	Why Computing	Skills

A message from Mrs Bermon:
Computing is an essential part of life in today's world. At Darlinghurst we teach children the knowledge and skills that we believe will enable them to make sense of and contribute to their world.

Design and Purpose

Our bespoke Computing Curriculum ensures that all children can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. We ensure children can analyse problems in computational terms and have real life computing experiences with which to apply their skills. Children can develop their evaluation and analytical skills and apply this to new and unfamiliar technologies to solve problems in information technology and apply to everyday life, ma maximising their personal and academic growth and maximise their life opportunities.   We ensure our children are responsible, competent, confident, and creative users of information and communication technology with a focus on internet safety.

At Darlinghurst we provide an unplugged and plugged curriculum. The unplugged curriculum allows learners to understand computing concepts before they apply them using digital equipment.

Our computing curriculum consists of the following strands: information technology, digital literacy, computer science and e safety. An additional strand, computational thinking, has been included. This teaches the vital thinking skills and processes necessary for using technology to solve problems and find solutions. E-safety and online safeguarding procedures are linked through other curriculum subjects such as RSHE.
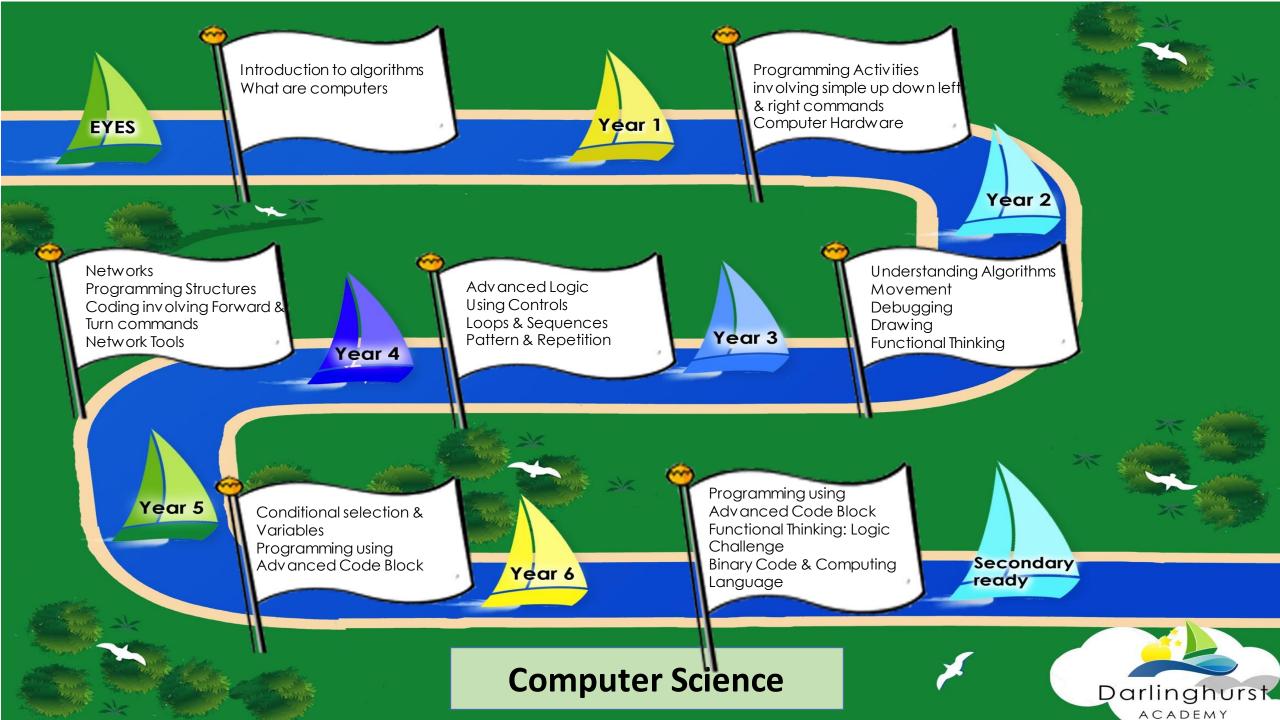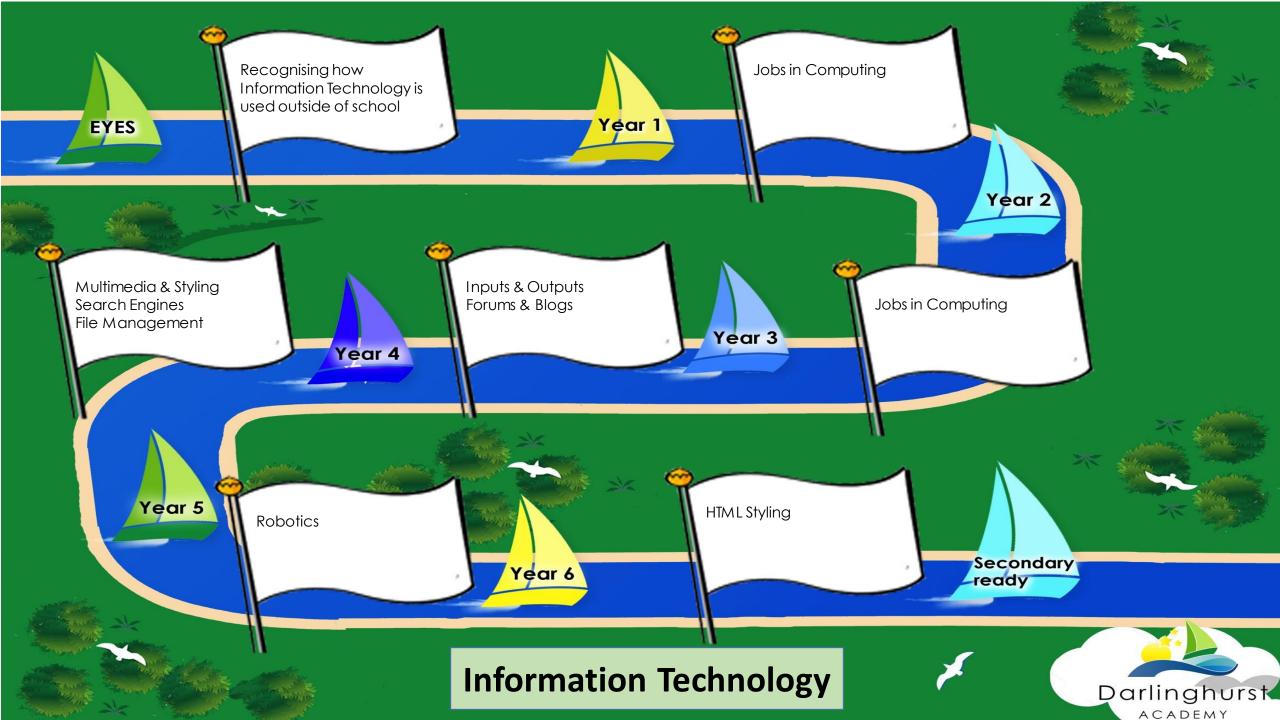
Difference

