Computing

Wallace Fields Junior School

SUBJECT LEADER: CHLOE DAY

Overview of presentation

- Computing Intent at Wallace Fields Junior School

- Actions implemented this year (2021/2022)

Curriculum (and cross-curriculum) Coverage

E-Safety Focus (including Internet Safety Day)

Assessment and Evidence of Computing

- Next Steps

Cultural Capital and Wider Experience

Challenge

Computing: Intent

In line with the 2014 National Curriculum for KS2 Computing, our aim is to provide children with the necessary skills and knowledge to embark on all areas of society when faced with technology.

The curriculum focuses on providing children with the skills required to use and apply computational thinking and creativity to understand and have an impact in our rapidly-changing, modern world.

By the time the children leave Wallace Fields Junior School, we hope the children will have gained key knowledge and skills across the three main areas of the computing curriculum: computer science, information technology and digital literacy.

The three strands are covered across all year groups in KS2 and ensure a solid grounding for future learning beyond for all children.

The full intent statement is on the website alongside the implementation (including a **progression map**) and the impact of Computing.

https://www.wallacefields-jun.surrey.sch.uk/learning/computing

2021 – 2022 Actions: Curriculum Coverage

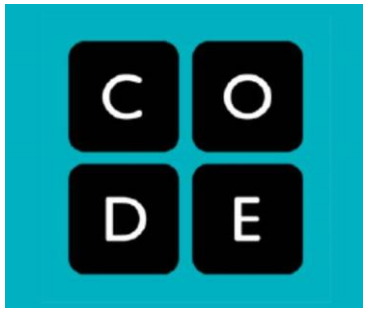
Computing Progression Map

2021 – 2022

Wallace Fields Junior School Intent	In line with the 2014 National Curriculum for KS2 Computing, our aim is to to provide children with the necessary skills and knowledge to embark on all areas of society when faced with technology. The curriculum focuses on providing children with the skills required to use and apply computational thinking and creativity to understand and have an impact in our rapidly-changing, modern world. By the time the children leave Wallace Fields Junior School, we hope the children will have gained key knowledge and skills across the three main areas of the computing curriculum: computer science (programming, coding and understanding how digital systems work in practice), information technology (using computer systems to store, retrieve and send information; focus on presenting, designing and creating using a range of multimedia) and digital literacy (evaluating digital content for its reliability, using technology safely and respectfully, understanding the positive influence we can have on our digital footprint). The three strands are covered across all year groups in KS2 and ensure a solid grounding for future learning beyond for all children.

Compuational Thinking/ Computer Science	Information Technology	Digital Literacy/ E-Safety
Computer Science will introduce children to the understanding of how computers and networks work. It will also give all children the opportunity to learn about computer programming. National Curriculum Requirements: Children should know how to design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. They should solve problems by decomposing them into smaller parts. Children should be able to use sequence, selection, and repetition in programs; work with variables and various forms of input and output. They should use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Children should understand computer networks, including the internet.	Information Technology is about the use of computers for functional purposes, such as collecting and presenting information, or using search technology. Children should know how compters can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration. National Curriculum Requirements: They should use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. Children should 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.	Digital Literacy is about the safe and responsible use of technology, including recognising its' advantages for collaboration and communication. National Curriculum Requirements: Children should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

KS1 Cultural Capital	To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. To create and debug simple programs. To use logical reasoning to predict the behaviour of simple programs To use technology purposefully to create, organise, store, manipulate and retrieve digital content To recognise common uses of information technology beyond school To 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	
National Curriculum/ End point for KS2	To design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts To use sequence, selection, and repetition in programs; work with variables and various forms of input and output To use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs To 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 To use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content To 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 To use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	
Key Vocabulary	Abstraction Algorithm Binary Coding Communication technology Compile Computation logic/thinking Data Debug Decomposition Hardware Information technology Input Internet	Logic Network Output Prodecure/function Program Programming language Repetition Selection Sequence Software System Variable World Wide Web



Computing Curriculum:

Digital Literacy – using technology safety and evaluating the safety and reliability of digital content.

