TT Education™
The School Improvement Company

A Guide to Progression in Design and Technology

Year 1-6

(In line with the National Curriculum)

DIGITAL DOWNLOAD

About the Authors: TT Education

We're the UK's leading school improvement organisation, working with schools, academies and trusts in the UK and beyond to improve the quality of children's education.

Founded in January 2012 by David Maytham, everything we do is underpinned by the belief that every child has the right to an excellent education.

We're dedicated to enhancing life chances for all pupils by empowering teachers and leaders to create sustainable improvement in their schools through engaged learning and inspirational leadership. We help teachers and leaders make progress through our outstanding CPD courses, INSET days, consultancy, resources, digital solutions and longer-term school improvement support.

TT Education has won the School Improvement Provider of the Year award for the last two years (2018 and 2019) underlining our position as a leading provider of school improvement services, classroom materials and digital resources.

About this document

Our highly acclaimed Guide to Progression in **Design and Technology** document provides teachers with a clear framework for teaching and assessing primary **Design and Technology**. Written by current practitioners, for current practitioners, this document is fully aligned with the objectives and expectations of the National Curriculum.

A Progression in Design Technology

TT Education's Learning Pathways: The Path to Success

What is it?

A forward thinking, innovative approach to teaching and learning in the 21st century classroom, which can be applied across all subjects to support all schools in achieving outstanding results through engaged learning. Developed by education expert David Maytham, The Path to Success is grounded in the latest educational research and first-hand experience of current teaching of real children in the primary classroom.

How is it different?

We are not advocating a scheme that schools, children and teachers have to follow in a particular order or predetermined way. In our experience, a predetermined scheme is unable to take account of all the various factors at play in any one classroom; including, but not limited to the skill set of the teacher and the ability range of the children.

The Path to Success is a circular methodology with talk, collaboration and active approaches at its heart. Its process can be applied across the curriculum, as the core techniques it embodies can be used to teach any skill or operation. Once teachers internalise this process, it has the potential to transform their practice and have a significant impact on standards.

What does it look like?

Teachers who utilise the Path to Success will develop and enrich children's ability to problem-solve, think creatively, improve their skills as learners and consequently make accelerated progress.

The Power of Talk:

"Talk is thought. It is only when you talk something through that you realise whether you have fully understood it. Talking allows us to develop our thinking, internally question our understanding and, ultimately, learn."

