



**ST DAY & CARHARRACK PRIMARY SCHOOL**

**Computing 25/26**






**SCARF**



**common  
sense  
media**

## UNIT COVERAGE

Barefoot  
LearningComputing  
Learning  
Journey  
25/26

-  Computer Science
-  Information Technology
-  Digital Literacy



EYFS

1. People who Help Us
2. Busy Bodies
3. Super Space
4. Springtime
5. Summer Fun
6. Awesome Autumn
7. Boats Ahoy

Year  
1

1. Digital Citizenship – Online Safety
2. Programming A – Moving a Robot
3. Creating Media – Digital Painting
4. Creating Media – Digital Writing
5. Programming B – Programming Animations
6. Data and Information - Grouping Data

Digital  
Learning  
CornwallYear  
3

1. Digital Citizenship – Online Safety
2. Programming A – Scratch Junior
3. Creating Media – Digital Photography
4. Creating Media – Making Music
5. Programming B – Robot Algorithms
6. Data and Information - Pictograms

Year  
2Year  
4

1. Digital Citizenship – Online Safety
2. Programming A - Microbit: First Steps
3. Creating Media – Animation
4. Creating Media – Book Creator
5. Programming B – Sphero First Use
6. Data and Information – Branching Databases

Year  
5

1. Digital Citizenship – Online Safety
2. Programming A – Sphero Sessions
3. Creating Media – Photo Editing
4. Creating Media – Audio Editing
5. Programming B – Repetition in Games
6. Data and Information – Microbit: Data handling

Year  
6

1. Digital Citizenship – Online Safety
2. Programming A – Selection with Micro:Bits
3. Creating Media – Video Editing
4. Creating Media – Vector Drawing
5. Programming B – Selection in Quizzes
6. Data and Information – Flat-File Databases

Year  
5



### PEOPLE WHO HELP US

Age: 4-6 years

Curriculum Links: Maths, English, PHE

Concepts and Approaches: Algorithms, Collaboration, Persevering, Creating, Pattern, Logical reasoning, Tinkering, Abstraction

Three activities based on our everyday superheroes, which have been designed to help pupils develop their computational thinking skills. Create patterns on a police car, guide a delivery person to their destination and design a uniform for a firefighter!



### BUSY BODIES

Age: 4-6 years

Curriculum Links: PSHE, English, Science

Concepts & Approaches: Algorithms, Decomposition, Debugging, Logic, Patterns, Abstraction

Provides four activities that help children discover how bodies move and grow. Using the resources provided they explore and learn about parts of the body, growth and movement.

Simple algorithms are created and adapted to form a routine of movements.



### SUPER SPACE

Age: 4 - 6 years

Curriculum Links: Science

Concepts and Approaches: Algorithms, Collaboration, Persevering, Creating, Pattern, Logical reasoning, Tinkering, Abstraction

Includes 3 space themed activities to develop pupils computational thinking and problem solving skills. Include creating algorithms to direct a rocket through space and spotting patterns in pictures of aliens.



### SPRINGTIME

Age: 4-6 years

Curriculum Links: Early Years

Concepts & Approaches: Abstraction, Tinkering, Creating, Collaborating, Algorithms, Persevering, Decomposition

Three Spring themed activities see the children make a Rabbit run, create Junk scarecrows and explore sequencing whilst planting seeds.



### SUMMER FUN

Age: 4-6 years

Curriculum Links: Science, Maths, English, D&T

Concepts & Approaches: Tinkering, Persevering, Patterns, Logic, Decomposition, Debugging, Collaborating, Algorithms

Children explore their surroundings and get creative, take a journey and make a map, and discover seaside tangrams, in these three fun activities.



### AWESOME AUTUMN

Age: 4-6 years

Curriculum Links: Early Years

Concepts & Approaches: Creating, Pattern, Logic, Algorithms, Decomposition, Collaborating

Three Autumn themed activities which see the children explore patterns in Garlands Galore, create a leaf labyrinth and make Pumpkin Soup using computational thinking skills.



