

# storyybrook

## Computing Curriculum



## 1. Computing Curriculum Vision

At Storyybrook, we believe computing helps pupils understand and navigate the digital world safely, confidently and responsibly whilst developing creativity, problem solving and logical thinking.

**Computing teaching is designed to ensure pupils:**

- develop computational thinking
- understand how digital systems work
- create and debug programs
- communicate using technology
- evaluate digital information critically
- use technology safely and responsibly
- apply digital skills across the curriculum

**Within our specialist SEMH context, computing provides opportunities for:**

- developing confidence and independence
- strengthening communication
- increasing engagement and motivation
- developing resilience through problem solving
- supporting creativity and self-expression
- preparing pupils for the wider world

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 computing knowledge
- computing vocabulary
- how digital systems and technology operate

**Understand**

- algorithms and programming
- online safety and digital responsibility
- patterns, sequences and logical systems
- how technology can be used safely and purposefully



## Apply

- computational thinking
- programming and debugging
- digital communication
- problem solving
- evaluation of digital systems and information

## 3. Implementation

### Computing is implemented through:

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

### Pupils progressively develop computational thinking through:

sequence → algorithm → debug → program → evaluate → refine

### Retrieval

#### Pupils revisit:

- prior knowledge
- vocabulary
- concepts
- misconceptions
- computational thinking skills
- previously taught computing knowledge

### Vocabulary

#### Vocabulary is explicitly taught through:

- Tier 1 language
- Tier 2 language
- Tier 3 computing vocabulary

### Reading

#### Pupils read:

- instructions
- algorithms
- diagrams
- explanations
- digital information



- online content
- charts and data
- digital media

## Adaptive Teaching

Learning may include:

- visual models
- practical demonstrations
- chunked learning
- supported programming
- oral rehearsal
- vocabulary pre-teaching
- movement opportunities
- structured discussion

## 4. Impact

Leaders evaluate impact through:

Monitoring activity	Evidence
Learning walks	computational language, engagement and application
Book scrutiny	progression of digital understanding and recording
Pupil voice	confidence, vocabulary and understanding
Assessment information	progress and misconceptions
Retrieval activities	long-term retention
Vocabulary reviews	disciplinary language use
Final outcomes	application of computing knowledge

Within the specialist SEMH context:

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

## 5. How Computing Progresses at Storybrook

Phase	Knowledge	Computational Thinking	Digital Understanding
KS1	understand simple digital systems and online safety	sequence and debug simple instructions	identify → use
LKS2	investigate programming, media and digital systems	create, test and debug programs	investigate → explain



Phase	Knowledge	Computational Thinking	Digital Understanding
UKS2	analyse systems, variables and digital information	evaluate and refine programs and systems	analyse → justify → evaluate

### Computing Knowledge Progression Overview

Strand	KS1	LKS2	UKS2
Algorithms & Programming	follow and create simple instructions	create and debug simple programs	use variables, selection and logical systems
Digital Literacy	recognise safe technology use	understand responsible online behaviour	evaluate reliability and digital citizenship
Information Technology	create simple digital content	present and organise digital information	create and evaluate digital products
Digital Systems	recognise devices and functions	understand hardware and software	analyse systems and networks
Online Safety	identify safe behaviours	recognise online risks and responsibilities	evaluate online information and digital impact

### Computing Progression Principles

Computing learning at Storyybrook is designed so that pupils:

- revisit prior learning through retrieval opportunities
- develop increasingly sophisticated computing vocabulary
- move from sequencing and identifying towards analysing and evaluating
- apply computational thinking to solve problems
- increasingly think, communicate and work as computer scientists

### 6. Computational Thinking Progression

KS1	LKS2	UKS2
Follow and create simple instructions	Create, test and debug programs	Design, evaluate and refine programs
Recognise patterns and sequences	Use algorithms and logical thinking	Use variables, selection and logical systems
Identify simple errors	Debug and improve programs	Evaluate effectiveness and reliability
Communicate digital ideas	Explain computing processes	Justify decisions and evaluate systems



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

## 7. Computing Disciplinary Progression

KS1	LKS2	UKS2
Computer scientists identify, sequence and debug	Computer scientists create, test and explain	Computer scientists analyse, evaluate and refine

## 8. Reading in Computing

Phase	Reading focus
KS1	instructions, symbols and simple digital information
LKS2	explanations, algorithms and digital media
UKS2	digital information, online sources, evaluation and reliability





