South Gosforth First School – Computing

Long Term Planning – Year 2

Term:	Autumn		Spring		Summer	
	1	2	1	2	1	2
E-safety	What information is private? recap	What should we do if something upsets us?	How should we behave online? What is cyberbullying?	What are the dangers of sharing photos online?	Why is it important to be responsible on the internet?	Can we trust everything we find on the internet?
Computing Topics	Recognizing uses of technology  iLearn2	Simple algorithms Code.org	E-book Creation  iLearn2	Loops Code.org	Introduction to animation  iLearn2	Events Code.org
Computing Curriculum Area	- Recognize uses of IT – Digital Literacy - Introduction to Animation – Information Technology - Code.org - Simple Algorithms		- E-book creation – Digital Literacy - Code.org - Loops		- Introduction to animation – Digital Literacy - Code.org - Events	
Cross Curricular Areas	Internet Research – Digital Literacy		Digital Art – Information Technology		Data Handling – Information Technology	
National Curriculum Objectives	- 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. - Recognize common uses of information technology beyond school. - Use technology purposefully to create, organize, store, manipulate and retrieve digital content. - Create and debug simple programs - Use logical reasoning to predict the behaviour of simple programs		- 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. - Use technology purposefully to create, organize, store, manipulate and retrieve digital content. - Create and debug simple programs - Use logical reasoning to predict the behaviour of simple programs		- 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. - Use technology purposefully to create, organize, store, manipulate and retrieve digital content. - Create and debug simple programs - Use logical reasoning to predict the behaviour of simple programs	

E-safety Activities	Lee and Kim – recapping lesson - Clear re-capping of their knowledge from last year making it that watching videos online cannot always be suitable. - Re-establish who is safe to communicates with online and what to do if someone unknown communicates with us Jessie and Friends episode 1 – what to if something upsets us. - Recap on what unsuitable content could be and how to establish what content is safe. - Discuss appropriate use of appropriate search engines safe search. - Reminder about what reporting looks like and who our trusted adults are. Code org - Putting a STOP to online meanness - Understand that in our online neighbourhood some people can be unkind and say mean things. – Explain the STOP approach – Step away, Tell an adult, OK sites first, Pause and think online. – Give the children a clear understanding that this is not ok and what to do if someone is unkind online.	"Troll Stinks" – unplugged lesson - Use the Troll stinks book to introduce the children to the concept of cyberbullying. - Make clear links between behavior online and how people in the real world end up feeling. - Anything that you would not say to a person in person should not be typed on the internet to them either. Jessie and Friends episode 2 – What are the dangers of sharing photos online? - Give children a stock photograph and see if they can warp it to make it look unusual or cool. Then ask them to make it look funny – this could then lead into a discussion about what if this person was in the room right now how would that make them feel. - Link this back to the internet being forever and that anyone could keep you pictures or do whatever they like to them. - Explain that something need only be up for minutes and people could take a screen grab / screen capture of it. Jessie and Friends episode 3 – People might not be who they say they are. Watch and discuss the episode - reiterating the message that people are not always who they say they are when playing online games and that it is ok to say no. Give clear steps on what to do if someone wants to be our friend online, and what to do if they persist.	Chicken Clicking – unplugged lesson - Use this story to teach about the importance of taking care what they click on. Link with their own wider knowledge do they know anyone who has made unintentional purchases in apps or in game. - Remind children of the possibility of viruses getting on to your system if they click without thinking. - Introduce the concept of micro-transactions and how they could end up costing the bill payer significant amounts of money. - Make it clear that it doesn't matter if you clicked intentionally or not you need to go and tell a grown-up if you think you have made a mistake. Penguin Pig – unplugged lesson - How do you know what is true? - Reintroduced this story and remind them of when they looked at this last year - Introduce to concept of reliability in eSafety - Then establish the rule of three
Suggested Activities	Recognize uses of computing - Use relevant pictures and videos e.g. watching the opening of the news how many computers or things created by computers do the children notice. - Progress to pictures of the wider world e.g. a construction site, a football match. - Computer treasure hunt including computer spotter and find the technology	Creating an E-book - Children to create a front cover using premade images then they could move on to uploading their own images. - Create text combined with images, voice overs and add more pages to their book over the course of the lessons.	Introduction to animation - Begin by using Junior Infant Tools animate website and ABCYa Make An Animation website to create simple animations. - Concentrate on manipulating backgrounds and duplicating frames to create simple stop-motion animations.

	Coding – Code.Org Course C lessons 1-6 - Opening lessons will recap and re-establish coding principals and employ specific lessons on debugging more regularly. - The final lesson will look at how you might create art using coding as well as offering cross curricular links with maths.	Coding – Code.Org Course C lessons 7-10 - Creating more efficient code using the repeat function to optimize block usage. - The children should be able to compare two codes which will perform the same function and identify the most efficient use of code. - They will also start to add more code blocks including stickers to create more involved code.	Coding – Code.Org Course C lessons 11-16 - Opening lessons will re-establish what events are and how they can change the algorithm. - Subsequent lessons will use code to create a survival game and a pursuit game. - Final lessons will look at displaying data, before moving onto a freer project to conclude.
Prior Learning & Understanding – 'Why here, why now?'	E-safety - Children have established sensible internet principals throughout Year 1 but it is important to revisit the most important after summer to make sure have been remembered and are being followed. Recognise uses of technology - The children have experienced a variety of technology in school and will clearly have seen and experienced it outside of school. - They have also discussed how widely technology is used when discussing eSafety in year 1. Code.org - Children have used algorithms and loops to code in year 1, we will continue to build on and develop these skills as well as applying them to new contexts e.g. art.	E-safety - The idea of not engaging with strangers is very familiar to the children so we will now explore what to do if someone they know is interacting with them in a way they don't like. - We will also expand on why they should not interact with people that they don't know on the internet. Create an E-book - The children have already combined images and words in the images and text and comic creation module from year 1 these skills will be refined to fit a slightly different context and to achieve a polished final product – their E-book on the shelf. Code.org - The children have improved their ability to code and should be able to create code to execute a variety of functions. - They have used some loops last year to start to optimize code and will continue to build and develop their skills.	E-safety - Children have discussed why it is important to consider clicking so they will now consider the consequences of responsibility and irresponsibility. - Children will have experienced online content and it is important that they discern fake content from real content. Introduction to animation - The children's digital literacy has improved through the modules so far and they have practiced typing and including images in their projects. - This module will focus on their ability to manipulate images to give the impression of movement. - They need to refine their ability to move objects using the mouse and touchpad and also learn how to rotate objects without resizing them. Code.org - The children have created algorithms and encountered some events last year to change the algorithm and will then find new ways to include events to create a game.
Key Skills	E-safety - Identify appropriate content. - Clearly understand how to search appropriately using a suitable search engine. - Remember when and where to seek help. Recognise uses of Computing - Understand what makes a computer a computer.	E-safety - Clear understanding that anyone they have not met in person is a stranger and could be anyone. - clear definition of cyberbullying. - An appreciation for how and why someone could manipulate a photo. E-book Creation	E-safety - Identification of suspicious links. - Identification of suspicious content and clear understanding of how to check the reliability of information. Introduction to Animation - Add a background and objects to a frame.

<table>
<tr><td></td><td>- Understand computers store and follow instructions.
- Spot digital technology in school.
- Understand the advantages that technology allows us.

<u>Code.org</u>
- