

Year 7 RM and Catering Curriculum Overview 2023-24

Unit Title	Focused Practical Tasks/ Resistant Materials (4 weeks)	Mechanical Toy Project	Basic Cookery of Savoury and Sweet Dishes
Number of lessons	4 Lessons	14 lessons	9 practical lessons if taught fortnightly 18 lessons if taught weekly (1 practical and 1 theory)
Curriculum content	<p>Baseline Test (1 lesson)</p> <p>Students to complete baseline test in first lesson.</p> <p>Net Design (3 lessons):</p> <p>During this mini project pupils are going to design the graphics for a multi-pack cereal box. Learners can use an existing brand and re-design the graphics, character and logo. Alternatively, they can create your own brand, logo and characters.</p> <p>As you work you apply your knowledge and understanding of materials and ingredients. You work accurately at all stages and show understanding of ways you are limited. You clearly modify and change your work as necessary as it develops. As you develop and communicate ideas you are aware of culture and society in the products you use and create.</p> <p>Respond creatively to briefs. Apply knowledge and understanding of materials and techniques. Solve technical problems.</p>	<p>Over the next 12 weeks all learners will be designing and making a mechanical toy. Pupils are doing this project to develop and enhance your research, design and making skills. Building on knowledge you have previously learned. All students will be expected to work to the best of your ability throughout this project, with the main emphasis on producing a high standard of work and a very high-quality final product.</p> <p>Knowledge covered: Different types of mechanisms and motion. Systems and Control: Input, output and processes. Basic applied Physics</p>	<p>Core knowledge:</p> <p>Introduction to different cooking methods Working with recipes Costing a recipe using simple percentages Health and Safety Healthy Eating – Government guidelines Use of questionnaires Balanced meals Food label information Importance and types of packaging</p> <p>Core skills:</p> <p>Weighing and measuring Knife skills Methods of cookery Temperature controlling Safe use of equipment</p> <p>Enhanced knowledge:</p> <p>Applying knowledge and understanding of ingredients and equipment working accurately and showing understanding of limitations Government guidelines of healthy eating Enhanced skills: Modifying dishes to include increased nutritional value Evaluation of dishes using a Star profile</p>
Links to prior learning	<ul style="list-style-type: none"> • Maths creating nets at KS2 • Healthy eating at KS1 and KS2 	<ul style="list-style-type: none"> • Science Different types of Motion • Maths range of basic shapes 	If food technology was taught in primary school students should understand health and safety as well as basic equipment knowledge
Cultural capital opportunities	<p>https://www.youtube.com/watch?v=HPpMV_vcVEg</p> <p>Home Product Analysis of cereal box net: Take a cereal box net and take it apart. Look at how it is constructed and also the graphics used.</p>	<p>Visit Bressingham steam museum</p> <p>https://www.bressingham.co.uk/home.aspx</p> <p>See a range of machines that use CAMS and convert one type of motion into another.</p>	<p>Visit local farms and look at the foods available in farm shops</p> <p>Visit farmers markets and look at the foods offered</p> <p>Look at celebrity chef's blogs and recipe ideas</p>

	Make sense of the legal information regarding nutrients etc.		
Assessment focus	<p>Baseline Test: Knowledge and understanding of the following subject areas:</p> <ul style="list-style-type: none"> • English • Maths • Science • Art • Food Technology • DTRM 	<p>Mechanical Toy Practical: Tools and equipment are used accurately when working from your plans which you change if necessary.</p> <p>Core Skills being assessed: Measuring and marking out. Use of a Tools (Tenon saw, coping saw, try square...etc.)</p>	<p>Term 1: Baseline test</p> <p>Term 2: Pre-assessment: fruit salad Assessment: apple crumble</p> <p>Term 3: End of unit test</p>

Name:

Date:

Cooking

- A broad range of ingredients, equipment, food skills and techniques, and cooking methods are used to achieve successful results.
- Recipes and cooking methods can be modified to help meet current healthy eating messages.



Why is food cooked?

Some foods can be eaten raw and form an important part of the diet. However, many foods need to be prepared and cooked before they are eaten to:

- make the food safe to eat by destroying pathogenic microorganisms and toxins;
- destroy microorganisms and enzymes that cause food to deteriorate and therefore increase the keeping quality of the food;
- make the food more digestible and easier to absorb.

Food skills

There are a number of food skills which enable a variety of increasingly complex dishes to be prepared and made.

These can include:

- beating, combining, creaming, mixing, stirring and whisking;
- blitzing, pureeing and blending.
- kneading, folding, forming and shaping;
- knife skills;
- rubbing-in and rolling-out;
- use of the cooker: boiling/simmering/poaching, frying, grilling, roasting and baking.

Safety

- Sharp knives: never walk around with a knife. Use the *bridge hold* and *claw grip* to cut safely.
- Grater: hold grater firmly on a chopping board. Grate food in one direction and leave a small amount at the end to prevent injury to knuckles.
- Hot liquid: drain hot liquid carefully over the sink using a colander.
- Saucepans: turn panhandles in from the edge, so they are not knocked.
- Hot equipment: always use oven gloves when placing food in and out of the oven.
- Spills: wipe up immediately.
- Electrical equipment: always follow instructions.

To find out more, go to:
<https://bit.ly/322eSpr>

Food skills are acquired, developed and secured over time.

Bridge hold



Claw grip



Food skill	Food skill	Food skill	Food skill	Food skill
Bake	Fry and sauté	Portion / divide		
Beat	Glaze and coat	Prove		
Blitz, puree and blend	Grate	Roast		
Casserole	Grill	Roll-out		
Chill	Juice	Rub-in		
Core	Knead	Sift		
Cream	Layer	Snip		
Crush	Mash	Spread		
Cut out	Measure	Stir-try		
Cut, chop, slice, dice and trim	Melt, simmer and boil	Weigh		
Decorate and garnish	Microwave	Whisk		
Drain	Mix, stir and combine	Zest		
Fold	Peel			
Form and shape	Pipe			

Heat exchange/transfer

Cooking requires heat energy to be transferred from the heat source, e.g. the cooker hob, to the food. This is called heat transfer or heat exchange. There are three ways that heat is transferred to the food. They are:

- conduction – direct contact with food on a surface, e.g. stir-frying;
- convection - currents of hot air or hot liquid transfer the heat energy to the food, e.g. baking;
- radiation - energy in the form of rays, e.g. grilling.

Many methods of cooking use a combination of these. The amount of heat and cooking time will vary according to the type of food being cooked and the method being used.

Cooking methods

These are based on the cooking medium used:

- moist/water based methods of cooking, e.g. boiling, steaming, stewing, braising;
- dry methods of cooking, e.g. grilling, baking, roasting, toasting, BBQ;
- fat-based methods of cooking – stir, shallow and deep fat frying.

Vegetable cuts



batons – 5-6.5cm long x 1 cm square



dice – 1cm square



julienne/match stick – 5-6.5cm long x 3 mm square



fine julienne – 5-6.5cm long x 1.5mm square

Task

Complete the *Food route Cooking journal*:
<https://bit.ly/3dYUibH>

Key terms

Conduction: The exchange of heat by direct contact with foods on a surface e.g. stir-frying or plate freezing.

Convection: The exchange of heat by the application of a gas or liquid current e.g. boiling potatoes or blast chilling.

Heat transfer: Transference of heat energy between objects.

Radiation: Radiation is energy in the form of rays, e.g. grilling.

Cooking for health

Take into account healthy eating recommendations to ensure that dishes/meals are part of a varied, balanced diet.

- Planning - does the meal meet the nutritional needs and preferences of those it is being cooked for? Base your meals on starchy food.
- Choosing - choose low fat/sugar/salt versions, where possible.
- Preparing - limit the amount of fat added (try a spray oil) and replace salt with other flavourings, such as herbs and spices.
- Cooking - use cooking practices which reduce the amount of fat needed and minimise vitamin losses from fruit and vegetables.
- Serving - serve the meal in proportions which reflect current healthy eating advice.
- Do not forget to include a drink.

Healthier cooking methods

- Grill or BBQ foods rather than fry to allow fat to drain away.
- Drain or skim fat from liquids, e.g. sauces, stews and casseroles.
- Dry fry using non-stick pans, so no need for oil.
- Oven bake rather than fry.
- Steam or microwave vegetables.

The Eatwell Guide

- When choosing food and drinks, current healthy eating guidelines should be followed.



Fruit and vegetables

- This group should make up just over a third of the food eaten each day.
- Aim to eat at least five portions of a variety each day.
- Choose from fresh, frozen, canned, dried or juiced.
- A portion is around 80g (3 heaped tbs).
- 30g of dried fruit or 150ml glass of fruit juice or smoothie count as a max of 1 portion each day.

Potatoes, bread, rice, pasta or other starchy carbohydrates

- Base meals around starchy carbohydrate food.
- This group should make up just over a third of the diet.
- Choose higher-fibre, wholegrain varieties.

Dairy and alternatives

- Good sources of protein and vitamins.
- An important source of calcium, which helps to keep bones strong.
- Should go for lower fat and lower sugar products where possible.

To find out more, go to:
<https://bit.ly/2QzUMfe>

The Eatwell Guide

- Comprises 5 main food groups.
- Is suitable for most people over 2 years of age.
- Shows the proportions in which different groups of foods are needed in order to have a well-balanced and healthy diet.
- Shows proportions representative of food eaten over a day or more.

Beans, pulses, fish, eggs, meat and other protein

- Sources of protein, vitamins and minerals.
- Recommendations include to aim for at least two portions of fish a week, one oily, and; people who eat more than 90g/day of red or processed meat, should cut down to no more than 70g/day.

Oil and spreads

- Unsaturated fats are healthier fats that are usually from plant sources and in liquid form as oil, e.g. olive oil.
- Generally, people are eating too much saturated fat and need to reduce consumption.

Foods high fat, salt and sugar

- Includes products such as chocolate, cakes, biscuits, full-sugar soft drinks, butter and ice cream.
- Are high in fat, sugar and energy and are not needed in the diet.
- If included, should be had infrequently and in small amounts.

8 tips for healthier eating

These eight practical tips cover the basics of healthy eating, and can help you make healthier choices.

- Base your meals on starchy carbohydrates.
- Eat lots of fruit and veg.
- Eat more fish – including a portion of oily fish.
- Cut down on saturated fat and sugar.
- Eat less salt (max. 6g a day for adults).
- Get active and be a healthy weight.
- Don't get thirsty.
- Don't skip breakfast.

Hydration

- Aim to drink 6-8 glasses of fluid every day.
- Water, lower fat milk and sugar-free drinks including tea and coffee all count.
- Fruit juice and smoothies also count but should be limited to no more than a combined total of 150ml per day.

Fibre

- Dietary fibre is a type of carbohydrate found in plant foods.
- Food examples include wholegrain cereals and cereal products; oats; beans; lentils; fruit; vegetables; nuts; and, seeds.
- Dietary fibre helps to: reduce the risk of heart disease, diabetes and some cancers; help weight control; bulk up stools; prevent constipation; improve gut health.
- The recommended average intake for dietary fibre is 30g per day for adults.

Composite/combination food

Much of the food people eat is in the form of dishes or meals with more than one kind of food component in them. For example, pizzas, casseroles, spaghetti bolognese and sandwiches are all made with ingredients from more than one food group. These are often called 'combination' or 'composite' foods.



Meals and snacks can be sorted into The Eatwell Guide food groups.

Composite/combination food - Lasagne



Pasta (lasagne sheets): **Potatoes, bread, rice, pasta or other starchy carbohydrates**

Onions, garlic and chopped tomatoes: **Fruit and vegetables**

Lean minced meat (or meat substitute): **Beans, pulses, fish, eggs, meat and other protein**

Cheese sauce made with milk and cheese: **Dairy and alternatives**

Olive/vegetable oil used to cook onions and mince: **Oil and spreads**

Task

Plan a menu for a day that applies the principles of The Eatwell Guide and the 8 tips for healthier eating. Make one of the dishes, complete a sensory evaluation and calculate the energy and nutrients provided using nutritional analysis.

Key terms

The Eatwell Guide: A healthy eating model showing the types and proportions of foods needed in the diet.

Hydration: The process of replacing water in the body.

Dietary fibre: A type of carbohydrate found in plant foods.

Composite/combination food: Food made with ingredients from more than one food group.



Food hygiene

- Good food safety and hygiene practices are essential to reduce the risk of food poisoning.