The Power of Active Approaches: Gamification of Learning

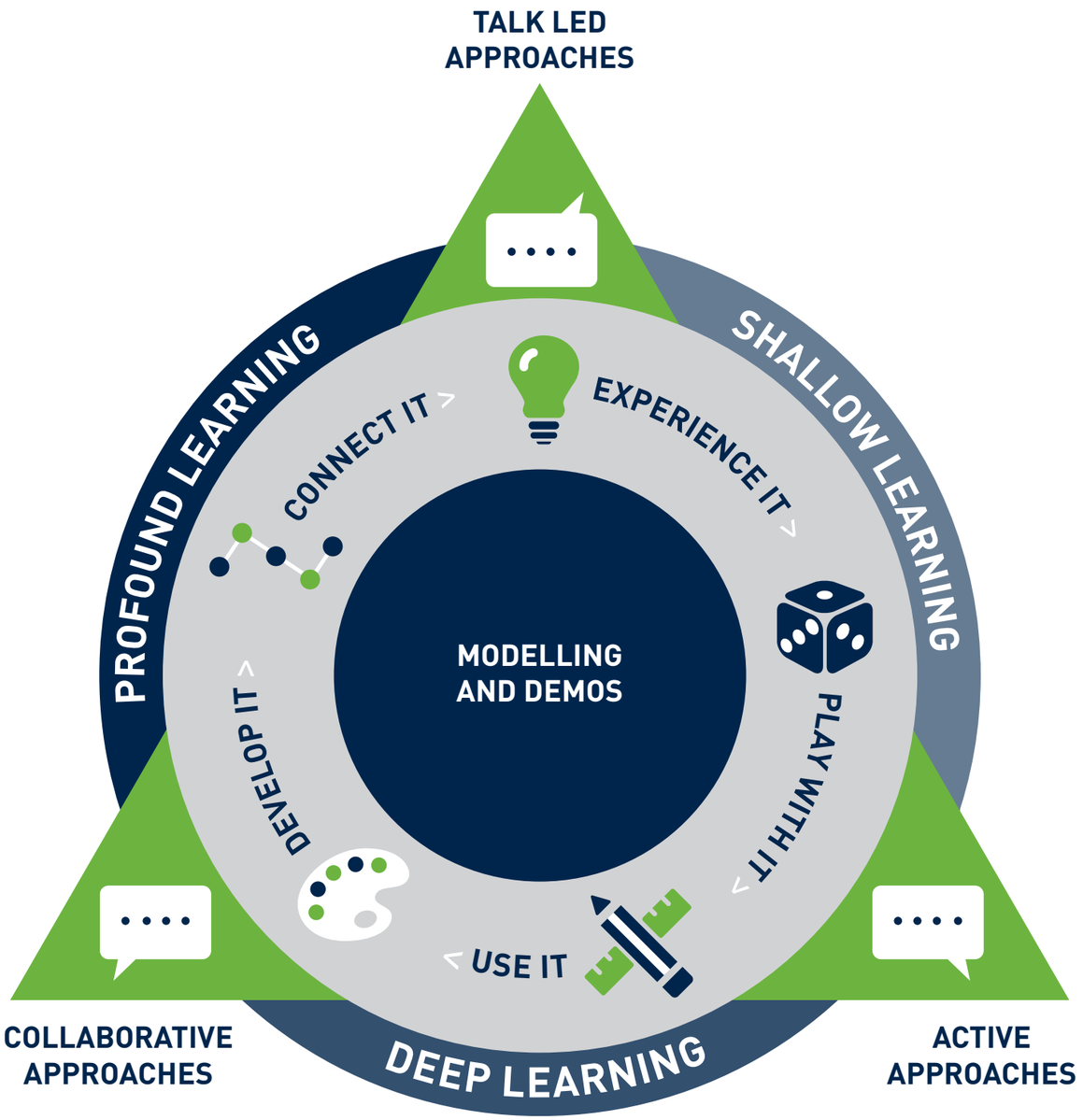
"In the natural world, young animals learn through play. We are familiar with this as a concept with babies and toddlers; why, then, do we reject this as children begin to grow? When an idea or concept is made into a game – something which children recognise and respond to – children begin to engage with it and take ownership over it. Gamifying learning allows children to generate ideas for themselves, cultivate their creativity, and lay the foundations for fluent learning."

The Power of Collaboration:

"Creating a classroom climate of collaboration is crucial for the long term sustainability of learning. If we share a common purpose, we are incentivised to work together to develop our collective understanding. The barriers created by fear of personal failure are destroyed and we begin to recognise the power of our own contributions to the learning of the whole group. Not only does this create feelings of self-worth, excitement and engagement with the learning, but it also stimulates creativity and, in the discussion and development of ideas with peers, creates a deeper level of understanding."

David Maytham
Founder, Managing Director

TT Education's Learning Pathways: The Path to Success



A Progression in Design Technology

TT Education's Learning Pathways: The Path to Success

Stage 1: Experience it

Children need **rich experiences** which they can relate to in order to support them in developing a particular skill set. For example, how can you expect children to learn to appreciate rhymes and poems if they have never experienced these rhymes and poems in a meaningful, exciting and interesting context? The challenge for us as teachers is to find a way to replicate this meaningful experience and practical application in the classroom.

"Hook, Experience, Context and Purpose" is a mantra we use a lot when working with schools. We ask teachers to think back to the last unit or topic they taught and then to consider the four elements of the mantra. What was the hook you used to engage, inspire and excite your children? What experiences did children bring to the activity, or how were you able to replicate experiences to make the learning link to the real world? Did you choose a context which was relevant and did all the children have a clear purpose for their learning, or was it simply 'complete the activities on page 10'?

Stage 2: Play with it

This, in a sense, refers to the **Gamification of Learning**. The power of playing short burst games to practise key skills on a daily basis should not be underestimated. Not only do they act as a hook to excite, engage and challenge the children but they also support children in developing fluency in a particular skill: procedural efficiency alongside conceptual understanding.

