

Design and Technology – Food

Key Vocabulary

Nutrients	The components that make up food.
Balanced diet	A diet that contains all the nutrients in the correct amount.
Food processor	A piece of electrical equipment used to prepare a variety of foods. E.g. slice and grate vegetables.
Blender	A piece of electrical equipment that can cut up food and reduce it to a pulp.
Hand-held mixer	Electrical equipment that mixes, whisks or beats small quantities of food.
Creaming	Beating fat and sugar together to trap air into a mixture.
Rubbing in	Rubbing fat into flour traps air into the mixture.
Grate	To make coarse or fine threads by rubbing over one side of a grater.
Peel	To remove the thin layer of skin of fruit and vegetables.
Pipe	To press a soft food through a piping bag fitted with a shaped nozzle.
Blend	To mix two or more ingredients together, by hand, or with a hand blender or food processor.
Juice	To squeeze the juice from fruit or vegetables.
Food poisoning	An illness caused by eating contaminated food.
Food spoilage	When food deteriorates so that its quality is reduced or it can no longer be eaten.
Cross contamination	The process by which bacteria or other microorganisms are unintentionally transferred from one substance or object to another, with harmful effect.
High risk foods	Ready-to-eat moist foods, usually high in protein.
Intensive farming	A method of farming aimed at increasing the amount of food produced.
Free Range	A method of farming where animals have access to outdoor space.
Food provenance	Knowing where food is grown, reared and caught and how it is produced and transported.
Free sugar	Sugars added to food (e.g. sugar, syrup and honey).
Obesity	Being very overweight, carrying more body fat than is healthy.

Weighing and Measuring

Kitchen Scales

Used for weighing solid ingredients in **grams**

Measuring Jug

Measuring liquids in **millilitres**

Measuring Spoons

Measure an accurate teaspoon or tablespoon.

One teaspoon is 5ml;
one tablespoon is 15ml.

A Cooker



Hob— The top part of the cooker, with hotplates or burners

Grill—A grill radiates heat downwards to cook food

Oven— Used to bake, roast and dry food

The 4C's of Food Safety



Cleaning
Cross Contamination
Cooking
Chilling

Knives

Knife Types: Cook's knife, Paring knife, Bread knife.

Knife Safety: Carry a knife by the handle with the point downwards.

Use the correct sized knife for the task.

Do not leave knives in washing up bowls.

Always cut away from your fingers.

Bridge Hold



Claw Grip



cooks knife



paring/vegetable knife



bread knife

Fairtrade

Fairtrade is about better prices, decent working conditions, local sustainability, and fair terms of trade for farmers and workers in the developing world.