### BOATS AHOY

Age: 4-6 years

Curriculum Links: Science, Maths, English, D&T

Concepts & Approaches: Algorithms, Decomposition, Creating, Tinkering, Logic, Patterns, Abstraction, Collaborating

Takes children on a journey of discovery as they investigate boats. Four activities make up this set of resources. Includes different uses of boats, floating and sinking predictions, creating a good boat through exploring designs and role play.

# The Computational Thinkers

## Concepts

 **Logic**  
Predicting and analysing

 **Evaluation**  
Making judgements

 **Algorithms**  
Making steps and rules

 **Patterns**  
Spotting and using similarities

 **Decomposition**  
Breaking down into parts

 **Abstraction**  
Removing unnecessary detail



## Approaches

 **Tinkering**  
Changing things to see what happens

 **Creating**  
Designing and making

 **Debugging**  
Finding and fixing errors

 **Persevering**  
Keeping going

 **Collaborating**  
Working together

# Barefoot



## Computing at School

**coram**   
Life Education

# SCARF

  
Safety Caring Achievement Resilience Friendship



**common  
sense  
media**



# EYFS Online Safety – We will use:



MEDIA BALANCE & WELL-BEING

*We find balance  
in our digital lives.*

**How can I make screen time meaningful?**

Learners go beyond "screen time" to explore the impact that their digital lives can have on their well-being and their relationships with others, while learning strategies for balancing media in their everyday lives.



PRIVACY & SECURITY

*We care about  
everyone's privacy.*

**How can I keep private data safe and secure?**

Learners find out how to protect personal information and gain a deeper understanding of their data privacy rights, so they can advocate for themselves and others.



DIGITAL FOOTPRINT & IDENTITY

*We define who we are.*

**How can I be responsible with my online identity?**

Learners consider the benefits and risks of online sharing and explore how their digital personae affect their sense of self, their reputations and their relationships.



RELATIONSHIPS & COMMUNICATION

*We know the power  
of words & actions.*

**How can I build positive relationships?**

Learners reflect on how to effectively communicate online and build positive relationships, avoid risky online talk, and understand why certain topics and conversations can best lend themselves to certain mediums.



CYBERBULLYING, DIGITAL DRAMA & HATE SPEECH

*We are kind & courageous.*

**How can I be kind and respectful?**

Learners take on these tough topics and play the active role of an upstander to build positive, supportive online communities and combat online cruelty.

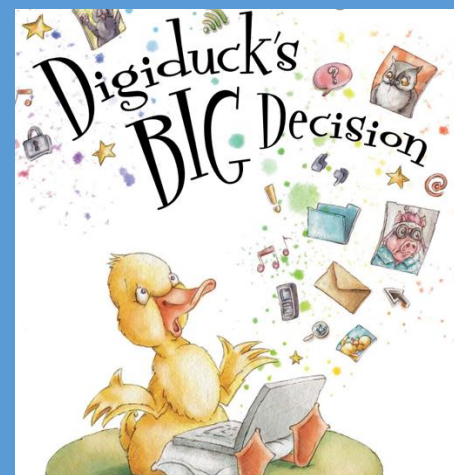
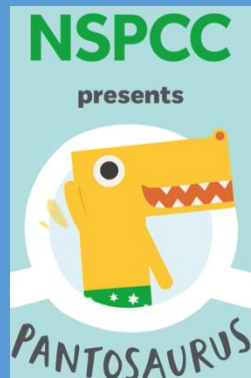


NEWS & MEDIA LITERACY

*We are critical  
thinkers & creators.*

**How can I think critically about what I see and create?**

Learners will identify credible and trustful information sources and reflect on their responsibilities as thoughtful media creators and consumers.





# CURRICULUM MILESTONES



## Computer Science

- I can understand and create **algorithms** (steps or rules as instructions, e.g. how to make a sandwich)
- I understand that algorithms must be precise



## Information Technology

- I can identify examples of **technology** in the classroom
- I can use apps or websites to aid my learning
- I can move a cursor with a mouse or trackpad and click on an icon
- I can place **items** into groups
- I can decide on **labels** for groups
- I can move a **cursor** with the trackpad and **click** on an icon
- I can save and retrieve work that I have produced (includes auto-save)
- I can use an **app** or **website** to make graphical marks or pictures