Our children are prepared to study computing at secondary school through our approach. They understand the vocabulary and concepts for them to progress quickly in their studies. Through their computational thinking unit, children have learned how to apply the necessary thinking skills to become successful coders in the modern world. The unplugged curriculum has increased the confidence of both the children and the staff teaching computing.
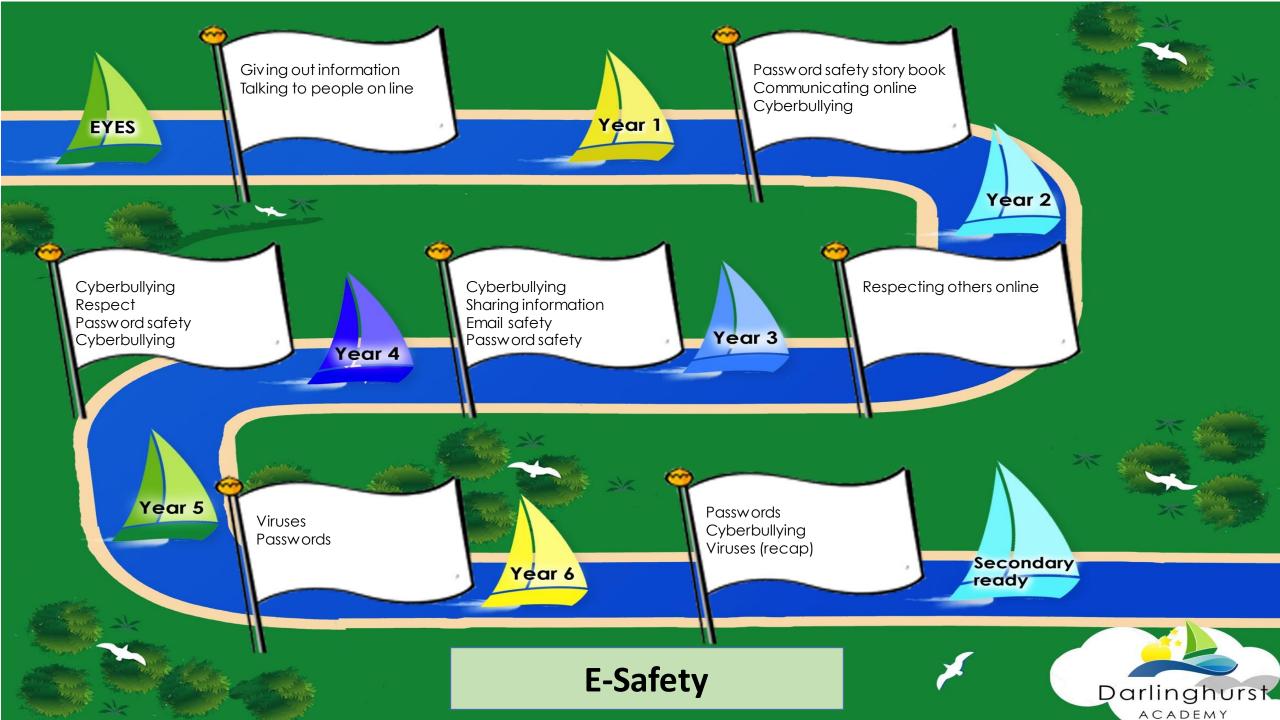Use of the computing suite as well as laptops across the school has enabled our children to put their theoretical skills into practise using different software and applications to demonstrate the skills. A coding club this year has enabled children with a keen interest to develop their skills and prepare for a future career.
As part of our My Future, My Southend Project, the children were exposed to different careers linked to technology and computing which has helped raised aspirations and challenge stereotypes. They particularly enjoyed seeing how technology is used in careers such as graphic designing and computer game design and it has helped them understand the knowledge and skills needed to pursue careers in this sector.
We regularly liaise with other local schools to keep up to date with current trends in teaching computing and ensure that our provision is the best that we can provide. We have hosted CPD this last year and showed schools our approach to teaching the curriculum unplugged.

