Year 9 Cooking and Nutrition Knowledge Organiser

Hygiene and Safety – The four C's

Food hygiene & safety is a about protecting people and minimising the risk.

- **Cleaning** – e.g. following routine, meeting standards using correct materials, cloths and PPE ,
- **Chilling** – storing food at appropriate temperatures
- **Cooking** – making sure food is cooked and served at correct safe temperatures.
- **Cross-contamination** – avoiding food poisoning.

World Cuisine

World cuisines are one of the best ways to connect with others and to experience world cultures. Traditional food opens a window into the lifestyle of any given place. It tells a story of the people who lived there, its climate and the local flora and fauna.

Local ingredients and cooking techniques create a unique food profile distinctive to each area. Also, the customs around actually eating the food are integral to the culture.

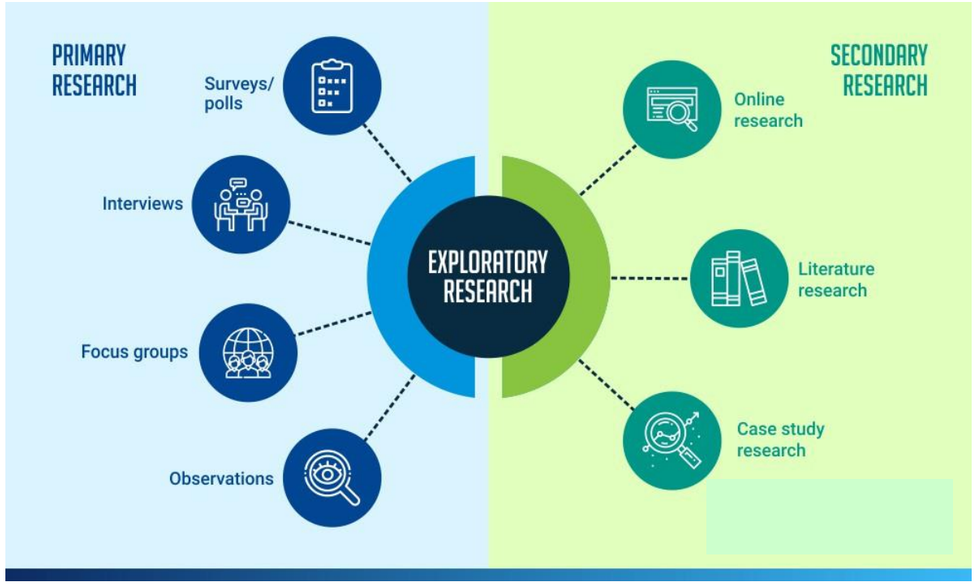
World Cuisine's popular in the UK:

- Chinese
- Italian
- Thai
- Indian
- Mexican
- Japanese
- Turkish
- Greek
- American
- Spanish

How to Research

Key Skills

- Select a Topic and identify keywords.
- Decide which research methods will work best and locate information.
- Evaluate and analyse information.
- Write, organise, and communicate information in a way that your readers will find interesting and easy to understand.
- Cite sources – it is important that you state where you have got information from, you don't want to be suspected of plagiarism.



Key vocabulary	
Cross Contamination	Process by which bacteria or other microorganisms are unintentionally transferred from one substance or object to another, with harmful effect.
Task analysis	Detailed examination of the given task.
Primary Research	Primary research is data which is obtained first-hand. This means that the researcher conducts the research themselves, going directly to the source, rather than relying on pre-existing data samples.
Secondary Research	Secondary research or desk research is a research method that involves using already existing data. Existing data is summarised and collated.