## Digital Literacy

### Operational Core Skills

- Children will use websites and apps to aid their learning.
- Children are able to save and retrieve work they have produced.
- Children learn to move a cursor with the trackpad on a laptop,

### Internet Safety

- Children give examples of when and how to speak to an adult when they need to.
- Children recognise some ways in which the internet can be used to communicate.
- Children describe what information they should not put online without asking a trusted adult first.
- Children describe how to behave online in ways that do not upset others.
- Children identify devices they could use to access information on the internet.
- Children explain rules to keep us safe when we are using technology both in and beyond the home.
- Children identify some simple examples of personal information (e.g. name, address, birthday, age, location).
- Children name their work so that others know it belongs to them.



# Year 1 Online Safety – We will use:



MEDIA BALANCE & WELL-BEING

*We find balance  
in our digital lives.*

**How can I make screen time meaningful?**

Learners go beyond "screen time" to explore the impact that their digital lives can have on their well-being and their relationships with others, while learning strategies for balancing media in their everyday lives.



PRIVACY & SECURITY

*We care about  
everyone's privacy.*

**How can I keep private data safe and secure?**

Learners find out how to protect personal information and gain a deeper understanding of their data privacy rights, so they can advocate for themselves and others.



DIGITAL FOOTPRINT & IDENTITY

*We define who we are.*

**How can I be responsible with my online identity?**

Learners consider the benefits and risks of online sharing and explore how their digital personae affect their sense of self, their reputations and their relationships.



RELATIONSHIPS & COMMUNICATION

*We know the power  
of words & actions.*

**How can I build positive relationships?**

Learners reflect on how to effectively communicate online and build positive relationships, avoid risky online talk, and understand why certain topics and conversations can best lend themselves to certain mediums.



CYBERBULLYING, DIGITAL DRAMA & HATE SPEECH

*We are kind & courageous.*

**How can I be kind and respectful?**

Learners take on these tough topics and play the active role of an upstander to build positive, supportive online communities and combat online cruelty.

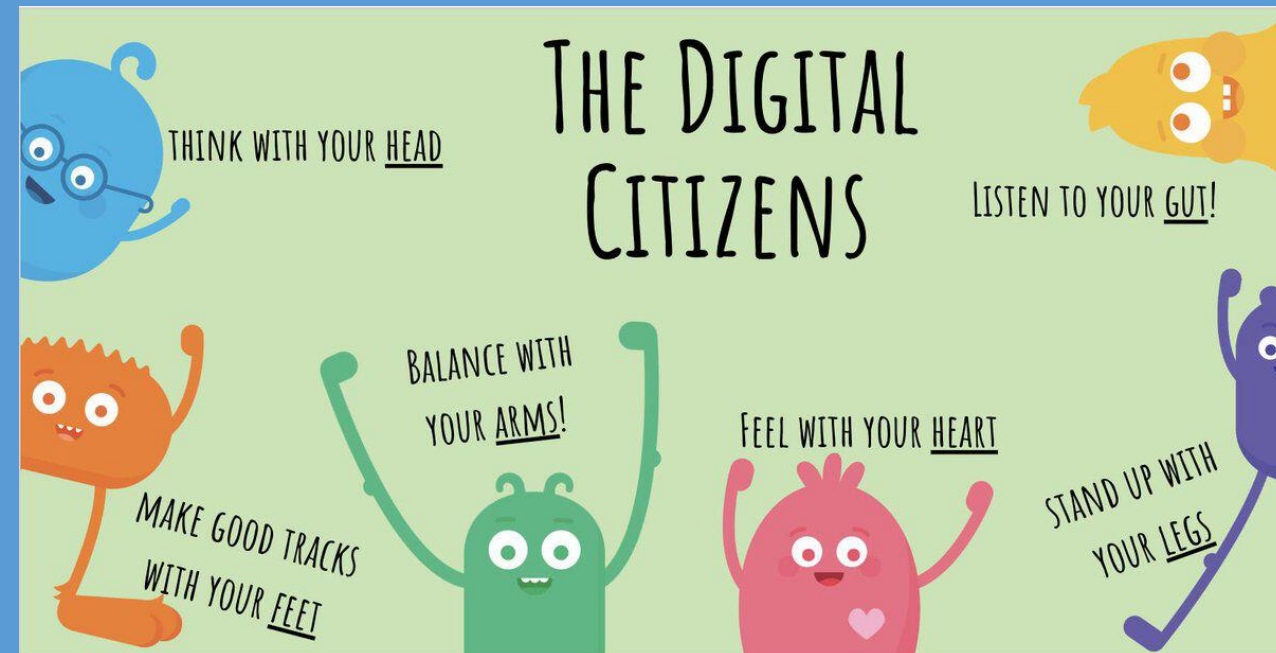
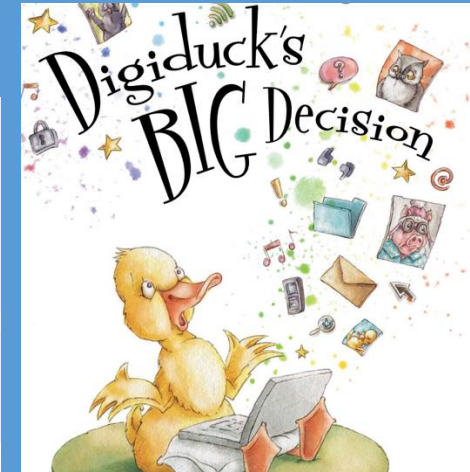