Food poisoning
 Food poisoning can be caused by:

- bacteria, e.g. through cross-contamination from pests, unclean hands and dirty equipment, or bacteria already present in the food, such as salmonella;
- physical contaminants, e.g. hair, plasters, egg shells, packaging;
- chemicals, e.g. cleaning chemicals.

Bacterial contamination is the most common cause. Microorganisms occur naturally in the environment, on cereals, vegetables, fruit, animals, people, water, soil and in the air. Most bacteria are harmless but a small number can cause illness. Harmful bacteria are called pathogenic bacteria. The process of food becoming unfit to eat through oxidation, contamination or growth of micro-organisms is known as food spoilage.

Bacterial growth and multiplication
 All bacteria, including those that are harmful, have four requirements to survive and grow:

- food;
- moisture;
- warmth;
- time.



High risk food
 Bacteria easily multiply on foods known as 'high-risk food'. These are often high in protein or fat, such as cooked meat and fish, dairy foods and eggs. Cooked pasta and rice are also regarded as high risk foods if they are not cooled quickly after cooking and stored below 5°C.

Moisture
 Bacteria need moisture to survive. Dried foods, such as powdered milk, cereals or dried egg do not support bacterial growth, if properly stored. However, if moisture is added, any bacteria still alive can quickly begin to multiply.

Symptoms of food poisoning
 The symptoms of food poisoning include:

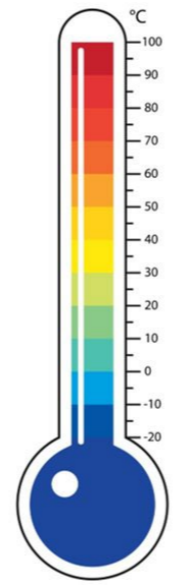
- nausea;
- vomiting;
- stomach pains;
- diarrhoea.

People at risk
 Elderly people, babies and anyone who is ill or pregnant needs to be extra careful about the food they eat.

Why clean?
 To remove grease, dirt and grime, and prevent food poisoning and pests.

Temperatures to remember
 To reduce the risk of food poisoning, good temperature control is vital:

- 5-63°C – the danger zone where bacteria grow most readily.
- 37°C – body temperature, optimum temperature for bacterial growth.
- 8°C – maximum legal temperature for cold food, i.e. your fridge.
- 5°C (or below) – the ideal temperature your fridge should be.
- 75°C – if cooking food, the core temperature, middle or thickest part should reach at least this temperature.
- 75°C – if reheating food, it should reach at least this temperature. In Scotland food should reach at least 82°C.



Allergen and food intolerance awareness
 There are 14 ingredients (allergens) that are the main reason for adverse reactions to food. Cross-contamination of food containing these allergens must be prevented to reduce the risk of harm. They must also be labelled on pre-packaged food and menus so that consumers can make safe choices. The 14 allergens are:

Celery (and celeriac)	Milk
Cereals containing gluten	Molluscs
Crustaceans	Mustard
Eggs	Nuts
Fish	Peanuts
Lupin	Sesame
	Soybeans
	Sulphur dioxide

Where should food be stored in the fridge?

Cheese, dairy and egg-based products
 The temperature is usually coolest and most constant at the top of the fridge, allowing these foods to keep best here.

Cooked meats
 Cooked meats should always be stored above raw meats to prevent contamination from raw meat.

Raw meats and fish
 Raw meats and fish should be below cooked meats and sealed in containers to prevent contamination of salad and vegetables.

Salad and vegetables
 These should be stored in the drawer(s) at the bottom of the fridge. The lidded drawers hold more moisture, preventing the leaves from drying out.

Time
 When bacteria spend enough time on the right types of food, at warm temperatures, they can multiply to levels that cause illness.
 Reheat food only once and eat leftovers within 48 hours.

Getting ready to cook

- Remove blazers/jumpers and roll up long sleeves.
- Tie up long hair and tuck in ties or head coverings.
- Thoroughly wash and dry hands.
- Put on a clean apron.

Use-by-date
 You've got until the end of this date to use or freeze the food before it becomes too risky to eat.

USE BY:
 25/08/20
 KEEP REFRIGERATED

Best-before-date
 You can eat food past this date but it might not be at its best quality.