Stage 3: Use It

Once children have experienced a particular skill and had an opportunity to play with it in order to fully assimilate the technique, they then move on to use it in context. Practical application in context is key to successful outcomes for children.

"Tell me and I'll forget; show me and I may remember; involve me and I'll understand." Chinese proverb

Stage 4: Develop it

Children continue to develop the skill in context. It is absolutely crucial that all adults within the classroom, and within the school at large, position themselves alongside the children as learners, actively engaging in the learning process. High-quality modelling and demonstration should be underpinned by **an active, talk-led, collaborative learning climate**, in which children move from learners to teachers. If a child can teach a particular skill, it means they must have learnt it and are more likely to remember it. As practitioners, we should be aiming to move all our children into becoming teachers. If a child can confidently demonstrate the level of understanding necessary for them to be able to explain and teach a concept, idea or approach to another child, then in doing so they are demonstrating that their initial learning has been internalised and embedded. By this stage they are demonstrating a move from shallow surface level learning to deeper learning and understanding.

Step 5: Connect It

This refers to children making connections across the curriculum. With a deeper understanding, children will begin to make links and connections in terms of how they could apply the skill or concept they have just learnt across the curriculum and in the wider world. Making these connections and exploring possible connections moves the child from deep learning into profound learning, which will stay with them forever.

This circular approach then repeats as new skills, concepts and ideas are added. This whole approach is underpinned by talk-led, active and collaborative approaches, which provide the foundation for success.

© TT Education Limited

TT Education™
The School Improvement Company

Introduction

James Lewis
School Improvement Partner

Our world has been built by Design Technology. From the clothes we wear and the chairs we sit on, to the computers we use and the cars we drive, we are constantly surrounded by engineered products, or the adverts that try to sell them. How do we prepare our children for that world, whether it's to join the ranks of those creators, or to be safe and critical receivers of it all?

How do we use the skills and knowledge of Design Technology to inform and develop our understanding elsewhere? How do we ensure our pupils are progressing?

This skills progression guide from TT Education is aimed at ensuring teachers have clarity and consistency in how they help pupils learn how to develop deeper understanding of design and technology – what does it take to work like an engineer or graphic designer? To access our other subjects through their eyes? We have taken the National Curriculum for DT and, having applied our experiences and understanding of learning and progression, provided you with a guide that will help structure learning effectively – and help pupils to add knowledge to their long-term memories... it will help them learn.

The national curriculum states that "Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation." [National Curriculum 2014]

The following booklet breaks down all of the elements of skills that pupils are required to develop as part of the national curriculum – and beyond, supported by our Path to Success.

We hope you enjoy this guide and find it useful in supporting your teachers understand progression in skills in DT more deeply.

Connect it...

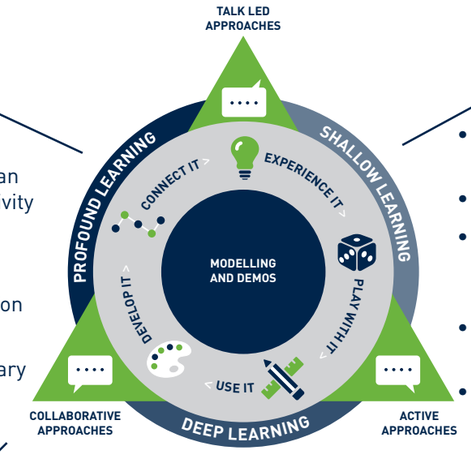
- Use DT across the curriculum to develop, e.g. to plan and present ideas
- High quality discussion and use of visual and other design, e.g. its use in adverts, propaganda etc – link to SMSC, PSHE, RE
- Specific links to e.g. art, electricity (science), persuasion (English), enterprise (PSHE/economic education), statistics (maths, ICT)
- Link back to the experience/context that is informing your topic

Experience it...

- Ensure children experience a rich context for design around the school, e.g. posters, assemblies, film
- Trips and visits involving designers, engineers, architects - with workshops
- Pointing out the engineering and design in the children's local area to give them a context
- Link to the design/technology that is most relevant for the children (eg apps, social media, films)
- Prominent displays of children's (and staff's) work
- Ensure that children have access to the technology they might need

Develop it...

- Collaborate!
- Pupils discussing how DT skills can inform problem solving and creativity
- Discuss DT in global industry and marketing, and our response(s)
- Insist on high-quality metacognition through the iterative DT process
- Use activities to enhance vocabulary application and use of DT-based language
- Challenge, set tasks that require pupils to 'teach' about DT, or aspects of 'being a critical thinker'



Play with it...

- Chance to experiment as well as learning 'formal' techniques
- Celebrating children's creativity
- CT/TA positioned alongside the children throughout the design process
- Word association games and follow-on 'play' with vocabulary
- Design 'flash' – one day a week, share something that's interesting from a DT perspective

Use it...

- Design as stimulus for work in other areas (artistic, diagrammatic, solid etc)
- Minimum requirement for lesson time
- Opportunity for high-quality metacognitive training that can be applied elsewhere
- Evidence learning; pictures, posters, models, but also analysis in writing, posters, videos etc

TT Education™
The School Improvement Company

DESIGN

Plan
Make comments about what they are going to design or cook

Generate
Come up with ideas for a product, and express why they like it (i.e. personal appeal)

Draw
Trace around simple shapes to reproduce symbols

Precision level: simple shapes freehand (e.g. square but possibly with curved-out corners)**; colouring-in is mostly within the lines**

Develop
With support, discuss design criteria during the construction process

MAKE

Constructions with materials that are supplied for them

Tools
Children's scissors

Ruler / metre rule

Measure
To nearest 10cm (e.g. with stick painted in 5cm blocks)

EVALUATE

Simple evaluation
(e.g. spot similarities and differences between products)

Follow simple advice from adults to improve their work

Showcase work
Can refer to a photo or drawing while talking about their work

Use tallies and simple tables

COOKING

Sharps
Use knives with an 11-12cm non-serrated blade (supervised)

A Progression in Design Technology YEAR 1

VOCABULARY

Use common words and phrases relating to Design Technology

Suggested words

Product	Painting
Design	Printing
Technology	Trace
First/second (etc)	Share
Then	Effect
When	Improve
Last	Ingredients
Next	Material
Before	Savoury
After	Sweet
Drawing	

Locational

Near	Position
Far	Direction
Up	Above
Down	Below
Further	Roughly
Higher	Close to
Underneath	Older
Centre	Newer
Anticlockwise	

NOTES

TT Education™
The School Improvement Company

DESIGN

Plan
Give a brief overview of their plans for design or cooking, using some DT vocabulary

Generate
Make comments about the function and purpose of their product, and its personal appeal

Draw
Devise a simple diagram

Begin to annotate and highlight digital designs

Precision level: **rectangles are accurate** (e.g. corners don't curve outwards)**; colouring-in is within the lines**

Develop
Start to volunteer comments about the design criteria while the construction process is ongoing

MAKE

Select from materials that are supplied for them

Tools
Set square, soft tape-measure, knitting needles, crocheting sticks

Measure
To nearest cm and g

Use litres and °C for temperature

Scales in ones, twos, fives, tens (where the numbers are given)

EVALUATE

Relate products to their design criteria

Listen courteously to views that differ from their own

Follow advice from adults or peers

Showcase work
Use ICT to create a simple info-sheet about their work (e.g. text with photo)

Use pictograms, tally charts, block diagrams

COOKING

Sharps
Use butter-knives without close supervision

Use peeler on carrots

Use grater for cheese

Other skills
Sieve flour

Hot food
Watch adults putting food in ovens and explain how to do it safely

A Progression in Design Technology YEAR 2

VOCABULARY

Use a wide range of everyday terms in Design Technology

Suggested words

Process	Fashion
Construction	Monitor
Model	Sew
Later	Knit
Earlier	Contrast
Since	Depth
Period	Layer
At the same time as	Scale
	Critique
Paste	Compare
Textile	Levers
Collage	Sliders
Relief	Wheels
Object	Axles
Style	Seasoning

Locational
Left/right (from own perspective)

Symmetrical

Reflect

Diagonal (i.e. sloped, not the official maths meaning)

Range (not yet in technical maths sense)

NOTES

DESIGN

Plan
Verbally explain their plans for design or cooking, linking to techniques and using DT vocabulary

Generate
Refer to research while talking about their product (i.e. not just its personal appeal)