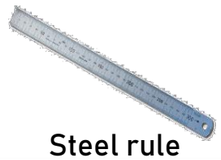
Year 9 Product Design Knowledge Organiser

Architectural Light

Key Skills

- Responding to a Design Context
- Analysing & researching information
- Creating a brief & identifying an audience
- Writing a product specification
- Developing CAD/CAM skills using:
    - Techsoft 2D Design
- Applying Health & Safety procedures and PPE in the workshop environment
- Identifying & using specific workshop tools and equipment
- Developing practical skills to create lap, housing & dowel joints to join materials
- Using a line bender to manipulate Acrylic
- Knowledge of timbers, manufactured boards, thermosetting polymers & card
- Prototype modelling, finishing & presentation skills
- Evaluating the design & manufacturing process

Tools & Equipment

 Try square	 Steel rule	 Soldering Iron
 Bench vice	 Bench hook	 Tenon saw
 LED	 Side cutters	 Sand Paper
 Pillar drill	 Belt & Disc sander	 Sealant

Thermoplastic polymers are chemically manufactured and can be heated and shaped many times.

Acrylic 	Acrylic is used in sheet form it is lightweight or shatter-resistant. It comes in a variety of colours it can be frosted or transparent. Acrylic is durable and is a good electrical insulator but scratches easily. It is recyclable and can be heat moulded.

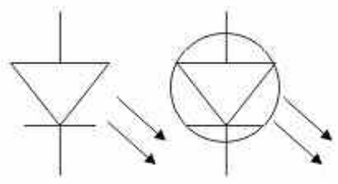
Key vocabulary

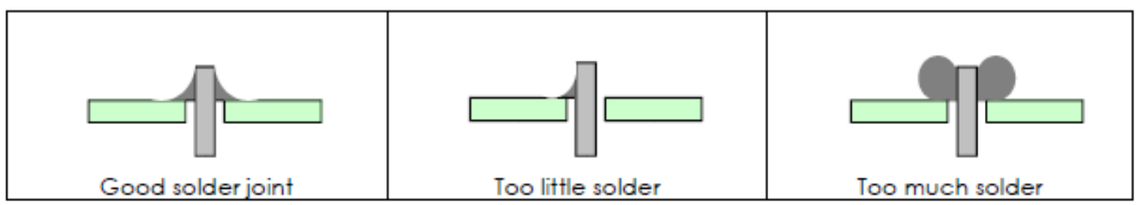
Design Context	The circumstances, problem or setting in which a product will be used.
Design Brief	An written outline which explains the aims and objectives of a project.
Specification	A statement that details exactly a products function and the design requirements.
CAD	Computer aided design
CAM	Computer aided manufacture e.g. laser cutter
Finishing	The process of applying a finish to preserve or protect a material & improve aesthetics.
Prototype	A prototype is a model that is built to test to see if it is successful or whether it needs further modification or improvements.
PPE	Personal protective equipment are items

Timber is a natural material with imperfections, knots and grain – always sand with the grain

Softwood 	From coniferous trees that are evergreen, which are faster to grow and are less expensive than hardwoods. Softwoods are a sustainable material as the resource can be regrown and not depleted. Softwoods are strong and easy to work with.
Hardwood 	Hardwood. Hardwoods come from deciduous trees, which have large flat leaves that fall in the autumn. Hardwoods take longer to grow, are not easily sourced and are expensive to buy

L.E.D. - Light Emitting Diode
This component is usually called by its initials L.E.D. It lights up when connected to a battery and needs between 1.5v - 3v (Volts). More than 3 volts will burn it out. The long leg must be connected to the positive side of the circuit or current will not pass through.


LED SYMBOLS



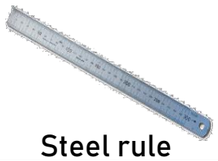
Year 9 Product Design Knowledge Organiser

Organiser

Key Skills

- Responding to a Design Context
- Analysing & researching information
- Creating a brief & identifying an audience
- Developing CAD/CAM skills using:
    - Techsoft 2D Design
- Applying Health & Safety procedures and PPE in the workshop environment
- Identifying & using specific workshop tools and equipment
- Developing practical skills to create mitre joints
- Drilling pilot holes, fixing screws
- Cutting Acrylic/MDF to produce a shelf
- Prototype modelling, finishing & presentation
- Evaluating the design & manufacturing process