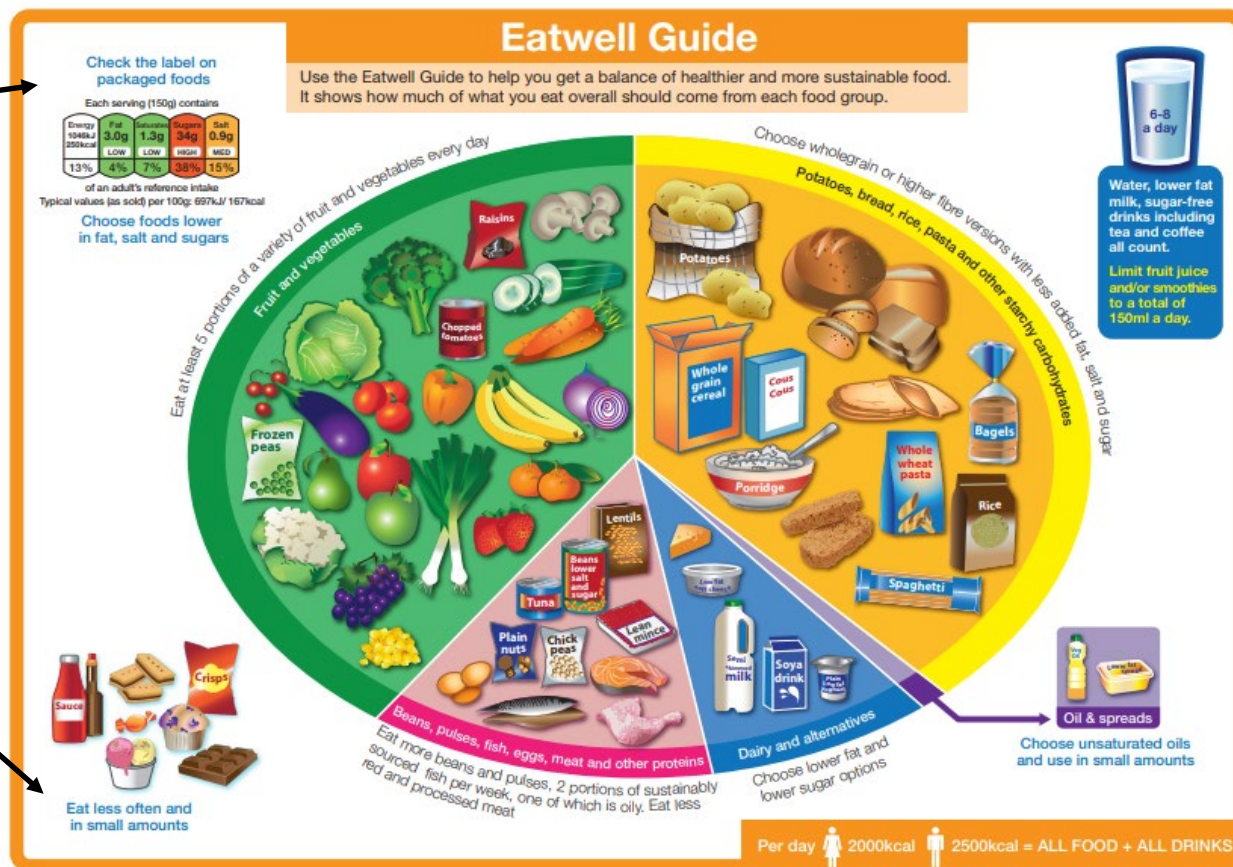


Eatwell Guide

The Eatwell Guide shows how eating different foods can make a healthy and balanced diet. It divides food into groups and shows how much of each food group is needed for a healthy diet.

A traffic light colour coded food label which helps you choose healthy food

Foods high in fat and/or sugar have been removed from the main segments as these should be eaten less often and in small amounts.



8 Tips for Healthy Eating

1. Base your meals on starchy foods
2. Eat lots of fruits and vegetables
3. Eat more fish—including a portion of oily fish each week
4. Cut down on saturated fat
5. Eat less salt
6. Get active
7. Drink plenty of water
8. Don't skip breakfast

Macro Nutrients

Protein	is needed for growth, repair, maintenance and energy. <i>examples</i>
Carbohydrate	provides the body with energy. <i>examples</i>
Fat	keeps the body warm, provides energy, protects vital organs and provides fat soluble vitamins <i>examples</i>

Micro Nutrients Vitamins & Minerals

Vitamin A	Keeps the eyes and skin healthy <i>Liver, milk, carrots, red peppers</i>
Vitamin B	Releases energy from food <i>Bread, fish, broccoli, liver, milk, peas, rice</i>
Vitamin C	Keeps connective tissue healthy. Helps the body to absorb iron <i>Oranges, blackcurrants, broccoli, red and green peppers</i>
Vitamin D	Helps the body to absorb calcium for strong bones and teeth <i>Butter, eggs, milk and oily fish</i>

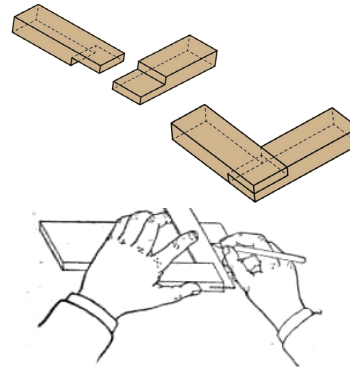
Calcium	Builds strong bones and teeth <i>Yoghurt, cheese, milk, tofu</i>
Iron	Keeps red blood cells healthy <i>Green vegetables, beans, fish, egg yolk, red meat</i>
Sodium (Salt)	Keeps the correct water balance <i>Cheese, bacon, salted nuts, ready meals</i>