EYES

Introduction to algorithms
What are computers

Year 1

Programming Activities
involving simple up down left
& right commands
Computer Hardware

Year 2

Understanding Algorithms
Movement
Debugging
Drawing
Functional Thinking

Year 3

Advanced Logic
Using Controls
Loops & Sequences
Pattern & Repetition

Year 4

Networks
Programming Structures
Coding involving Forward &
Turn commands
Network Tools

Year 5

Conditional selection &
Variables
Programming using
Advanced Code Block

Year 6

Programming using
Advanced Code Block
Functional Thinking: Logic
Challenge
Binary Code & Computing
Language

Secondary ready

Computer Science

Darlinghurst
ACADEMY

EYES

Recognising how Information Technology is used outside of school

Year 1

Jobs in Computing

Year 2

Multimedia & Styling
Search Engines
File Management

Year 4

Inputs & Outputs
Forums & Blogs

Year 3

Jobs in Computing

Year 5

Robotics

Year 6

HTML Styling

Secondary ready

Information Technology

Darlinghurst
ACADEMY

EYES

Giving out information
Talking to people on line

Year 1

Password safety story book
Communicating online
Cyberbullying

Year 2

Cyberbullying
Respect
Password safety
Cyberbullying

Year 4

Cyberbullying
Sharing information
Email safety
Password safety

Year 3

Respecting others online

Year 5

Viruses
Passwords

Year 6

Passwords
Cyberbullying
Viruses (recap)

Secondary ready

E-Safety

Darlinghurst ACADEMY

EYES

Develop as digitally literate citizens

Year 1

Jobs in Computing

Year 2

Email & IP addresses
Email safety
Finding addresses

Year 4

Jobs in Computing

Year 3

Jobs in Computing

Year 5

Open and closed
Chatrooms and how they work

Year 6

Chatrooms and how they work
Computer Evolution

Secondary ready

Digital Literacy

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KS1

Key stage 1 Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions

- create and debug simple programs ▯ use logical reasoning to predict the behaviour of simple programs

- use technology purposefully to create, organise, store, manipulate and retrieve digital content

- recognise common uses of information technology beyond school

- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

KS2

Key stage 2 Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

- use sequence, selection, and repetition in programs; work with variables and various forms of input and output

- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration

- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content ▯ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information ▯ use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Secondary ready

Working scientifically

Darlinghurst ACADEMY