Draw
Draw sketches at different points of the design process
Draw and annotate digital designs
Start to draw to scale
Start to draw 3D projections, with shading for clarity
Precision level: accurate 2D shapes (e.g. a freehand Union Jack where the internal lines intersect at the centre-point)

Develop
Politely discuss their peers' work
Willingness to alter and/or restart designs

MAKE

Work creatively with a range of materials, with some control

Tools
Protractor, metallic tape-measure, spirit level, sandpaper
Screwdrivers (supervised)

Measure
To nearest mm, nearest 10ml, and 45° for angle
Convert between units, eg m to cm
Use scales where numbers may be missing
Make measurements on a computer design

Estimate
Start to estimate length and distance
Start to understand area

NOTES

A Progression in Design Technology YEAR 3

EVALUATE

Link their own and others' designs and products to their function and purpose
Start to verbalise others' opinions that differ from their own
Make choices about following advice

Showcase work
Make and discuss annotated sketches and diagrams
Use bar charts (e.g. not blocks)

COOKING

Sharps
Serrated knife with 'bridge' hold to cut onion (supervised)
Cut e.g. peppers with precision (i.e. even size)
Use peeler on apples
Use a grater for e.g. apple, carrot

Other skills
Mash potato (roughly)**; crush garlic**
Break eggs, often not breaking yokes
Knead bread dough

Hot food
Cook food in an electric stockpot (supervised)

VOCABULARY

Use some specialist vocab in discussions

Suggested words

Chronological	Weave
Approximate	Dye
Accurate	Version
Technique	Purpose
Structure	Opinion
Mechanical	Organise
Parallel	Construct
Perpendicular	Mock-up
Perspective	Prototype
Quality	Clarify
Fabric	Raising agents

Locational
Left/right (secure use from any perspective e.g. discussing partners' work across the table)

© TT Education Limited

TT Education™
The School Improvement Company

DESIGN

Plan

Explain their plans for design or cooking in some detail, and in writing, making reference to techniques and materials/ingredients

Generate

Use research to justify the appeal of their product, and the innovativeness of their design

Draw

Draw a plan or sketch from a description

Draw simple diagrams without much guidance

Create a scale-bar

Clear projections of common 3D shapes

Precision level: careful with wrist position to avoid **smudging** (awareness of rubbings detritus under the page that might affect lines / measurements)

Develop

Start to suggest how their peers can improve their work

Desire to alter and/or restart designs

MAKE

Request materials or ingredients that have not been supplied

Tools

Compass

Scissors (to score); **adult scissors** (to cut)

Sewing needle, Stanley knife & glue gun (all supervised)

Measure

Start to understand inches & miles, stone & pounds, Fahrenheit

Measure non-rectilinear distances on a computer design

Estimate

Make reasonable estimations of length and distance; start to estimate mass, capacity and angle

EVALUATE

Verbalise others' opinions politely and consider following their advice

Start suggesting improvements to others' designs

Link products to their cultural contexts

Showcase work

Make and discuss cross-sectional and exploded diagrams

Use time graphs; discrete and continuous data

COOKING

Sharps

Use a 'bridge' hold to cut harder veg (e.g. potato)

Use peeler on potato

Use a grater for e.g. lemon zest

Other skills

Reliably break eggs without breaking yoke

Creaming fat/sugar

Hot food

Use a microwave or toaster (supervised)

VOCABULARY

Use specialist vocab, often appropriately

Suggested words

Uncertain	Program
Former	Develop
Latter	Pattern piece
Cause	Structure
Consequence	Unique
Phase	Characteristic
Trend	Convention
Continuity	Aesthetic
Medium	Series
Intricate	Circuit
Audience	Program
Impact	

Locational

Make use of Mathematical language in describing shape and location (e.g. 3D shape vocab incl **angle**, **convex** etc)

Increase

Decrease

NOTES

A Progression in Design Technology YEAR 4

© TT Education Limited

DESIGN

Plan

Plan designs in detail with preliminary studies in sketchbooks, with reference to other designs and materials they have studied

Generate

Make comments about how their product might be altered to appeal to other groups

Draw

Make an accurate design sketch from someone else's measurements and notes

Precision level: consistency within oblique/perspective projections of 3D shapes (i.e. parallel lines shown parallel or to vanishing points)