Tools & Equipment

 Try square	 Steel rule	 Mitre Clamps
 Bench vice	 Bench hook	 Tenon saw
 Coping saw	 Chisel	 File
 Pillar drill	 Belt & Disc sander	 Screw driver

Key vocabulary

Design Context	The circumstances, problem or setting in which a product will be used.
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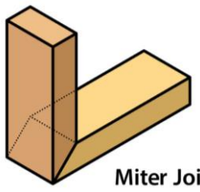
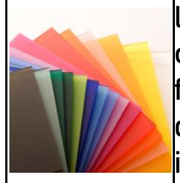
Finishing	The process of applying a finish to preserve or protect a material & improve aesthetics.
Prototype	A prototype is a model that is built to test to see if it is successful or whether it needs further modification or improvements.
PPE	Personal protective equipment are items such as goggles and aprons.

Joining Materials – Mitre Joint	
Mitre Joint  Miter Joint	A mitre joint is a joint made by cutting each of two parts to be joined, across the main surface, usually at a 45° angle, to form a corner, usually to form a 90° angle, though it can comprise any angle greater than 0 degrees.

Thermoplastic polymers are chemically manufactured and can be heated and shaped many times.	
Acrylic 	Acrylic is used in sheet form it is lightweight or shatter-resistant. It comes in a variety of colours it can be frosted or transparent. Acrylic is durable and is a good electrical insulator but scratches easily. It is recyclable and can be heat moulded.

Timber is a natural material with imperfections, knots and grain – always sand with the grain	
Softwood 	From coniferous trees that are evergreen, which are faster to grow and are less expensive than hardwoods. Softwoods are a sustainable material as the resource can be regrown and not depleted. Softwoods are strong and easy to work with.
Manufactured boards are timber produced by gluing wood layers or wood fibres together.	
Medium Density Fibreboard 	Medium Density Fibreboard or also known as MDF is made from wood fibres which are glued together. MDF has a smooth even surface which makes it easier to work than natural timber.

Year 9 Textiles Knowledge Organiser

Novelty Hot Water Bottle Cover

Key Skills

- Responding to a Design Brief
- Analysing existing products
- Identifying an intended user
- Demonstrate the ability to apply decorative techniques:
    - Machine appliqué (including reverse)
    - Computerised embroidery
    - Embroidery stitches (hand & machine)
- Using a sewing machine to complete a range of construction techniques:
    - Seams
    - Hems
    - Application of components
- Understanding the properties of materials
    - Polyester
    - Fleece
- Understand CAM using computerised embroidery

Product features	
Use of woven, knitted & non-woven materials	Consideration of a specified target market
Originality	Creative
Components used as decoration	Efficient use of materials
A variety of hand embroidery stitches	Components & fastenings
CAM embroidery	Machine appliqué

Health & safety
Follow teacher instructions
Move slowly around the room do not run
Tie long hair back
Hold scissors or shears correctly when walking around the room.
Only one person operating a sewing machine at one time
Never use a sewing machine unless supervised by a teacher or technician
Turn off the sewing machine when not in use.
Report any injuries or breakages to the teacher immediately

Key vocabulary	
Components	The parts/materials/threads needed to make a product.
3D features	Use of wadding to make a feature stand up or raised from the backing fabric.
Function	What a product does, how it works and what it will be used for? Is it sensory or educational or both?
CAM	Computer Aided Manufactured
Target Audience	The person or people most likely to be interested or use your design or product.
Embroidery	Even stitch widths and lengths completed by sewing by hand or machine.
Reverse appliqué	A decorative technique whereby a fabric placed on the back and visible on the front and is sewn in place by hand or machine.
Original	A product that is unique, creative and has functional features.
Appliqué	A decorative technique whereby one material is sewn on top of another by hand or machine.
Design Brief	A Design Brief is a written outline which explains the aims and objectives of a project.