

# Design Technology Assessment Grid

Skills Knowledge

KS1 National Curriculum Guidelines, Pupils should be taught:

- Design purposeful, functional, appealing products for themselves and other users based on design criteria
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology
- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Explore and evaluate a range of existing products
- Evaluate their ideas and products against design criteria
- Build structures, exploring how they can be made stronger, stiffer and more stable
- Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
- use the basic principles of a healthy and varied diet to prepare dishes and understand where food comes from.

## Year 1

*Highlight the statements that most of the class have achieved as you teach them.*

Design	Make	Evaluate	Technical Knowledge	Cooking & Nutrition
Use their own experiences to describe what their product is for.	Can plan their design.	Talk about their design ideas, what they are making and how it could be improved.	Describe the simple characteristics of materials and components.	Identify that all food comes from plants or animals & has to be grown, farmed or caught.
Say how their product will work and whether it is for themselves or other people.	Can select from tools and materials chosen by their teacher.	Describe what products are, who they are for and how and where they are used.	Know that a 3D textile product can be assembled from two identical fabric pieces.	Prepare simple dishes safely and hygienically, without using heat.
Develop and communicate ideas by talking & drawing.	Can cut, shape and join materials.			Cut, peel and grate food (suitable risk assessment to be completed).

## Year 2

*Highlight the statements that most of the class have achieved as you teach them.*

Design	Make	Evaluate	Technical Knowledge	Cooking & Nutrition
Can say how they will make a product suitable for the user.	Plan by suggesting what to do next.	Make judgements about their products and ideas using simple design criteria.	Describe the movement of simple mechanisms (levers, sliders, wheels, axles).	Know that all food has to be grown, farmed or caught.
Use simple design criteria to help develop their ideas.	Select tools and materials and explain their choices.	Suggest how their products can be improved.	Know how structures can be made stronger and more stable.	Know that we should eat at least five portions of fruit and veg each day.
	Measure, mark, cut, shape and join components.	Describe which materials products are made from.	Use some technical vocabulary for the projects they undertake.	Prepare simple dishes safely and hygienically without using heat.
	Use simple finishing techniques.	Say what they do/do not like about products.		Can cut, peel and grate food.

**KS2 National Curriculum Guidelines, Pupils should be taught:**

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities
- Investigate and analyse a range of existing products
- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- Understand how key events and individuals in design and technology have helped shape the world
- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- Apply their understanding of computing to program, monitor and control their products.
- understand and apply the principles of a healthy and varied diet
- Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

**Year 3**

*Highlight the statements that most of the class have achieved as you teach them.*

Design	Make	Evaluate	Technical Knowledge	Cooking & Nutrition
Describe the purpose of their product, indicating features which will appeal to users, based on their needs.	Select tools and materials suitable for the task.	Identify strengths & weaknesses of their ideas and products, referring to their design criteria.	Can discuss how to use maths and science to design products that work.	Know some schools that are grown, farmed and caught in the UK and Europe.
Explain how a particular part of their product works.	Order the main stages of making.	Consider how well products have been designed and made.	How materials have functional and aesthetic qualities.	Know that a healthy diet is made up from variety and balance.
	Measure, mark, cut, shape & join with some accuracy.	Investigate who designed products and how they are made.	With support, can identify how levers/pneumatics create movements.	With support, can prepare and cook some savoury dishes safely and hygienically.
	Apply a range of finishing techniques.	Investigate if items can be recycled/reused.	With support, can identify how to make strong shell structures.	Can use spreadin and kneading.

# Design Technology Assessment Grid

Skills Knowledge

## Year 4

Highlight the statements that most of the class have achieved as you teach them.

Design	Make	Evaluate	Technical Knowledge	Cooking & Nutrition
Develop and use their own design criteria to inform their ideas.	Select suitable tools and equipment.	Identify strengths and weaknesses in my ideas and products, referring to their design criteria and adapt their design accordingly.	With support, can identify how to use maths and science to design products that work.	Know some foods that are grown in the wider world.
Model their ideas using prototypes and pattern pieces.	Confidently justify their choice of materials and components.	Refer to amendments in their evaluation.	With support, can identify how materials have functional and aesthetic qualities.	Know that food is needed to provide energy for the body.
Make design decisions that consider the availability and cost of resources, as well as the needs and wants of the users.	Measure, mark, cut, shape and join with increasing accuracy.	Investigate and analyse how well products are designed and made.	Can identify how levers/pneumatics create movement.	With support, can prepare and cut some savoury dishes safely and hygienically.
	Use various finishing techniques with increasing accuracy.	Investigate if items can be recycled/reused and how.	Can identify how to make strong shell structures.	Use techniques, including chopping, slicing and baking.

## Year 5

Highlight the statements that most of the class have achieved as you teach them.

Design	Make	Evaluate	Technical Knowledge	Cooking & Nutrition
Carry out research to identify the needs, wants and preferences of individuals and groups.	Explain their choice of tools and equipment in relation to the techniques they will be using.	Consider the views of others to improve their work.	With support, can identify how pulleys, gears and cams work.	Know that seasons affect food availability.
Create annotated sketches and cross-sectional drawings.	Explain their choice of materials according to functional and aesthetic qualities.	Critically evaluate the design, make and fitness for purpose as they work.	With support, can identify how electrical circuits can create functional products.	Can prepare & cook savoury dishes safely and hygienically.
	Produce a list of what they need and formulate step-by-step plans.	Compare their work to their design specification.	With support, can identify how to program a computer to control products they have made.	Know that recipes can be adapted to change the appearance, taste, texture and aroma of a dish.
	Accurately measure, mark, cut, shape, join and combine materials.	Investigate methods of construction, how much product cost to make, how innovative they	With support, can identify how 3D textile products can be made from a combination of shapes.	

# Design Technology Assessment Grid

Skills Knowledge

		are and how sustainable product materials are.		
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## Year 6

*Highlight the statements that most of the class have achieved as you teach them.*

Design	Make	Evaluate	Technical Knowledge	Cooking & Nutrition
Can develop a simple design specification to guide their thinking.	Produce detailed lists of what they need and step-by-step plans.	Adapt their design as necessary and refer to this in their evaluation.	Can identify and analyse how pulleys, gears and cams work.	Know how food is processed into forms that can be eaten or used in cooking.
Use computer-aided design.	Can measure, mark, cut, shape, assemble, combine and finish materials and components accurately using techniques that involve several steps.	Compare their product to their design brief and state how it could be improved further.	Can identify and analyse how electrical circuits can create functional products.	Know that different foods contain different substances that are needed for health.
Make design decisions, taking account of constraints such as time, resources and cost.	Show resourcefulness when tackling problems.	Investigate and analyse the impact that products have beyond their intended purpose.	Can identify and analyse how to program a computer to control product they have made.	Design, prepare and cook savoury dishes.
			Can identify and analyse how 3D textile products can be made from a combination of shapes.	Use a range of food preparation techniques.