NEWS & MEDIA LITERACY

*We are critical  
thinkers & creators.*

**How can I think critically about what I see and create?**

Learners will identify credible and trustful information sources and reflect on their responsibilities as thoughtful media creators and consumers.





# CURRICULUM MILESTONES



## Computer Science

## Information Technology

## Digital Literacy

### Operational Core Skills

- Children will develop their understanding of creating and manipulate text further.
- Children will become familiar with using a keyboard to enter, edit and remove text. Children will also consider how to change the appearance of text and will be able to justify their reasoning in making such changes.
- Children will consider the differences between using a computer to create text, and handwritten approaches.
- Children practise key skills such as two-finger scrolling, use of the shift key for capital letters, and deleting chosen parts of on- screen text.

### Internet Safety

- Children describe ways in which people might make themselves look different online.
- Children explain some risks of communicating online with others they don't know well.
- Children explain how information put online about them can last for a long time.
- Children describe how to behave online in ways that do not upset others.
- Children demonstrate how to navigate a simple webpage to get to information they need (e.g. home, forward, back buttons; links, tabs and sections).
- Children create rules for using technology safely
- Children explain why they should always ask a trusted adult before they share information about themselves online.
- Children recognise that content on the internet may be on

- I can identify information technology in the school, home, and beyond
- I can create **rules** for using technology **Safely**
- I can enter **data** into a computer system
- I can use a computer to **present** data
- I can find answers to questions by looking at **data**
- I can explain why I should always ask a trusted adult before I **share** any information about myself **online**.
- I can use technology to capture and manipulate (position, re-size, rotate) photos as part of a piece of work I can describe ways in which people might make themselves look different online
- I can create **audio** using digital technology
- I can **edit** and **adjust** audio using digital technology

- I can create and run a **program** (an algorithm or multiple algorithms that can be understood by a computer)
- I can **predict** the behaviour of simple programs
- I can **debug** (find and fix a problem) within a simple program
- I can **predict** the behaviour of simple programs
- I can create and run a **program** (an algorithm or multiple algorithms that can be understood by a computer) I can **debug** (find and fix a problem) within a simple program





# Year 2 Online Safety – We will use:



## MEDIA BALANCE & WELL-BEING

*We find balance in our digital lives.*

### How can I make screen time meaningful?

Learners go beyond "screen time" to explore the impact that their digital lives can have on their well-being and their relationships with others, while learning strategies for balancing media in their everyday lives.



## PRIVACY & SECURITY

*We care about everyone's privacy.*

### How can I keep private data safe and secure?

Learners find out how to protect personal information and gain a deeper understanding of their data privacy rights, so they can advocate for themselves and others.



## DIGITAL FOOTPRINT & IDENTITY

*We define who we are.*

### How can I be responsible with my online identity?

Learners consider the benefits and risks of online sharing and explore how their digital personae affect their sense of self, their reputations and their relationships.