BEST BEFORE:
 25/08/21
 STORE IN A COOL DRY PLACE

Key terms
Allergens: Substances that can cause an adverse reaction to food. Cross-contamination must be prevented to reduce the risk of harm.
Bacteria: Small living organisms that can reproduce to form colonies. Some bacteria can be harmful (pathogenic) and others are necessary for food production, e.g. to make cheese and yogurt.
Cross-contamination: The transfer of bacteria from one source to another. Usually raw food to ready-to-eat food but can also be the transfer of bacteria from unclean hands, equipment, cloths or pests. Can also relate to allergens.
Food poisoning: Illness resulting from eating food which contains food poisoning micro-organisms or toxins produced by micro-organisms.
High risk ingredients: Food which is ready to eat, e.g. cooked meat and fish, cooked eggs, dairy products, sandwiches and ready meals.

Task
 Create a poster highlighting the top tips for ensuring food is safe to eat. Include personal hygiene, safe storage, preparation and cooking of food.

To find out more, go to:
<https://bit.ly/2Z97B5f>

Name:

Date:

Food labelling

- Food labels provide information, which helps people to know when to eat food, and how to store it safely.
- Nutrition and allergy information on food labels help to make informed food and drink choices.



Food labelling

Information on the labels of pre-packed food and drink products can be legally required or just for consumer information.

Legally required information:

- country of origin and place of provenance;
- date mark;
- list of ingredients (including additives and allergens);
- name and address of the manufacturer, packer or seller;
- name of food or drink;
- nutrition information;
- storage and preparation instructions;
- weight or volume.

Consumer information:












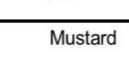


- front-of-pack nutrition label;
- price;
- serving suggestions/image.

Allergen labelling

There are 14 ingredients (allergens) that are the main reason for adverse reactions to food. They must be labelled on pre-packaged food and menus so that consumers can make safe choices.

From summer 2021 new legislation will tighten the rules requiring food that is prepared for direct sale, e.g. in a coffee shop, to carry a full list of ingredients.

The 14 allergens are:

Foods containing gluten, present in wheat, barley and rye 	Crustaceans 	Eggs 	Fish 	Lupin 
Peanuts 	Soybeans 	Milk 	Nuts 	Molluscs 
Celery 	Mustard 	Sesame seeds 	Sulphur dioxide 	

Nutrition information

Nutrition information can help consumers make healthier choices.

Back-of-pack nutrition information is legally required.

NUTRITION

When heated according to instructions

Typical values	Per 100g	Each pack (390g**)
Energy	457kJ 109kcal	1781kJ 424kcal
Fat	3.9g	15.2g
of which saturates	1.9g	7.5g
Carbohydrate	12.1g	47.1g
of which sugars	1.6g	6.2g
Fibre	1.1g	4.2g
Protein	5.8g	22.6g
Salt	0.6g	2.2g

Key terms

Allergen: An ingredient that may cause an adverse reaction to food.

Back-of-pack labelling: Is legally required and can help consumers make healthier choices.

Front-of-pack labelling: Is voluntary but must provide certain information and can use red, amber and green colour coding.

Use-by-date: Relates to the safety of the food. Food must be eaten by this date.

Best-before-date: Relates to the quality of the food. Food may still be eaten beyond this date.

Date marks/shelf life

'Use by' dates relate to the safety of the food and 'best before' dates relate to quality. Eating foods after their 'use by' date could lead to food poisoning.

USE BY:

25/08/20

KEEP REFRIGERATED

BEST BEFORE:

25/08/21

STORE IN A COOL DRY PLACE

Baby leaf salad

Keep refrigerated. Once opened consume within 24 hours and by the 'use by' date shown.

Ingredients

It is a legal requirement to include an ingredients list on packaged or pre-prepared foods. The ingredients must appear in descending order and with the allergens identified in **bold**, **highlighted**, underlined or in *italics*.

