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Design & Technology Curriculum

1. Design & Technology Curriculum Vision

At Storyybrook, we believe design and technology help pupils become creative, practical and reflective problem solvers who can design, make and evaluate purposeful products for real-life contexts.

Design & Technology teaching is designed to ensure pupils:

- develop creativity and innovation
- solve practical problems
- design purposeful products
- develop technical knowledge and practical skills
- evaluate and improve outcomes
- understand how design impacts everyday life
- apply learning across different contexts

Within our specialist SEMH context, Design & Technology provides opportunities for:

- practical and hands-on learning
- resilience and perseverance
- confidence building
- communication and collaboration
- independence and decision-making
- sensory and kinaesthetic experiences

Learning is ambitious, adaptive and carefully sequenced so pupils progressively know more, remember more and can do more over time.

2. Intent

At Storyybrook pupils will:

Know

- substantive design and technology knowledge
- technical vocabulary
- materials, tools and mechanisms
- design processes and construction techniques

Understand

- how products are designed for purpose
- how materials and structures function
- how evaluation improves outcomes
- how design and technology impact everyday life

Apply

- designing and making skills
- construction and technical skills
- evaluation and refinement
- problem solving and creativity
- safe and purposeful use of tools and materials

3. Implementation

Design & Technology is implemented through:

- Carefully sequenced units
- Learning is organised through thematic units and revisited across phases.

Design Thinking

Pupils progressively develop design thinking through:

explore → design → create → test → evaluate → refine

Retrieval

Pupils revisit:

- prior knowledge
- vocabulary
- techniques
- materials and tools
- misconceptions
- previously taught design and technology knowledge and skills

Vocabulary

Vocabulary is explicitly taught through:

- Tier 1 language
- Tier 2 language
- Tier 3 design and technology vocabulary

Reading

Pupils explore:

- design briefs
- diagrams and instructions
- product designs
- technical explanations
- recipes and methods

- evaluation examples
- inventor and designer studies

Adaptive Teaching

Learning may include:

- visual models
- practical demonstrations
- sensory exploration
- chunked tasks
- guided construction
- oral rehearsal
- vocabulary pre-teaching
- structured discussion

4. Impact

Leaders evaluate impact through:

Monitoring activity	Evidence
Learning walks	technical vocabulary, creativity and engagement
Work scrutiny	progression of skills and design thinking
Pupil voice	confidence, vocabulary and evaluation
Assessment information	progress and misconceptions
Retrieval activities	long-term retention
Vocabulary reviews	disciplinary language use
Final outcomes	application of design and technology knowledge

Within the specialist SEMH context:

improved attendance, engagement and participation are considered important indicators of curriculum impact.

5. How Design & Technology Progresses at Storyybrook

Phase	Knowledge	Design Thinking	Technical Understanding
KS1	explore materials, structures and simple mechanisms	explore and create	identify → make
LKS2	investigate structures, textiles and food technology	design and refine	investigate → explain
UKS2	analyse mechanisms, systems and product effectiveness	evaluate and improve	analyse → justify → evaluate

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Design & Technology Knowledge Progression Overview

Strand	KS1	LKS2	UKS2
Structures	build simple structures and models	strengthen and refine structures	evaluate and improve structural effectiveness
Mechanisms	explore sliders and levers	investigate pneumatics and movement	understand gears, pulleys and systems
Textiles	join and decorate materials	develop stitching and textile techniques	refine textile products and evaluate outcomes
Food Technology	prepare simple foods safely	understand healthy eating and preparation	apply nutritional understanding and evaluate products
Design Process	generate ideas and create products	develop designs and explain choices	refine, evaluate and justify outcomes
Evaluation	talk about products and designs	explain strengths and improvements	justify decisions and evaluate effectiveness

Design & Technology Progression Principles

Design & Technology learning at Storyybrook is designed so that pupils:

- revisit prior learning through retrieval opportunities
- develop increasingly sophisticated technical vocabulary
- move from exploration and construction towards evaluation and refinement
- apply creativity and problem solving to purposeful outcomes
- increasingly think, communicate and work as designers and makers

6. Design Thinking Progression

KS1	LKS2	UKS2
Explore materials and create simple products	Design, build and refine products	Evaluate, improve and justify design choices
Use simple tools and techniques	Select appropriate materials and techniques	Analyse effectiveness and refine outcomes
Talk about designs and products	Explain construction choices	Justify decisions and evaluate products
Follow simple design processes	Develop increasingly independent designs	Apply technical understanding purposefully

Pupils revisit and increasingly apply these design skills across all phases and design contexts.

7. Design & Technology Disciplinary Progression

KS1	LKS2	UKS2
Designers explore, make and test	Designers investigate, refine and explain	Designers analyse, evaluate and justify design choices

8. Reading in Design & Technology

Phase	Reading focus
KS1	labels, diagrams and simple instructions
LKS2	design briefs, methods and technical explanations
UKS2	technical analysis, evaluation and product comparison