## RELATIONSHIPS & COMMUNICATION

*We know the power of words & actions.*

### How can I build positive relationships?

Learners reflect on how to effectively communicate online and build positive relationships, avoid risky online talk, and understand why certain topics and conversations can best lend themselves to certain mediums.



## CYBERBULLYING, DIGITAL DRAMA & HATE SPEECH

*We are kind & courageous.*

### How can I be kind and respectful?

Learners take on these tough topics and play the active role of an upstander to build positive, supportive online communities and combat online cruelty.

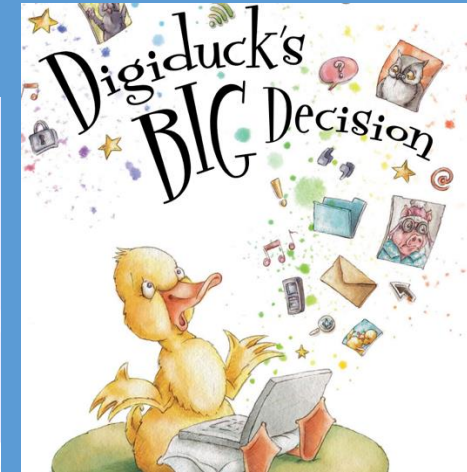


## NEWS & MEDIA LITERACY

*We are critical thinkers & creators.*

### How can I think critically about what I see and create?

Learners will identify credible and trustful information sources and reflect on their responsibilities as thoughtful media creators and consumers.







# CURRICULUM MILESTONES



## Computer Science

- I can identify that **sprites** can be controlled by **commands** that I choose
- I can create a **sequence** of connected commands
- I can identify a way to improve a program
- I can **debug** errors across a sequence of code
- I can **decompose** (break into smaller chunks) a programming problem



## Information Technology

- I can identify **networked devices** around me
- I can identify **inputs** and **outputs** of common computing
- Devices
- I can create questions with yes / no answers to **categorise** objects
- I can retrieve information from different levels of a **branching database**
- I can design and plan for an **animation** (e.g. stop-frame animation on an iPad)
- I can create and edit an **animation**
- I can create **audio** using digital Technology
- I can **edit** and **adjust** audio using digital technology

## Digital Literacy

### Operational Core Skills

- Children use software to edit and improve written work from a cross-curricular subject.
- Children develop their use of the shift key, using numerous basic punctuation marks correctly within their on-screen writing.
- Children type to achieve a completed written piece that can be printed or published directly to the internet.
- Children use specific typing software to improve keyboard skills and awareness.

### Internet Safety

- Children explain how their own and other people's feelings can be hurt by what is said or written online.
- Children know who they should ask if they are not sure if they should put something online.
- Children describe rules about how to behave online and how to follow them.
- Children evaluate digital content and can explain how to make choices from search results.
- Children identify situations where they might need to limit the amount of time they use technology.
- Children describe simple strategies for creating and keeping passwords private.
- Children explain why copying someone else's work from the internet without permission can cause problems.

# Year 3 Online Safety – We will use:



MEDIA BALANCE & WELL-BEING

*We find balance in our digital lives.*

**How can I make screen time meaningful?**

Learners go beyond "screen time" to explore the impact that their digital lives can have on their well-being and their relationships with others, while learning strategies for balancing media in their everyday lives.



PRIVACY & SECURITY

*We care about everyone's privacy.*

**How can I keep private data safe and secure?**

Learners find out how to protect personal information and gain a deeper understanding of their data privacy rights, so they can advocate for themselves and others.



DIGITAL FOOTPRINT & IDENTITY

*We define who we are.*

**How can I be responsible with my online identity?**

Learners consider the benefits and risks of online sharing and explore how their digital personae affect their sense of self, their reputations and their relationships.



RELATIONSHIPS & COMMUNICATION

*We know the power of words & actions.*

**How can I build positive relationships?**

Learners reflect on how to effectively communicate online and build positive relationships, avoid risky online talk, and understand why certain topics and conversations can best lend themselves to certain mediums.



CYBERBULLYING, DIGITAL DRAMA & HATE SPEECH

*We are kind & courageous.*

**How can I be kind and respectful?**

Learners take on these tough topics and play the active role of an upstander to build positive, supportive online communities and combat online cruelty.



