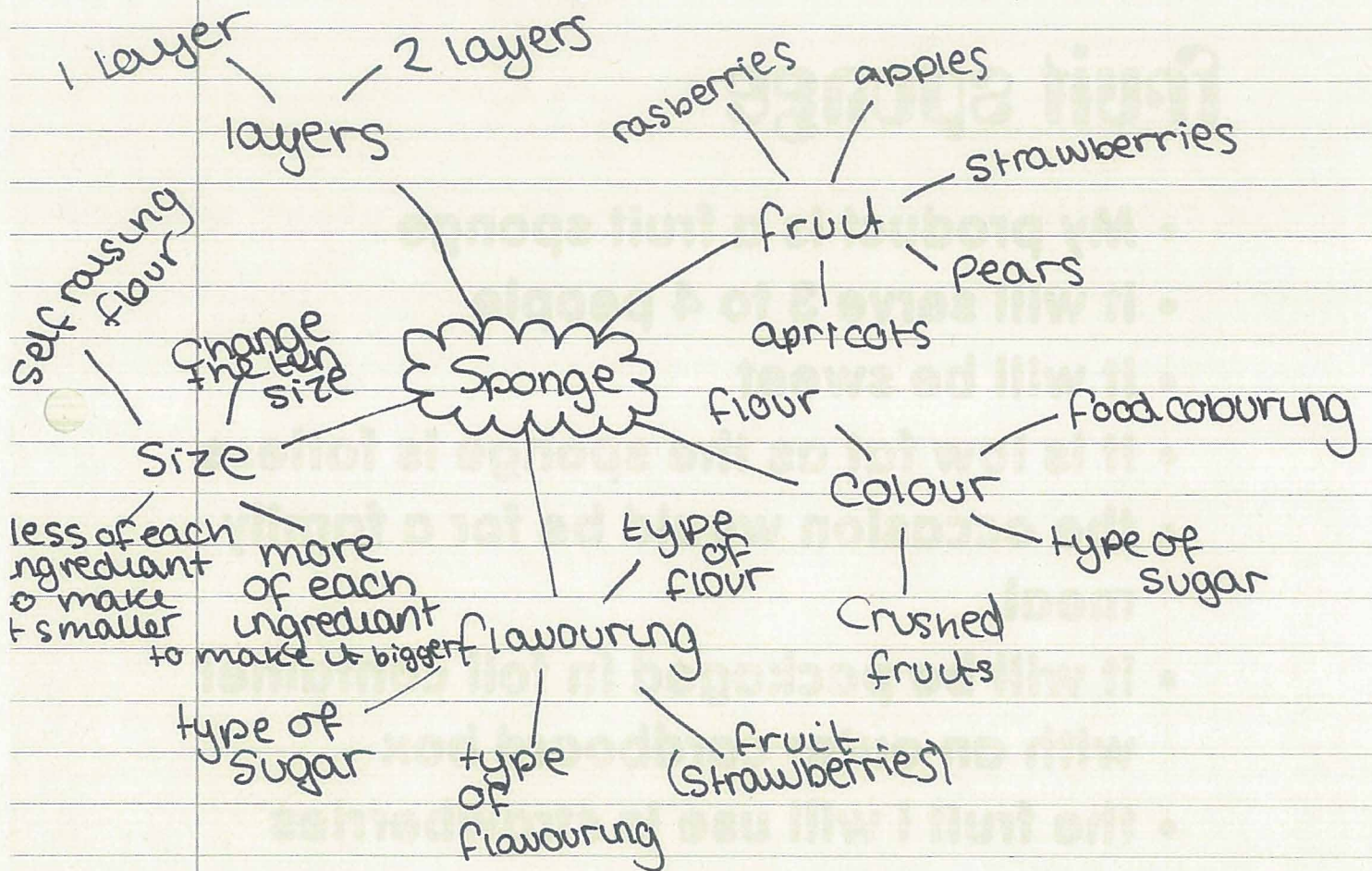
What I could change :

- Change the fruits (Strawberries, pears etc)
- change the colour
- Change the type of Sponge (flavouring)
- put icing on top of the sponge
- have 2 layers instead of one layer
- type of sugar
- Size of the sponge
- change the flour