8. Design & Technology Coverage by Unit

Jack's Amazing Adventure / All at Sea (KS1)	Roots and Shoots / Sustain (KS1)	Dreaming of Dragons (KS1)	Sparks and Flames (LKS2)	Passport to South America (LKS2)	Electricity & Circuits (UKS2)	Healthy Futures (UKS2)
Delivery Focus Structures, mechanisms and model making	**Delivery Focus** Food technology and environmental design	**Delivery Focus** Textiles and imaginative design	**Delivery Focus** Electrical systems and functional products	**Delivery Focus** Textiles, cultural design and construction	**Delivery Focus** Systems, mechanisms and functional design	**Delivery Focus** Food technology, nutrition and product evaluation
National Curriculum Links design purposeful products build structures explore simple mechanisms	**National Curriculum Links** prepare simple foods safely explore healthy eating use materials purposefully	**National Curriculum Links** use textiles and joining techniques design creative products evaluate outcomes	**National Curriculum Links** understand electrical systems design functional products evaluate effectiveness	**National Curriculum Links** develop textile techniques investigate cultural design evaluate products	**National Curriculum Links** understand systems and mechanisms develop functional products evaluate effectiveness	**National Curriculum Links** understand healthy eating prepare and cook foods safely evaluate products and nutrition
Design Thinking Focus explore materials build and test models evaluate simple outcomes	**Design Thinking Focus** explore materials and ingredients follow design processes evaluate products	**Design Thinking Focus** explore textiles join materials refine creative ideas	**Design Thinking Focus** investigate systems build and refine products evaluate function	**Design Thinking Focus** refine textile techniques compare designs explain choices	**Design Thinking Focus** analyse systems test and refine products justify design decisions	**Design Thinking Focus** investigate ingredients and nutrition refine food products evaluate effectiveness
Reading Focus diagrams instructions design examples	**Reading Focus** recipes diagrams labels	**Reading Focus** design examples instructions illustrations	**Reading Focus** technical diagrams explanations instructions	**Reading Focus** textile examples design studies cultural artwork	**Reading Focus** technical diagrams evaluation reports product analysis	**Reading Focus** recipes nutritional information evaluation examples
Vocabulary structure slider lever stable	**Vocabulary** ingredient healthy design evaluate	**Vocabulary** textile stitch join fabric	**Vocabulary** circuit component function system	**Vocabulary** textile weave pattern design	**Vocabulary** mechanism system prototype efficiency	**Vocabulary** nutrition hygiene preparation evaluate
Assessment Opportunities	**Assessment Opportunities**	**Assessment Opportunities**	**Assessment Opportunities**	**Assessment Opportunities**	**Assessment Opportunities**	**Assessment Opportunities**

build structures explain choices evaluate outcomes	prepare simple foods explain healthy choices evaluate products	create textile products explain techniques evaluate outcomes	construct products explain systems evaluate effectiveness	create textile outcomes explain techniques refine products	design functional products evaluate effectiveness justify design choices	prepare healthy foods explain nutritional choices evaluate products
Adaptive Teaching practical modelling visual supports guided construction	**Adaptive Teaching** practical activities visual sequencing structured discussion	**Adaptive Teaching** scaffolded modelling sensory exploration guided support	**Adaptive Teaching** practical demonstrations visual diagrams structured questioning	**Adaptive Teaching** visual examples practical modelling vocabulary support	**Adaptive Teaching** chunked construction guided evaluation practical modelling	**Adaptive Teaching** practical activities visual sequencing structured discussion

National Curriculum Strand	KS1 Cycle 1	KS1 Cycle 2	LKS2 Cycle 1	LKS2 Cycle 2	UKS2 Cycle 1	UKS2 Cycle 2
Design	Jack's Amazing Adventure	All at Sea	Stone Age to Iron Age	Sparks and Flames	Forces in Action	World War 2
Make	Special to Us	Fit for Life	Rock Detectives	Roman Britain	Materials Matter	Healthy Futures
Evaluate	Jack's Amazing Adventure	Fit for Life	Healthy Me	Protect Our Planet	Forces in Action	World War 2
Technical Knowledge	Special to Us	Jack's Amazing Adventure	Stone Age to Iron Age	Sparks and Flames	Forces in Action	Electricity and Circuits
Cooking and Nutrition	Uniquely Me	Fit for Life	Materials Matter	Protect Our Planet	Healthy Futures	Healthy Futures
Mechanisms and Systems	Jack's Amazing Adventure	Dreaming of Dragons	Tremors	Sparks and Flames	Forces in Action	Electricity and Circuits

10. Assessment in Design & Technology

Formative assessment	Summative assessment
retrieval quizzes	end-of-unit outcomes
questioning	teacher assessment and professional judgement
vocabulary checks	TrackAble outcomes
observations of practical tasks	pupil application tasks
discussion activities	design thinking outcomes
evaluation of products	final design outcomes

Assessment Principles in Design & Technology

Design & Technology assessment at Storyybrook is designed to ensure pupils progressively develop:

- substantive design and technology knowledge
- technical vocabulary
- practical and construction skills
- evaluation and refinement skills
- the ability to communicate ideas through purposeful design

Assessment opportunities may include:

- practical construction tasks
- discussion and oral explanation
- design sketches and planning
- evaluation activities
- collaborative projects
- food preparation and product design

Assessment supports pupils in moving progressively from:

KS1: explore → create
↓
LKS2: design → refine
↓
UKS2: analyse → justify → evaluate

Within the specialist SEMH context, assessment approaches are adaptive, supportive and designed to allow pupils to demonstrate understanding through practical, verbal and design-based outcomes.

11. Design & Technology Assurance Statement

The Storyybrook Design & Technology Curriculum provides full National Curriculum coverage whilst ensuring learning remains ambitious, adaptive and meaningful within a specialist SEMH context. Pupils progressively develop substantive design and technology knowledge, disciplinary understanding and design thinking skills through increasingly sophisticated exploration, construction, evaluation and refinement of products and systems. This prepares pupils to solve problems creatively, apply practical skills purposefully and become confident, reflective designers and makers.