Computer Science – programming and coding.

Information Technology – presenting, designing and creating using a range of multimedia.

2021 – 2022 Actions: Curriculum Coverage

Wallace Fields Junior School - Computing Y4

	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
Autumn	Whole School: E-Safety Lesson – Online Privacy Google Classroom set up	To practise the skills of touch typing. Google Classroom practise	To practise the skills of touch typing.	To learn how to open and save a document.	How can I insert an image onto my document?	How can I insert an image onto my document? LINK TO ART	To know how to use the 'shift' button.	To know how to align text.	To know how to add bullets and numbering to a document.	To know how to insert a table to record data on a document.	To know how to insert a table to record data on a document. LINK TO TOPIC	Whole School: E-Safety Lesson Online Bullying	Assessment: Can I independently process a word document? LINK TO ONLINE BULLYING	To use my word processing skills to create a poster. LINK TO E-SAFETY – BE 'SMART'.
Spring	Whole School: E-Safety Lesson – Online Identity	How much do I already know about Scratch programming ?	Can I use Scratch programming to animate my name?	Can I use Scratch programming to create a music animation?	Can I use Scratch programming to design a game with a score?	Whole School: SAFER INTERNET DAY	Can I use Scratch programming to create a story? LINK TO ENGLISH	Whole School: E-Safety Lesson – Managing Online Information – Fake News	To test an algorithm and debug if necessary.	To understand computer language.	To create a range of shapes using specific algorithms. (Turtle Academy Lessons)	To create a range of shapes using specific algorithms. (Turtle Academy Lessons)	To create a range of shapes using specific algorithms. (Turtle Academy Lessons)	Assessment: Compare Scratch and Turtle Academy.
Summer	Whole School: E-Safety Lesson – Wellbeing Online – Screen Time	To know how to use a search engine effectively.	To use a search engine for a research task. LINK TO TOPIC	To show my knowledge of safe internet searches and present it on a word-processed poster. LINK TO E-SAFETY	Continued: To show my knowledge of safe internet searches and present it on a word-processed poster. LINK TO E-SAFETY	What is an animation and can I try to create one?	Can I show which parts of a still image need to move to be animated?	Whole School: E-Safety Lesson – Online Relationships (Finish in PSHE) Can I experiment with clap animation to see how I could create a short film?	Can I plan a paper animation on a storyboard ?	Continued: Can I plan a paper animation on a storyboard?	Can I create my background for my animation film?	Can I create my characters for my animation film?	Can I create an animation film?	Assessment: Can I create an animation film?

+ 2 Core/ Foundation lessons per half term to be on a Chromebook to show Computing across the curriculum (evidenced in books or on Google Classroom)

Word Processing – Information Technology

Coding: Turtle Academy – Computer Science

Coding: Scratch – Computer Science

E-Safety: Safe Internet Searches – Digital Literacy and Information Technology

Animations – Information Technology and Computer Science

Guidance for teaching staff on lesson sequences to ensure curriculum coverage and progression.

2021 – 2022 Actions: Curriculum Coverage

Geography - 22.9.21

Miss Day • Sep 22, 2021

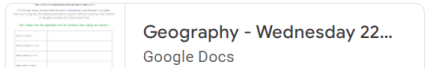
Good afternoon Team 4!

In Geography this afternoon, you have already learnt what a **hemisphere** is and where the **equator** is.

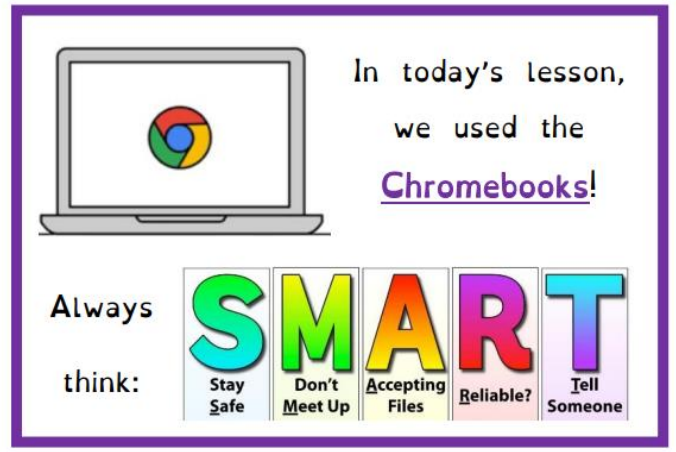
Now, you are going to do some research to find out what hemisphere different countries are in.

Here are your steps to complete this task.
1. Choose a country.
2. Using **Kiddle**, work through the questions on the attached document and answer the questions. There is a challenge if you finish!
3. 'Turn in' your work when the lesson is finished!

We will then print your work and you will be sticking it in your book!



Geography - Wednesday 22...
Google Docs



Science 30.9.21

Miss Sarjeant • Sep 30, 2021

100 points

Thursday 30th September 2021
LQ: Can I investigate different types of wind seed carrier, to see which will carry a seed the furthest distance from the mother plant?

Science 30.9.21
Google Docs

Promotion of Computing across the curriculum.

Each year group are expected to use Computing in at least 2 cross-curricular lessons per half term.

2021 – 2022 Actions: E-Safety

PROJECT EVOLVE

Privacy Online

Managing Online Information

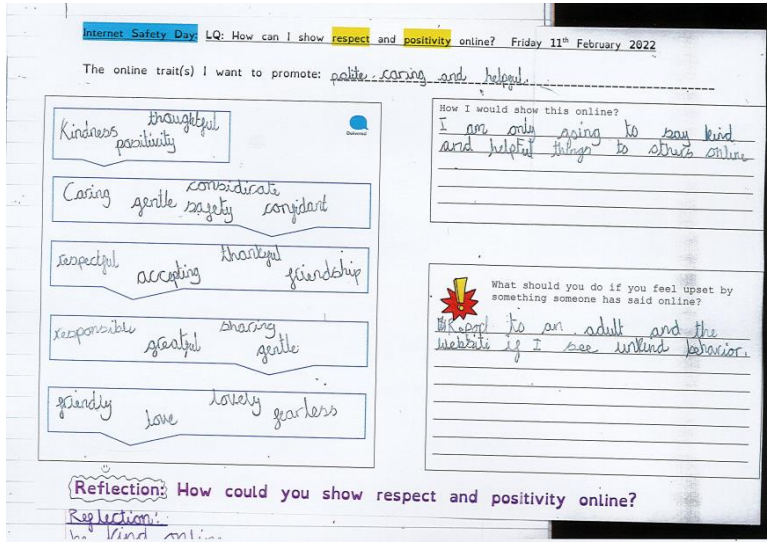
Online Bullying

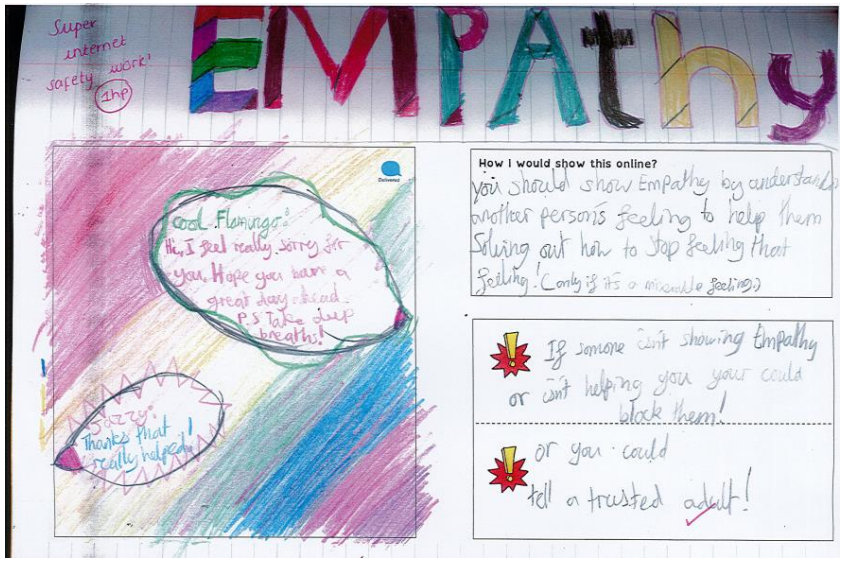
Online Identity

Online Relationships (key themes – trust, support, respect, boundaries)

