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 Do

Computing is an essential skill and part of our curriculum and links to all aspects of our daily life and curriculum. At Darlinghurst, we provide intentional and responsible real life computing experiences, particularly focusing on safety and e-literacy. Children will be able to develop key e-skills which they will be able to apply to everyday life, maximising their personal and academic growth and maximise their life opportunities. At Darlinghurst we also provide an unplugged curriculum to allow learners to understand computing concepts before they apply them using digital equipment.

The progression of knowledge and skills in computing are covered through the four areas of the computing curriculum: information technology, digital literacy, computer science and e safety. An additional strand, computational thinking, has been included as part of our 'unplugged' curriculum. 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 covered across our computing curriculum and linked to other curriculum subjects such as RSHE.

E-Safety

E-safety is taught in every computing lesson, ensuring that all eight strands from the 'Education In A Connected World' framework are covered. These eight strands include:

- **Self Image and Identity** - This strand explores the differences between online and offline identity beginning with self-awareness, shaping online identities and media influence in propagating stereotypes. It identifies effective routes for reporting and support and explores the impact of online technologies on self-image and behaviour.

- **Online Relationships** - This strand explores how technology shapes communication styles and identifies strategies for positive relationships in online communities. It offers opportunities to discuss relationships, respecting, giving and denying consent and behaviours that may lead to harm and how positive online interaction can empower and amplify voice.

- **Online Reputation** - This strand explores the concept of reputation and how others may use online information to make judgements. It offers opportunities to develop strategies to manage personal digital content effectively and capitalise on technology's capacity to create effective positive profiles.

- **Online Bullying** - This strand explores bullying and other online aggression and how technology impacts those issues. It offers strategies for effective reporting and intervention and considers how bullying and other aggressive behaviour relates to legislation.

- **Managing Online information** - This strand explores how online information is found, viewed and interpreted. It offers strategies for effective searching, critical evaluation of data, the recognition of risks and the management of online threats and challenges. It explores how online threats can

pose risks to our physical safety as well as online safety. It also covers learning relevant to ethical publishing.

- **Health Well-being and Lifestyle** - This strand explores the impact that technology has on health, well-being and lifestyle e.g. mood, sleep, body health and relationships. It also includes understanding negative behaviours and issues amplified and sustained by online technologies and the strategies for dealing with them.

- **Privacy and Security** - This strand explores how personal online information can be used, stored, processed and shared. It offers both behavioural and technical strategies to limit impact on privacy and protect data and systems against compromise.

- **Copyright and Ownership** - This strand explores the concept of ownership of online content. It explores strategies for protecting personal content and crediting the rights of others as well as addressing potential consequences of illegal access, download and distribution.

Each computing lesson follows a 'layered lesson' approach. Children are able to reflect upon and review prior learning before being introduced to the new vocabulary and concept for the lesson. They are then able to practise the new skill or concept including additional challenge or scaffold where needed.

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.

We start the year with our bespoke unit, computational thinking, which allows our children to develop the required skills to become excellent coders without the additional distraction of using computers. We look at the four key fundamentals of computing: abstraction, decomposition, pattern recognition and building algorithms in an age appropriate context. Each year group builds on the skills learnt last year and by the time that children reach year 6 they are confident in their ability to apply these skills in a computing context.

DB primary training has enabled staff to access and use the software to aid their teaching. DB primary uses real life scenarios to teach key skills e.g. how to use a keyboard. The e safety thread runs throughout, which underpins our Learning and Life Skills. The unit on computational thinking is also a problem solving approach which can be applied to any life skill or area.

The unplugged curriculum has increased the confidence of both the children and the staff teaching computing. It has allowed the concepts to be covered without the stress of having to know how to use a computer.

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.

Reflections and Celebrations

Examples of Computing

In the Early Years children are encouraged to use computing software and hardware showing independence, resilience and perseverance in the face of challenge. As part of this, they explain and explore the reasons for rules when using computers and e-safety. They safely use and explore different devices using different software and techniques. For example, experimenting with colour, design, texture, form and function when using a painting app.

Years 1 and 2 have been focusing on directional language and making instructions clear and precise as part of the Computer Science strand.
Year 2 have been creating their own BeeBot worlds. Children have also been able to look at Scratch Junior to see how they might control a robot.

By the end of this milestone children can use can discuss how the internet is used outside of school. And how it can be used safely. They understand where and how we use IT safely. They can draw, paint and create music using computer software. They can design and create a simple programme.

As children advance in computing, we have been looking at communicating electronically using our online learning platform DB Primary (a safe and secure online learning environment). We have also focused on how to stay safe online as well as being respectful members of the online world.

Year 3 begin to understand that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks. They also explore animation, capturing and editing digital still images to produce a stop-frame animation that tells a story. In computer science they learn to use sequences using block based programming to create music.

Year 4 start to recognise the internet as a network of networks including the WWW, and why we should evaluate online content. They use a text-based programming language to explore count-controlled loops when drawing shapes. Using a block-based programming language to explore count-controlled and infinite loops when creating a game.

By the second milestone, children understand why we need to look for patterns, how to use flowcharts and conditions in algorithms. They understand what an online identity is. They understand what a website is and how the internet is used to share information including what is safe for them to share online. They can use email software confidently. They can design games using appropriate software.

By upper key stage 2, children have a good understanding of conditions and how they are used in coding. They use software to create their own videos and website material.

Year 5 begin to recognise IT systems in the world and how some can enable searching on the internet. In computer science, they start to apply their knowledge by exploring selection in programming to design and code an interactive quiz.

Year 6 create their own games in Scratch showing their imagination and creativity. Year groups have chosen specific software for the questions that their children have been asking. For example, year 6 have used excel to create spreadsheets for their enterprise projects in response to the question 'How would a real business use a computer?' This has enabled them to see how specific software can help them complete a task and how it might be used in the business world.

By the final milestone children are confident in their ability to apply the skills of abstraction, decomposition, pattern recognition and building algorithms in a computing context. They know how to perform a search on the internet and the difference between hardware and software. They can test variables and conditions in order to create games. They understand how they can ensure their online relationships remain healthy.

Examples of parental and community engagement
We have 'Tea and Talk' sessions throughout the year including on internet safety and how to use computer software such as TTRockstars and DB Primary. This year we have hosted teacher training with a focus on assessment.

Useful websites

Barefoot Computing

Downloadable activities and games for children, links to live lessons and a guide for parents - includes cross-curricular lesson plans and resources that unpack computational thinking in a range of subjects.

https://www.barefootcomputing.org/

Code Club

Projects and activities for home learning and a parent guide.

https://projects.raspberrypi.org/en/codeclub

UK Safer Internet Centre (KS1 and KS2)

Online safety resources aimed at 3 -11 year olds.

https://www.saferinternet.org.uk/advice-centre/young-people/resources-3-11s

STEM Learning e-Library (KS1 and KS2)

An online resource bank, which links to resources on external websites. The site features a live chat function offering support from subject experts. New home learning resources are being developed.

https://www.stem.org.uk/primary-computing-resources

Computing Gallery