Develop

Make reasonable suggestions for how their peers might improve their work

MAKE

Request other materials and give reasons

Tools

Hammer/nails, chisel, mallet, vice (supervised)

Measure

Angle to nearest °

Calculate area; start to understand volume

Use approximate equivalences between metric and imperial

Start using linear and area measuring tools on a computer design

Estimate

Estimate length, distance, mass, capacity, angle; start to estimate temperature and area

NOTES

A Progression in Design Technology YEAR 5

EVALUATE

Use constructive and sensitive language to suggest improvements to their peers' designs

Showcase work

Create a presentation with text/images to support them in showcasing work

Use timetables; mode and range averages

COOKING

Sharps

Use 'claw' grip to cut e.g. celery, carrot

Other skills

Mash potato to a smooth texture

Separate egg whites from yokes

Folding meringue mix

Hot food

Remove e.g. hot biscuits from a baking tray using a fish-slice (supervised)

VOCABULARY

Use specialist vocab appropriately

Suggested words

Contemporary	Sparse
Prior	Exceptional
Subsequent	Pulley
Enduring	Cam
Dominate	Lever
Context	Gear
Complex	

Locational

Shape vocab (incl **diagonal**, **rotation**, angle language)

NOTES

TT Education™
The path to success

DESIGN

Plan

Plan in detail with preliminary studies in sketchbooks, linking to what they have studied and explaining their choices

Generate

Make sophisticated comments about the limitations of the function and purpose of their product, with reference to different audiences

Develop

Constructively critique their peers' work and help with the improvements if appropriate

MAKE

Tools

Saw, power tools (supervised)

Measure

Calculate area and volume

Fluency with converting units, including between metric and imperial

Accurate linear/area measuring tools on a computer design

Estimate

Make reasonable estimations of length, distance, mass, capacity, angle, area and temperature

NOTES

A Progression in Design Technology YEAR 6

EVALUATE

Analyse their own and others' responses to their design, making improvements if appropriate

Help improve peers' designs where that offer is welcomed

Showcase work

Use a range of supporting material to showcase their work, and take questions

Use pie charts and line graphs; mean average

COOKING

Sharps

Use large knives on hard vegetables like suede (supervised)

Hot food

Handle hot food with oven gloves (supervised)

VOCABULARY

Start to apply vocab in sophisticated ways (e.g. cross-curricular)

Suggested words

Simultaneous

Attribute

Controversy

Authentic

Maquette

Locational

Concentric

Radial

Intersecting

NOTES

© TT Education Limited

TT Education™
The path to success

Progression in design technology

DESIGN

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plan	**Plan**	**Plan**	**Plan**	**Plan**	**Plan**
Make comments about what they are going to design or cook	Give a brief overview of their plans for design or cooking, using some DT vocabulary	Verbally explain their plans for design or cooking, linking to techniques and using DT vocabulary	Explain their plans for design or cooking in some detail, and in writing, making reference to techniques and materials/ ingredients	Plan designs in detail with preliminary studies in sketchbooks, with reference to other designs and materials they have studied	Plan in detail with preliminary studies in sketchbooks, linking to what they have studied and explaining their choices
Generate	**Generate**	**Generate**	**Generate**	**Generate**	**Generate**
Come up with ideas for a product, and express why they like it (i.e. personal appeal)	Make comments about the function and purpose of their product, and its personal appeal	Refer to research while talking about their product (i.e. not just its personal appeal)	Use research to justify the appeal of their product, and the innovativeness of their design	Make comments about how their product might be altered to appeal to other groups	Make sophisticated comments about the limitations of the function and purpose of their product, with reference to different audiences
Draw	**Draw**	**Draw**	**Draw**	**Draw**	
Trace around simple shapes to reproduce symbols Precision level: simple shapes freehand (e.g. square but possibly with curved-out corners); colouring-in is mostly within the lines	Devise a simple diagram Begin to annotate and highlight digital designs Precision level: rectangles are accurate (e.g. corners don't curve outwards); colouring-in is within the lines	Draw sketches at different points of the design process Draw and annotate digital designs Start to draw to scale Start to draw 3D projections, with shading for clarity Precision level: accurate 2D shapes (e.g. a freehand Union Jack where the internal lines intersect at the centre-point)	Draw a plan or sketch from a description Draw simple diagrams without much guidance Create a scale-bar Clear projections of common 3D shapes Precision level: careful with wrist position to avoid smudging (awareness of rubbings detritus under the page that might affect lines / measurements)	Make an accurate design sketch from someone else's measurements and notes Precision level: consistency within oblique/perspective projections of 3D shapes (i.e. parallel lines shown parallel or to vanishing points)	
Develop	**Develop**	**Develop**	**Develop**	**Develop**	**Develop**
With support, discuss design criteria during the construction process	Start to volunteer comments about the design criteria while the construction process is ongoing	Politely discuss their peers' work Willingness to alter and/or restart designs	Start to suggest how their peers can improve their work Desire to alter and/or restart designs	Make reasonable suggestions for how their peers might improve their work	Constructively critique their peers' work and help with the improvements if appropriate