Design and Technology – Workshop

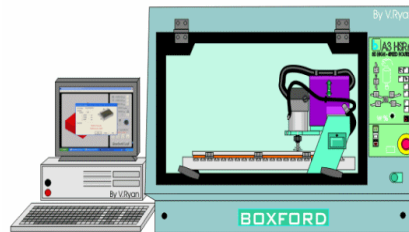
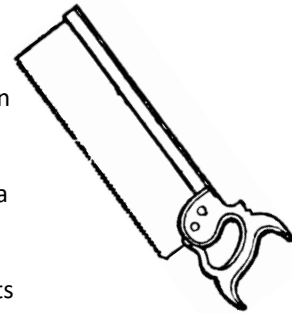
Key Vocabulary

Softwood (Pine)	Wood from a pine tree used for lots of construction
Working drawings	Drawings with dimensions (measurements) to accurately work from
Tenon saws	Saws for straight cuts in wood
Bench hooks	Board used to cut wood on
Try squares	Used to mark / check for right angle
Machine vices	Clamp used to hold work on machines
Pillar drills	Fixed powered drill for accurate holes
Belt sander	Sander with a continuous abrasive surface
PVA	Glue used to stick wood to wood
Dowel rod	Round section wood
Evaluation	The process of looking back at work carried out
Tension	Being pulled
Test	Checking fitness for purpose
Modify	Changes made to improve a product
CNC	Term used to classify machines controlled by a computer
CAD	Computer aided design
CAM	Computer aided making(manufacture)
Router	Machine used to cut out maze
2D Design	CAD program used in schools
mm	Millimetres. Unit of measurement
Wet/dry paper	Abrasive paper used to smooth acrylic
Acrylic	Hard plastic used for top of maze
Buffing machine	Machine used to polish acrylic and metals
PVC	Soft plastic used for base of maze
Pilot drill	Starter hole for a screw
Clearance drill	Hole to allow thicker part of a screw to drop through
Logo	Used by companies to help recognise brands
Vacuum former	Machine used to form soft plastic over a mould
Mould	Shape over which others materials are formed
Laser cutter	CNC machine used to cut acrylic, card and wood
Tensol Cement	Solvent cement used to join acrylic to acrylic
Dissolve	To melt or soften into a liquid
Monochrome	Use of 1 colour against a background
Theromforming	Plastic re-softenable with heat

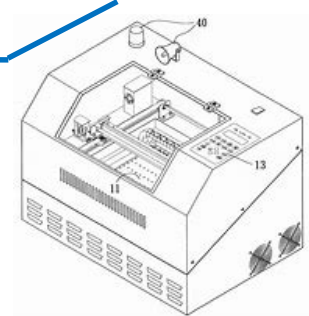
Tools, Equipment and Processes



Lap joints are used to joint the corners on the ball hurler. You need to read the **working drawing** then accurately mark out the joint using a **try square** before cutting with a **tenon saw** and **bench hook**. The material you will use is **pine**, a type of **softwood**. Joints are used because they increase the surface area for the glue, locate the pieces in place and provide added strength as the pieces interlock.



Computers are used to produce designs using **CAD** programs like **2D Design**. Parts can then be machined using **CAM** on **CNC** machines such as a **router** (left) or a **laser cutter** (right).



Vacuum Forming is the process of shaping **thermoforming** plastics such as **ridged polystyrene** over a mould.

- Place mould on the machine bed
- Clamp sheet of plastic in place and heat
- Raise machine bed
- Switch on vacuum to evacuate the air
- Allow to cool and remove
- Items such as yoghurt pots, ice cream tubs, and Easter egg packaging are produced in this way.

Vacuum Forming