Wellbeing Online

2021 – 2022 Actions: E-Safety





Internet Safety Day 2022

2021 – 2022 Actions: Assessment and Evidence

Assessment in foundation subjects is one of the 4 priority areas this academic year. I have therefore made it a focus to refine the assessment we undertake in Computing.

Assessment is termly.

- 1 lesson per term is assessment (a cold task using the skills they have obtained during the unit or a self assessment/ reflection on their work that unit)
- 1 Google Form per term consisting of 3-5 questions to assess the children's knowledge

The children's work/ assessments are stored either on the Google Classroom, Google Drive or in relevant books (mostly PSHE or topic based books).

2021 – 2022 Actions: Assessment and Evidence

Computer Science (Coding) Digital Literacy/ E-Safety Information Technology (presenting information)

Year 3: for 2021/2022

Term	Autumn	Spring	Summer
Assessment 1		NCCE paper assessment (evidence in hard copy Computing file)	Self-assessment/ purple pen reflection on WWW and EBI of Kodu (evidence on Google doc on Google classroom)
Assessment 2		Google Form Questions on digital devices	Google Form Questions on Kodu

Year 4:

Term	Autumn	Spring	Summer
Assessment 1	Google Doc – poster to show word processing skills	Google Doc – compare Scratch vs Turtle Academy	Self-assessment/ purple pen reflection on WWW and EBI of short film animation (evidence on Google doc on Google classroom)
Assessment 2	Google Form Questions on word processing	Google Form Questions on coding	Google Form Questions on animation

Year 5:

Term	Autumn	Spring	Summer
Assessment 1	Google Slides – presentation on history of computing	Self-assessment/ purple pen reflection on WWW and EBI of book cover (evidence on Google doc on Google classroom or in book)	Self-assessment/ purple pen reflection on WWW and EBI of podcast (evidence on Google doc on Google classroom or in book)
Assessment 2	Google Form Questions on history of codes	Google Form Questions on how to edit a book cover	Google Form Questions on podcast

Year 6:

Term	Autumn	Spring	Summer
Assessment 1	Self-assessment/ purple pen reflection on WWW and EBI of video editing (evidence on Google doc on Google classroom or topic book)	Google Doc – create a new programme with a given brief.	Self-assessment/ purple pen reflection on WWW and EBI of website (evidence on Google doc on Google classroom or topic book)
Assessment 2	Google Form Questions on video editing skills	Google Form Questions on research and presenting work online	Google Form Questions on making a website

2021 – 2022 Actions: Assessment and Evidence

Year 4:

Term	Autumn	Spring	Summer
Assessment 1	Google Doc – poster to show word processing skills	Google Doc – compare Scratch vs Turtle Academy	Self-assessment/ purple pen reflection on WWW and EBI of short film animation (evidence on Google doc on Google classroom)
Assessment 2	Google Form Questions on word processing	Google Form Questions on coding	Google Form Questions on animation