INGREDIENTS

Water, Carrots, Onions, Red Lentils (4.5%), Potatoes, Cauliflower, Leeks, Peas, Cornflour, **Wheat** flour, Cream (**milk**), Yeast Extract, Concentrated Tomato Paste, Garlic, Sugar, **Celery** Seed, Sunflower Oil, Herb and Spice, White Pepper, Parsley

ALLERGY ADVICE

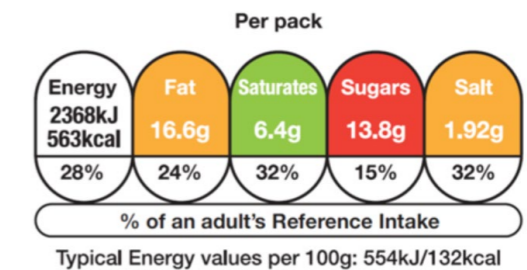
For allergens, see ingredients in **bold**

Front-of-pack labelling

Front-of-pack nutrition information is voluntary. If a food business chooses to provide this, only the following information may be provided:

- energy only;
- energy along with fat, saturates, sugars and salt.

Red, amber and green colours, if used, show at a glance whether a food is high, medium or low for fat, saturates, sugars or salt. The colour coding can be used to compare two products.



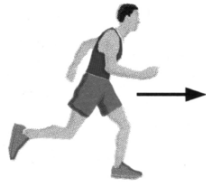
Task

Produce a food label for a dish you have made. Ensure that the label includes the information required by law that relates to food hygiene and safety, i.e. a date mark, ingredient list (with allergens identified) and storage instructions.

Mechanical Toy Knowledge Organiser

Linear Motion:

This is when something completes a movement in a straight line. When you walk down the street you are enacting a linear motion. Examples may be to pull a cord, wind up a rope and a zip mechanism.



Rotary Motion:

This motion involves moving in a complete circle. Examples may be a gear, wheel and a cam.



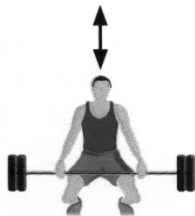
Oscillating Motion:

This is a swinging motion which does not go round in a full circle. Examples including a swing, pendulum and a metronome.



Reciprocating Motion:

This motion involves moving to and fro in one complete movement. Examples of this are a bicycle pump and a keyboard key.

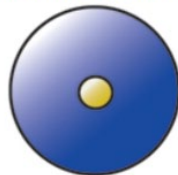


B: Cams and followers

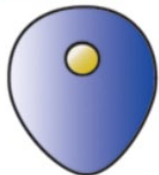
A cam mechanism has three parts: a cam, a slide and a follower. When the cam rotates, the follower moves up and down in a reciprocating motion. The pattern the follower moves up and down in, varies depending on the shape of the cam; it can do three things:

- go up (rise)
- go down (fall)
- Stay still (dwell)

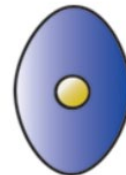
Cams come in many different shapes to create different combinations of rise, fall and dwell.



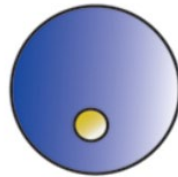
ROUND



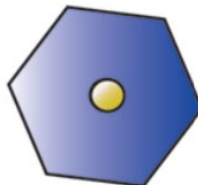
EGG-SHAPED



ELLIPSE



ECCENTRIC



HEXAGON



SNAIL

Name	Picture	Use
Coping Saw		The thin blades allow you to make curved cuts. The blade is held in tension by the spring steel frame with teeth pointing backwards towards the handle.
Tenon Saw		A hand saw with a stiff back used to cut straight lines in wood.
Pillar Drill		A machine used to make holes in materials.
Bench hook		Used to hold the wood when cutting on the face.
Mallet		A hammer with a large wooden head.
Try Square		The try-square is pushed against the straight edge of a piece of wood and a pencil is then used to mark a straight line across the material. The line is continued all the way round the wood (all four sides are marked). This type of marking materials helps if a joint is to be cut or the end of the material is simply to be sawn away
Rule		Steel rules come in rigid and flexible versions. While their primary purpose is accurate measurement , they can also be used as guides for laying out lines, and if rigid enough, for cutting. The thinner, more flexible rules can also be used to measure rounded or cambered work.

Net Knowledge Organiser

What is a brand name?

This is a name of a company that sells/ provides a product to the buying market.
Examples: Adidas, Apple, Sony or Kelloggs.

What is a Logo?

A name, symbol, or trademark designed for easy and definite recognition.



Flaps

The size and design of flaps is very important, both as a means of gluing the box together and also to ensure that the top bottom and sides fit well together.

Scoring

If you do not wish to cut into the surface of the card, folds can be creased using a ball-point pen.