## 9. Computing Coverage by Unit

Jack's Amazing Adventure / All at Sea (KS1)	Round About Winkfield / Sustain (KS1)	Dreaming of Dragons (KS1)	Sparks and Flames (LKS2)	Sound Waves (LKS2)	Passport to South America (LKS2)	Electricity & Circuits (UKS2)	Light & Perception / Our Changing World / Healthy Futures (UKS2)
<b>Delivery Focus</b> Algorithms, sequencing and digital navigation	<b>Delivery Focus</b> Digital information and online safety	<b>Delivery Focus</b> Digital storytelling and sequencing	<b>Delivery Focus</b> Hardware, software and digital systems	<b>Delivery Focus</b> Digital sound and programming	<b>Delivery Focus</b> Digital mapping and information handling	<b>Delivery Focus</b> Programming, systems and logical thinking	<b>Delivery Focus</b> Digital literacy, evaluation and responsible technology use
<b>National Curriculum Links</b> understand algorithms create and debug simple programs use technology purposefully	<b>National Curriculum Links</b> use technology safely organise digital content communicate information	<b>National Curriculum Links</b> create digital content sequence instructions debug simple programs	<b>National Curriculum Links</b> understand hardware and software create and debug programs use technology responsibly	<b>National Curriculum Links</b> record and edit digital sound create and debug simple programs understand inputs and outputs	<b>National Curriculum Links</b> use digital maps and databases organise and present information interpret digital information	<b>National Curriculum Links</b> use variables, selection and logical reasoning understand systems evaluate digital systems	<b>National Curriculum Links</b> evaluate online information create digital content understand responsible digital use
<b>Computational Thinking Focus</b> sequence instructions identify errors debug simple programs	<b>Computational Thinking Focus</b> organise information identify patterns use digital tools purposefully	<b>Computational Thinking Focus</b> sequence instructions debug programs create digital content	<b>Computational Thinking Focus</b> create programs test and debug understand systems	<b>Computational Thinking Focus</b> use inputs and outputs debug and improve programs create digital sequences	<b>Computational Thinking Focus</b> interpret information solve problems organise digital content	<b>Computational Thinking Focus</b> use variables apply logical systems evaluate effectiveness	<b>Computational Thinking Focus</b> evaluate reliability interpret information analyse digital impact
<b>Reading Focus</b> instructions symbols simple digital texts	<b>Reading Focus</b> online information diagrams labels	<b>Reading Focus</b> digital stories instructions visual prompts	<b>Reading Focus</b> explanations diagrams digital information	<b>Reading Focus</b> algorithms explanations digital media	<b>Reading Focus</b> maps reports digital information	<b>Reading Focus</b> programming explanations diagrams digital reports	<b>Reading Focus</b> online articles digital information charts and data
<b>Vocabulary</b> algorithm sequence	<b>Vocabulary</b> online information	<b>Vocabulary</b> sequence instruction	<b>Vocabulary</b> hardware software	<b>Vocabulary</b> input output	<b>Vocabulary</b> database mapping	<b>Vocabulary</b> variable selection	<b>Vocabulary</b> reliability media





debug route	search safe	digital debug	system network	vibration media	climate information	logical system	citizenship evaluate
<b>Assessment Opportunities</b> create and debug instructions explain sequences follow algorithms accurately	<b>Assessment Opportunities</b> identify safe behaviours organise information communicate findings	<b>Assessment Opportunities</b> create digital stories debug programs explain sequences	<b>Assessment Opportunities</b> explain hardware and software relationships debug programs explain systems	<b>Assessment Opportunities</b> create and improve programs explain systems debug effectively	<b>Assessment Opportunities</b> interpret information present findings explain geographical data	<b>Assessment Opportunities</b> explain and evaluate programs justify choices analyse systems	<b>Assessment Opportunities</b> evaluate online information justify viewpoints explain digital responsibility
<b>Adaptive Teaching</b> visual models practical demonstrations oral rehearsal	<b>Adaptive Teaching</b> visual supports structured discussion chunked learning	<b>Adaptive Teaching</b> supported sequencing visual prompts oral rehearsal	<b>Adaptive Teaching</b> practical exploration vocabulary support structured questioning	<b>Adaptive Teaching</b> practical investigations visual models structured discussion	<b>Adaptive Teaching</b> visual maps structured discussion vocabulary support	<b>Adaptive Teaching</b> chunked programming practical demonstrations vocabulary support	<b>Adaptive Teaching</b> structured discussion visual prompts guided evaluation





National Curriculum Strand	KS1 Cycle 1	KS1 Cycle 2	LKS2 Cycle 1	LKS2 Cycle 2	UKS2 Cycle 1	UKS2 Cycle 2
Algorithms and Programming	Jack's Amazing Adventure	Dreaming of Dragons	Tremors	Sparks and Flames	Space Exploration	Electricity and Circuits
Debugging and Computational Thinking	The Lonely Beast	Dreaming of Dragons	Rock Detectives	Sound Waves	Forces in Action	Our Changing World
Information Technology	Uniquely Me	All at Sea	Passport to Europe	Passport to South America	The Great British Isles	Healthy Futures
Digital Literacy	The Lonely Beast	Discover New Zealand	Healthy Me	Protect Our Planet	Rainforests	Our Changing World
Online Safety	Sustain (Cycle 1)	Sustain (Cycle 2)	Healthy Me	Protect Our Planet	Healthy Futures	Our Changing World

## 10. Assessment in Computing

Formative assessment	Summative assessment
retrieval quizzes	end-of-unit outcomes
questioning	teacher assessment and professional judgement
vocabulary checks	TrackAble outcomes
observations of programming and digital tasks	pupil application tasks
debugging activities	computational thinking outcomes
discussion activities	application of computing knowledge
evaluation of digital products	extended digital responses
online safety scenarios and discussion	digital literacy and online safety outcomes

### Assessment Principles in Computing

Computing assessment at Storyybrook is designed to ensure pupils progressively develop:





- substantive computing knowledge
- computing vocabulary
- computational thinking skills
- programming and debugging skills
- digital literacy and online safety understanding
- the ability to evaluate digital systems and information

## Assessment opportunities may include:

- discussion and oral explanation
- retrieval activities
- programming and debugging tasks
- creation of digital content
- interpretation of digital information
- presentations
- collaborative digital enquiry activities
- online safety and digital citizenship discussions

## Assessment supports pupils in moving progressively from:

KS1: identify → sequence



LKS2: create → test → debug



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 digital outcomes.





## 11. Computing Assurance Statement

The Storybrook Computing Curriculum provides full National Curriculum coverage whilst ensuring learning remains ambitious, adaptive and meaningful within a specialist SEMH context. Pupils progressively develop substantive computing knowledge, disciplinary understanding and computational thinking skills through increasingly sophisticated programming, problem solving and evaluation of digital systems. This prepares pupils to navigate the digital world safely, think critically about technology and become confident, responsible digital citizens.