NEWS & MEDIA LITERACY

*We are critical thinkers & creators.*

**How can I think critically about what I see and create?**

Learners will identify credible and trustful information sources and reflect on their responsibilities as thoughtful media creators and consumers.



Google  
presents

INTERLAND  
Be Internet Legends.



National Cyber  
Security Centre







# CURRICULUM MILESTONES



## Computer Science

## Information Technology

## Digital Literacy

Year  
4/5

- I can create a program that uses **loop commands** to achieve a particular outcome
- I can recognise that the order of **commands** may produce a different **outcome**
- I can identify a way to **refactor** (improve) my code
- I can create a program that uses loops to achieve a particular outcome
- I can recognise that some programs can be run at the same time (concurrency)
- I can explain the outcome of changes to code

- I can recognise that the **world wide web** is part of the internet
- I understand that the global **interconnection** of **networks** is the **internet**
- I can **analyse** information and differentiate between '**opinions**', '**beliefs**' and '**facts**'
- I can use a digital device to **collect data** automatically
- I can choose how often to collect **data samples**
- I can manipulate and adjust **images** for a particular **purpose**
- When **searching** on the **internet** for content to use, I can explain why I need to consider who owns it and whether I have the **right** to reuse it.
- I can identify the **input** and **output** devices used to record and play sound
- I can **plan** purposefully for a **podcast** audio production
- I can **record** and **edit** sound using digital technology as part of an audio production

### Operational Core Skills

- Children further improve their ability to type towards completed work, including more advanced punctuation marks and accuracy.
- Children use digital spell-check facilities to locate and correct spelling mistakes.
- Children will use multiple tabs within a web browser or move between different apps as part of a task.

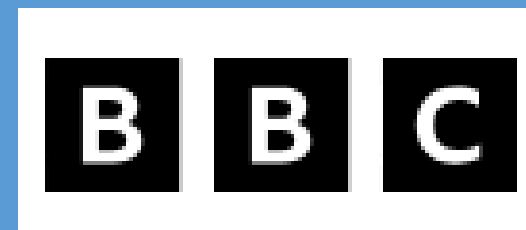
### Internet Safety

- Children explain how their online identity can be different to the identity they present in 'real life'.
- Children explain what it means to 'know someone' online and why this might be different from knowing someone in real life.
- Children describe how they can find out information about someone by looking online.
- Children explain why they need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation).
- Children analyse information and differentiate between 'opinions', 'beliefs' and 'facts'
- Children understand what criteria have to be met before something is a 'fact'.
- Children describe ways technology can affect healthy sleep and can describe some of the issues.
- Children explain how internet use can be monitored.
- Children assess and justify when it is acceptable to use the work of others.



# Year 4/5 Online Safety – We will use:

	<b>MEDIA BALANCE &amp; WELL-BEING</b> <i>We find balance in our digital lives.</i>	<b>How can I make screen time meaningful?</b> Learners go beyond "screen time" to explore the impact that their digital lives can have on their well-being and their relationships with others, while learning strategies for balancing media in their everyday lives.
	<b>PRIVACY &amp; SECURITY</b> <i>We care about everyone's privacy.</i>	<b>How can I keep private data safe and secure?</b> Learners find out how to protect personal information and gain a deeper understanding of their data privacy rights, so they can advocate for themselves and others.
	<b>DIGITAL FOOTPRINT &amp; IDENTITY</b> <i>We define who we are.</i>	<b>How can I be responsible with my online identity?</b> Learners consider the benefits and risks of online sharing and explore how their digital personae affect their sense of self, their reputations and their relationships.
	<b>RELATIONSHIPS &amp; COMMUNICATION</b> <i>We know the power of words &amp; actions.</i>	<b>How can I build positive relationships?</b> Learners reflect on how to effectively communicate online and build positive relationships, avoid risky online talk, and understand why certain topics and conversations can best lend themselves to certain mediums.
	<b>CYBERBULLYING, DIGITAL DRAMA &amp; HATE SPEECH</b> <i>We are kind &amp; courageous.</i>	<b>How can I be kind and respectful?</b> Learners take on these tough topics and play the active role of an upstander to build positive, supportive online communities and combat online cruelty.
	<b>NEWS &amp; MEDIA LITERACY</b> <i>We are critical thinkers &amp; creators.</i>	<b>How can I think critically about what I see and create?</b> Learners will identify credible and trustful information sources and reflect on their responsibilities as thoughtful media creators and consumers.