Tuesday 1st February 2011

fruit sponge



Product specification for fruit sponge

- **My product is a fruit sponge**
- **it will serve 3 to 4 people**
- **it will be sweet**
- **it is low fat as the sponge is fatless**
- **the occasion would be for a family meal**
- **it will be packaged in foil container with an outer cardboard box**
- **the fruit i will use is strawberries**

Project Course – Development Work /

Aim: to change the flavour of the sponge

Modifications to be tested:

- to trial different flavours
- A Coco, vanilla and lime

<u>Ingredients</u>	<u>Quantities</u>
eggs	2
caster sugar	50g
Self-raising flour	50g
Coco Powder	25g
vanilla essence	
Lime	1

Equipment:

Whisk, sieve, tablespoon

Skills:

whisking method

Evaluation of development work

The aim of my work was to change the flavour of my sponge by adding cocoa powder.

For my first development I carried out one change.

Of the samples I produced, the most successful was fruit sponge because the sponge came out golden brown and tasted really spongy and the fruit preparation how I put the strawberries looked really good and it all tasted really nice.

I didn't have a least suitable sample because I only did one change.

I think that I met my aim because I changed the flavour of my sponge.

During the practical session I think I worked hygienic because I didn't have any nail varnish on and I wore an apron.

I used a variety of skills such as the whisking method for my sponge.

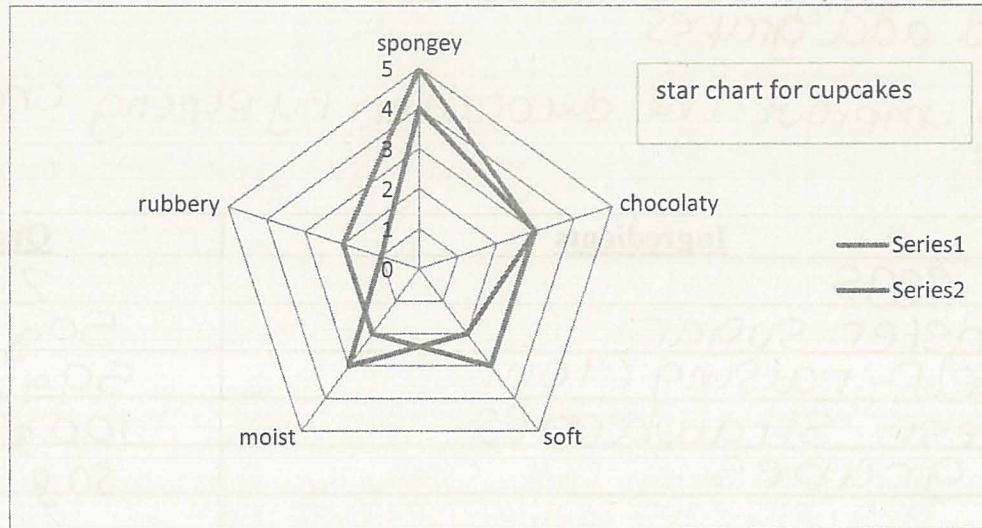
The improvements I could make are adding margarine.

I tested my work by a star profile rating test and found out that it was spongy.

I intend to develop next by changing the fruit.

spongey	5	4
chocolaty	3	3
soft	3	2
moist	2	3
rubbery	2	1

Development 1



Project Course – Development Work 2

Aim: to change the fruit in the sponge and to improve the decoration.

Modifications to be tested:

- to change the strawberries to fresh strawberries and add grapes
- to improve the decoration by piping cream on top

<u>Ingredients</u>	<u>Quantities</u>
eggs	2
Caster sugar	50g
Self-raising flour	50g
fresh strawberries	100g
grapes	50g

Equipment:

whisk, sandwich tin, tablespoon, ~~and~~ sieve and cooling rack

Skills:

whisking skill

Evaluation of development work 2

The aim of my work was to change the fruit and improve the decoration of the sponge.

For my second development i trialled the use of grapes with the strawberries and i improved the decoration by piping cream.

I think that i met my aim because i made many developments and it was low in fat.