© TT Education Limited

Progression in design technology

MAKE

Year 1

Constructions with materials that are supplied for them

Tools

Children's scissors

Ruler / metre rule

Measure

To nearest 10cm (e.g. with stick painted in 5cm blocks)

Year 2

Select from materials that are supplied for them

Tools

Set square, soft tape-measure, knitting needles, crocheting sticks

Measure

To nearest cm and g

Use litres and °C for temperature

Scales in ones, twos, fives, tens (where the numbers are given)

Year 3

Work creatively with a range of materials, with some control

Tools

Protractor, metallic tape-measure, spirit level, sandpaper

Screwdrivers (supervised)

Measure

To nearest mm, nearest 10ml, and 45° for angle

Convert between units, eg m to cm

Use scales where numbers may be missing

Make measurements on a computer design

Estimate

Start to estimate length and distance

Start to understand area

Year 4

Request materials or ingredients that have not been supplied

Tools

Compass

Scissors (to score); adult scissors (to cut)

Sewing needle, Stanley knife & glue gun (all supervised)

Measure

Start to understand inches & miles, stone & pounds, Fahrenheit

Measure non-rectilinear distances on a computer design

Estimate

Make reasonable estimations of length and distance; start to estimate mass, capacity and angle

Year 5

Request other materials and give reasons

Tools

Hammer/nails, chisel, mallet, vice (supervised)

Measure

Angle to nearest °

Calculate area; start to understand volume

Use approximate equivalences between metric and imperial

Start using linear and area measuring tools on a computer design

Estimate

Estimate length, distance, mass, capacity, angle; start to estimate temperature and area

Year 6

Tools

Saw, power tools (supervised)

Measure

Calculate area and volume

Fluency with converting units, including between metric and imperial

Accurate linear/area measuring tools on a computer design

Estimate

Make reasonable estimations of length, distance, mass, capacity, angle, area and temperature

© TT Education Limited

Progression in design technology

EVALUATE

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Simple evaluation (e.g. spot similarities and differences between products)	Relate products to their design criteria	Link their own and others' designs and products to their function and purpose	Verbalise others' opinions politely and consider following their advice	Use constructive and sensitive language to suggest improvements to their peers' designs	Analyse their own and others' responses to their design, making improvements if appropriate
Follow simple advice from adults to improve their work	Listen courteously to views that differ from their own	Start to verbalise others' opinions that differ from their own	Start suggesting improvements to others' designs		Help improve peers' designs where that offer is welcomed
	Follow advice from adults or peers	Make choices about following advice	Link products to their cultural contexts		
Showcase work	**Showcase work**	**Showcase work**	**Showcase work**	**Showcase work**	**Showcase work**
Can refer to a photo or drawing while talking about their work	Use ICT to create a simple info-sheet about their work (e.g. text with photo)	Make and discuss annotated sketches and diagrams	Make and discuss cross-sectional and exploded diagrams	Create a presentation with text/ images to support them in showcasing work	Use a range of supporting material to showcase their work, and take questions
Use tallies and simple tables	Use pictograms, tally charts, block diagrams	Use bar charts (e.g. not blocks)	Use time graphs; discrete and continuous data	Use timetables; mode and range averages	Use pie charts and line graphs; mean average