How would I change the colour of the font? *

Long answer text

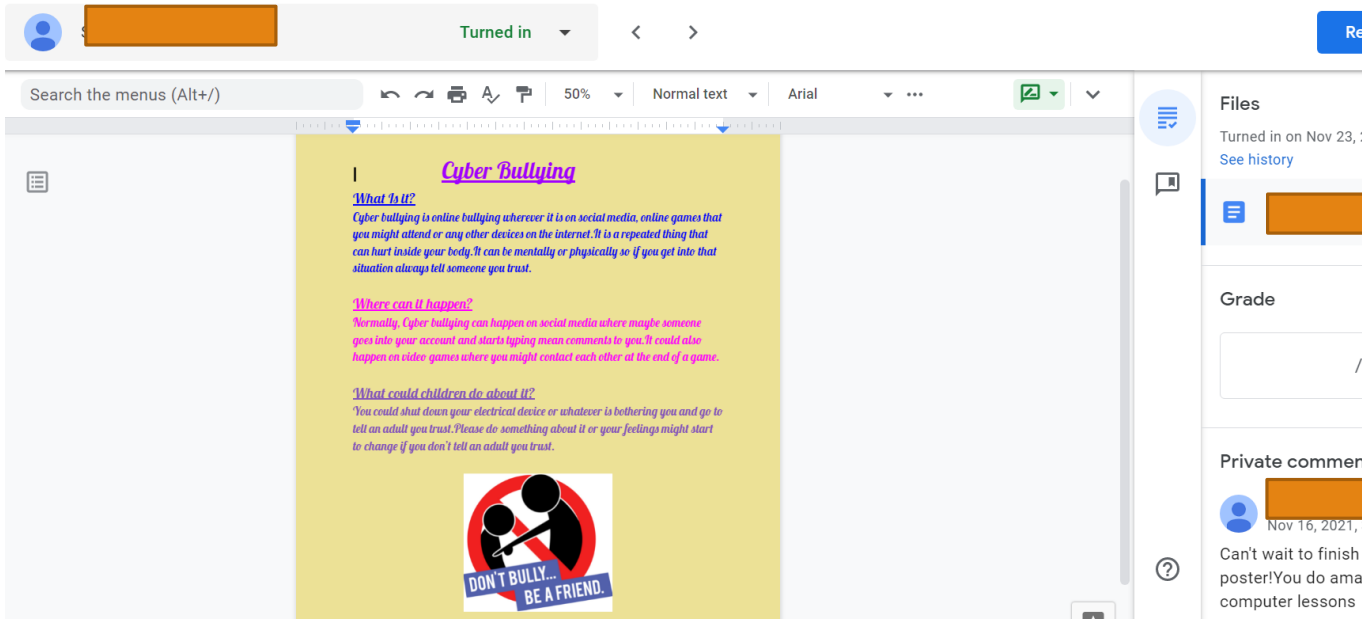
Explain 2 different ways to insert an image on a document. *

Long answer text

How do I insert bullet points on my document? *

Long answer text

Computing (link to PSHE) - 16.11.21



2021 – 2022 Actions: Assessment and Evidence

Impact of Assessment:

Class teachers are able to access children's work and responses to questionnaire which allow them to make a judgement at the end of the year.

As a **subject leader**, I can reflect on whether the children have understood and applied the skills and knowledge, allowing me to adjust the progression map accordingly.

2021 – 2022 Actions: Assessment and Evidence

To gain an understanding of Computing across the school, I have set up different ways to see the learning taking place.

1. Access to all Google Classrooms and books.
2. Computing Evidence Folder as a subject leader.
3. Meetings with children – gain pupil voice and children have the opportunity to show me what they have learnt in their lessons.

2021 – 2022 Actions: Assessment and Evidence

100% of pupils said they enjoyed computing.

Most children recognised that Computing is a key skill in life now, hence why they should learn it in school. Some children highlighted we need to learn about Computing at school to have an awareness of online safety. Few children weren't as sure – this was mainly Year 3 so this will be my target year group going into the summer term.

All children could identify a topic/ something they learnt in Computing lessons.

All children could identify a time where they used Chromebooks in a lesson that was not Computing.

All children could identify something to do with E-Safety but not an explicit theme so more awareness needs to be given to this.

Next Steps for Computing

- Gather more pupil voice. (Summer Term 2022)

- Continue to support year groups with Computing and the promotion of E-Safety themes. (Summer Term 2022 and next academic year)

- Continue to monitor assessment in Computing. (Summer Term 2022 and next academic year)

- Think about wider experiences to broaden the children's cultural capital and the challenge opportunities provided. (Next academic year)