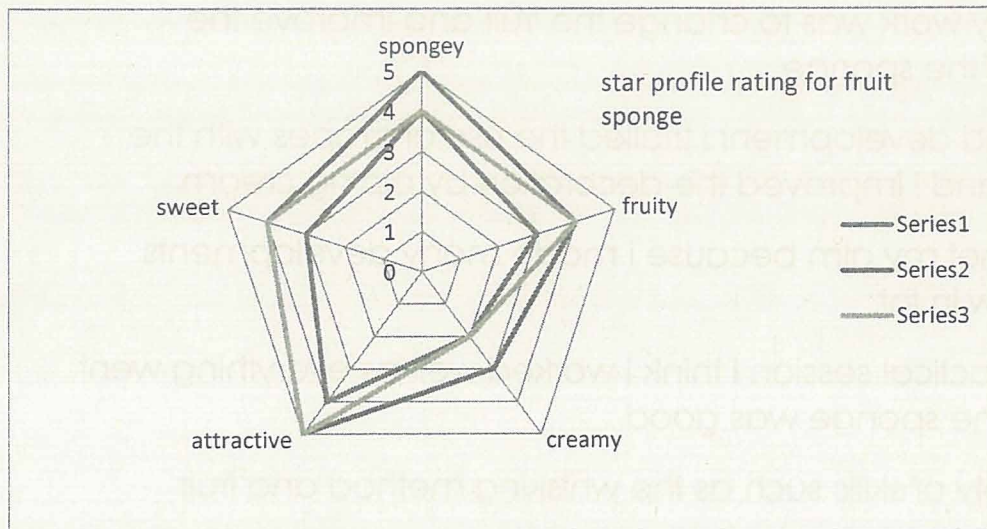
During the practical session i think i worked well as everything went to plan and the sponge was good.

I used a variety of skills such as the whisking method and fruit preperation.

I tested my work by a star profile rating test and found that all my testers liked the sponge and thought the decorations were attractive.

The sample i intend to make for my final product is fruit sponge with rasberries and cream.

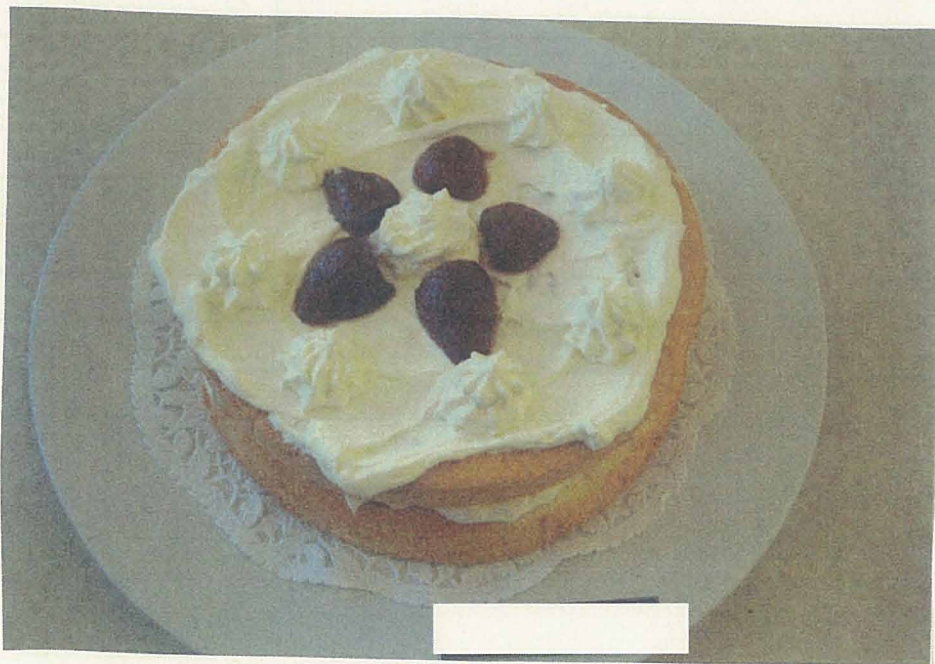
spongy	4	5	4
fruity	3	4	4
creamy	2	3	2
attractive	4	5	5
sweet	3	4	4