COOKING

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Sharps	**Sharps**	**Sharps**	**Sharps**	**Sharps**	**Sharps**
Use knives with an 11-12cm non-serrated blade (supervised)	Use knives with an 11-12cm non-serrated blade (supervised)	Serrated knife with 'bridge' hold to cut onion (supervised)	Use a 'bridge' hold to cut harder veg (e.g. potato)	Use 'claw' grip to cut e.g. celery, carrot	Use large knives on hard vegetables like suede (supervised)
	Use peeler on carrots	Cut e.g. peppers with precision (i.e. even size)	Use peeler on potato		
	Use grater for cheese	Use peeler on apples	Use a grater for e.g. lemon zest		
		Use a grater for e.g. apple, carrot			
	Other skills	**Other skills**	**Other skills**	**Other skills**	
	Sieve flour	Mash potato (roughly); crush garlic	Reliably break eggs without breaking yoke	Mash potato to a smooth texture	
		Break eggs, often not breaking yokes	Creaming fat/sugar	Separate egg whites from yokes	
		Knead bread dough		Folding meringue mix	
	Hot food	**Hot food**	**Hot food**	**Hot food**	**Hot food**
	Watch adults putting food in ovens and explain how to do it safely	Cook food in an electric stockpot (supervised)	Use a microwave or toaster (supervised)	Remove e.g. hot biscuits from a baking tray using a fish-slice (supervised)	Handle hot food with oven gloves (supervised)

© TT Education Limited

Progression in design technology

VOCABULARY

Year 1

Use common words and phrases relating to Design Technology

Suggested words

Product
Design
Technology
First/second (etc)
Then
When
Last
Next
Before
After
Drawing
Painting
Printing
Trace
Share
Effect
Improve
Ingredients
Material
Savoury
Sweet

Locational

Near
Far
Up
Down
Further
Higher
Underneath
Centre
Anticlockwise
Position
Direction
Above
Below
Roughly
Close to
Older
Newer

Year 2

Use a wide range of everyday terms in Design Technology

Suggested words

Process
Construction
Model
Later
Earlier
Since
Period
Paste
Textile
Collage
Relief
Object
Style
Fashion
At the same time as
Monitor
Sew
Knit
Contrast
Depth
Layer
Scale
Critique
Compare
Levers
Sliders
Wheels
Axles
Seasoning

Locational

Left/right (from own perspective)
Symmetrical
Reflect
Diagonal (i.e. sloped, not the official maths meaning)
Range (not yet in technical maths sense)

Year 3

Use some specialist vocab in discussions

Suggested words

Chronological
Approximate
Accurate
Technique
Structure
Mechanical
Parallel
Perpendicular
Perspective
Quality
Fabric
Weave
Dye
Version
Purpose
Opinion
Organise
Construct
Mock-up
Prototype
Clarify
Raising agents

Locational

Left/right (secure use from any perspective e.g. discussing partners' work across the table)

Year 4

Use specialist vocab, often appropriately

Suggested words

Uncertain
Former
Latter
Cause
Consequence
Phase
Trend
Continuity
Medium
Intricate
Audience
Impact
Program
Develop
Pattern piece
Structure
Unique
Characteristic
Convention
Aesthetic
Series
Circuit
Program

Locational

Make use of Mathematical language in describing shape and location (e.g. 3D shape vocab incl **angle**, **convex** etc)
Increase
Decrease

Year 5

Use specialist vocab appropriately

Suggested words

Contemporary
Prior
Subsequent
Enduring
Dominate
Context
Complex
Sparse
Exceptional
Pulley
Cam
Lever
Gear

Locational

Shape vocab (incl **diagonal**, **rotation**, angle language)

Year 6

Start to apply vocab in sophisticated ways (e.g. cross-curricular)

Suggested words

Simultaneous
Attribute
Controversy
Authentic
Maquette

Locational

Concentric
Radial
Intersecting

© TT Education Limited

NOTES

A Progression in Design Technology

NOTES

Order information:

These guides can be purchased online by visiting:
www.tteducation.co.uk/primary-resources

Alternatively, call our team on **01206 625626**
or email - **info@tteducation.co.uk**

TT Education™
The School Improvement Company

t: +44 (0) 1206 625626 e: info@tteducation.co.uk w: www.tteducation.co.uk