# CURRICULUM MILESTONES



## Computer Science

- I can create my own **variable** in a program
- I can program the way that a variable changes
- I can use the **value** of a variable as a trigger for another event
- I can use **variables** of my own creation within my Programs
- I can **program** and **debug** multiple functions on programmable hardware



## Information Technology

- I understand that **computer systems** transfer information over **networks** in **data packets**
- I understand that **internet connected programs** allow us to work together (**collaborate**)
- I can **collect data** and enter it into a **spreadsheet**
- I can recognise that data can be **calculated** using different **operations**
- I can apply a **formula** to **calculate** the data I need to answer **questions**
- I can **modify and adjust** objects in a 3D space.
- I can recognise the difference when working with **3D objects** in comparison to 2D shapes.
- I can recognise the components of a web page layout
- I can devise my own web design which contains clear navigation structures (menus, hyperlinks etc.)
- I can recognise the implications of linking to (and using) content owned by other people

## Digital Literacy

### Operational Core Skills

- Children will look critically at their written on-screen pieces, and re-order on-screen sentences for clarity, purpose or effect. They will be able to type at speed, with accurate spelling and a range of correctly incorporated punctuation.
- Children will use digital spelling checkers and thesaurus facilities with confidence.

### Internet Safety

- Children explain how they can represent themselves in different ways online.
- Children demonstrate how they would support others (including those who are having difficulties) online.
- Children describe some simple ways that help build a positive online reputation.
- Children identify a range of ways to report concerns both in school and at home about online bullying.
- Children demonstrate strategies to enable them to analyse and evaluate the validity of 'facts'.
- Children explain why using these strategies are important.
- Children assess and action different strategies to limit the impact of technology on their health (e.g. nightshift mode, regular breaks, correct posture, sleep, diet and exercise).
- Children describe ways in which some online content targets people to gain money or information illegally; children describe strategies to help them identify such content (e.g. scams, phishing).
- Children demonstrate how to make references to and acknowledge sources they have used from the internet.

# Year 5/6 Online Safety – We will use:

	<b>MEDIA BALANCE &amp; WELL-BEING</b> <i>We find balance in our digital lives.</i>	<b>How can I make screen time meaningful?</b> Learners go beyond "screen time" to explore the impact that their digital lives can have on their well-being and their relationships with others, while learning strategies for balancing media in their everyday lives.
	<b>PRIVACY &amp; SECURITY</b> <i>We care about everyone's privacy.</i>	<b>How can I keep private data safe and secure?</b> Learners find out how to protect personal information and gain a deeper understanding of their data privacy rights, so they can advocate for themselves and others.
	<b>DIGITAL FOOTPRINT &amp; IDENTITY</b> <i>We define who we are.</i>	<b>How can I be responsible with my online identity?</b> Learners consider the benefits and risks of online sharing and explore how their digital personae affect their sense of self, their reputations and their relationships.
	<b>RELATIONSHIPS &amp; COMMUNICATION</b> <i>We know the power of words &amp; actions.</i>	<b>How can I build positive relationships?</b> Learners reflect on how to effectively communicate online and build positive relationships, avoid risky online talk, and understand why certain topics and conversations can best lend themselves to certain mediums.
	<b>CYBERBULLYING, DIGITAL DRAMA &amp; HATE SPEECH</b> <i>We are kind &amp; courageous.</i>	<b>How can I be kind and respectful?</b> Learners take on these tough topics and play the active role of an upstander to build positive, supportive online communities and combat online cruelty.
	<b>NEWS &amp; MEDIA LITERACY</b> <i>We are critical thinkers &amp; creators.</i>	<b>How can I think critically about what I see and create?</b> Learners will identify credible and trustful information sources and reflect on their responsibilities as thoughtful media creators and consumers.