Development 1



Development 2



Project Course – Final Product

Product Name: fruit sponge

<u>Ingredients</u>	<u>Quantities</u>
eggs	3
Caster Sugar	75g
Self-raising flour	75g
double cream	250mls
fruit (Strawberries)	150g
Jam (Raspberry)	25g

Equipment:

Sandwich tin, electric whisk, Sieve, Tablespoon, Cooling Rack, knife, piping bag, Jug, bowl

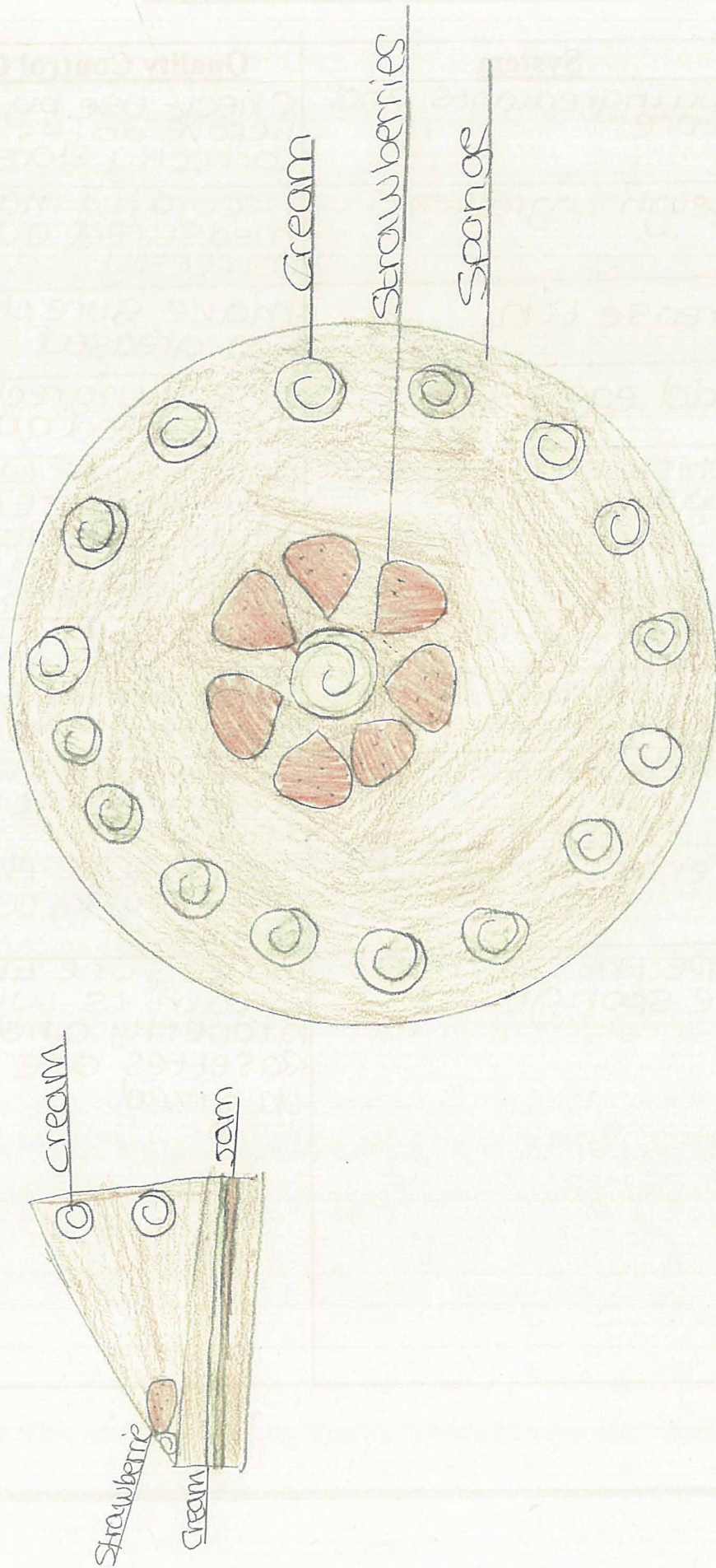
Skills:

Whisking method, folding method, fruit preparation, whipping and piping cream

System and Quality Control Checks for Fruit sponge

<u>System</u>	<u>Quality Control Checks</u>
Buy ingredients and store	check use by/best before dates check correctly stored
weigh ingredients	Accurately made + measured out correctly
Grease tin	make sure it's not too greased
Add egg + sugar	check ingredients are a good quality
Whisk eggs + caster sugar	make sure that the mixture is white and fluffy and leaves a trail for 3 seconds
Sieve flour	make sure there's no lumps
Pour mixture into tin	make sure the tin is greased
Whisk cream	make sure the cream is thick and soft
Prepare the fruit	make sure the fruit isn't mouldy and is evenly cut
Pipe the cream on the sponge	make sure the cream is whisked properly and Rosettes are even in sized.

Sketch Of final Product



Time plan for fruit sponge

<u>Time</u>	<u>process</u>	<u>health + safety</u>
11:10	weigh ingredients	wash hands
11:13	heat the oven	hair up
11:13	grease tin	no nail varnish
11:14	whisk eggs + caster sugar	apron on
11:18	sieve flour	check no lumps
11:20	pour mixture into tins	check evenly spread
11:22	put in the oven	check temp of oven
11:25	wash up	check if cooked
11:40	turn sponges onto cooling rack	check rack is clean
11:42	put sponges in freezer	5 mins only
11:45	whisk cream	make sure it's not too whisked
11:48	put jam inside the sponge	
11:50	put cream in the sponge	
11:53	pipe cream on top of the sponge	
11:57	cut up fruit	make sure the fruit is in date
12:02	put fruit on top of the sponge	
12:05	put sponge on plate	
12:06	sprinkle sugar on top	
12:07	wash and dry up	check if cleaned

Evaluation of final product

The aim of the brief was to produce an original fat free product which is suitable to sell in a market.

I trailed three design ideas which were chocolate chip cookies, fruit roulade and fruit sponge because they didn't have that much sugar in them and I chose fruit sponge to further develop because fruit sponge was the one with the least sugar.

I carried out two developments which were changing the flavour of the sponge to vanilla essence and changing the fruit from strawberries to raspberries because they were from the questionnaire. Then I chose the most successful parts of the developmental work to produce my final product which were changing the fruit.

The techniques I used were whisking method for whipping cream and the sponge and folding in the flour and piping the cream and fruit preparation.

I arrived at my final product by carrying out the following research questionnaires I found out what people like out of different low fat foods like what kind of flavours do you like out of vanilla essence, coca powder and bits of lime. I looked at recipes to see what kind of different ingredients were in the foods. I looked at packaging to see what kind of low fat ingredients was on the packaging it helped because it showed how much of sugar was in it.

Labelling I looked at what it contains and the price of them and the cooking, care and storage information it helped me by showing me what it contains in the product and how to cook it and how to storage it. Design ideas helped me because it showed me what product to choose from out of chocolate chip cookies, fruit sponge and fruit roulade. Supermarket survey helped me because it showed me how to compare the range of chilled and frozen foods on the market.

I used the following skills to make my product whipping method to whip the cream and folding method to fold the flour.

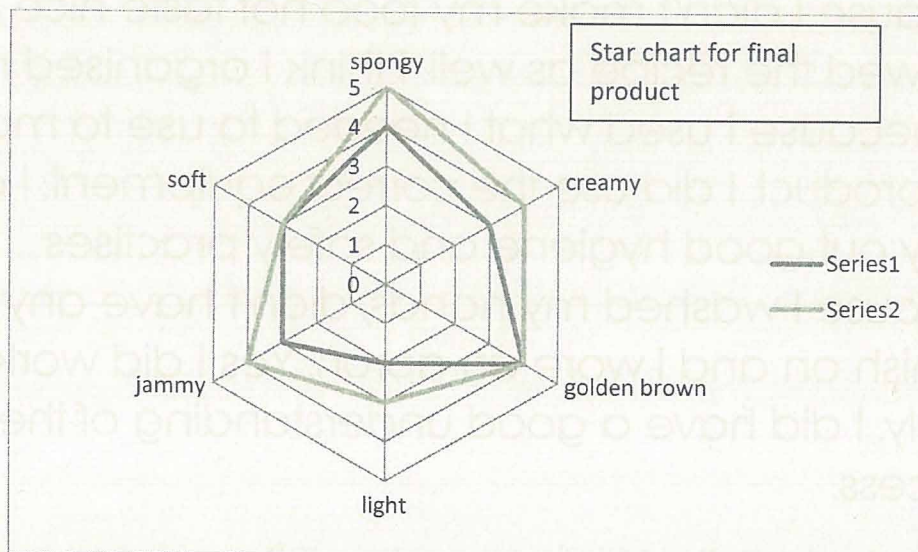
I think I was quite successful in my practical work because I didn't make my food not taste nice and i followed the recipe as well. I think I organised myself ok because I used what i needed to use to make my product. I did use the correct equipment. I did carry out good hygiene and safety practises because I washed my hands, didn't have any nail varnish on and I wore an apron. Yes I did work safely. I did have a good understanding of the process.

I needed a bit of help knowing if the caster sugar and eggs was whipped enough and I needed help to see if it was cooked enough in the oven.

The product was tested by a star profile the taste was spongy, light and fluffy the texture was spongy and the appearance looked tasty and creamy.

The product could be packaged by being put in a container (tin, box).

Final Design Idea



Final evaluation of project

I satisfied the brief because my final product was suitable for low fat diets and slimmers and it was an original product because it was different from the first recipe I used.

My design was successful for my target group because it was low in fat.

I achieved this by carrying out the following tasks i carried out a supermarket survey and I found out different ranges to compare for example chilled foods and frozen foods i found there where a lot of low fat dishes on the market and that they vary in price.

From a Questionnaire I found out what people would want in the sponge like vanilla essence, cocoa powder and bits of lime, their likes and dislikes and how much they are prepared to spend on a product.

I looked at product packaging and labelling i found out how to cook it and look at the ingredients and the storage information. It also gave me ideas for packaging my final product.

I carried out a product analysis which told me about what it has on the packaging, ingredients used and pricing.

On the internet I found out different recipes and how much fat could go in the sponge and the different types i could use.

My Research was successful because it helped me by choosing what recipe to cook for my final product.

The changes made in my final product were the fruit strawberries to raspberries and changed the sponge to two layers.

The main difficulties I met were knowing if the cream was whipped enough and seeing if the sponge was cooked enough in the oven.

I am sort of pleased with my final result but I think I could have improved on my decoration.

I could have improved my design by putting fruit in the middle instead of jam and made the decoration better.

It has got commercial potential because it could be sold in a supermarket.

The parts that I am pleased with in the product are the taste of the sponge.

At each stage of the project I evaluated my work. I evaluated all my research, my three design ideas

my two developments and my final product. All the evaluations for my practical work helped me with my final product.

If I had more time I could carry out more research on low fat products.

I have learnt from this project that the healthiest types of fat to use in cooking are polyunsaturated hard fats and oils. I have also learnt about which foods are lower in fats than others I have also learnt how to cook new recipes and how to develop products. I now know that animal fat is the worst fat and can cause high cholesterol.

Bibliography research

title of research	type of research	author	publisher
Good food magazines	magazine		bbc
Foods for special needs	DVD		Classroom video
Examining food and nutrition	book	Jenny ridge well	Heinemann
Food and nutrition	book	Anita tull	oxford
AQA design and technology	book	Girt, hotson, littlewood	Nelson thornes
Good housekeeping, new step by step	book	Good housekeeping	Ted smart
Teacher recipe sheets	sheets		

Exploring vegetarianism, a healthy alternative	DVD		viewtech
Gcse food technology	book	Jenny ridgewell	Heinemann
Design and make it	book	Robinson, Roberts, barnard, shephard	Stanley thornes
All about food	book	Helen McGrath	oxford

Websites

www.nutrition.org.uk

www.bbc.co.uk/food

www.sainsburys.co.uk

www.eatwell.gov.uk

www.food.gov.uk/labelling

www.lowfatveggiefood.co.uk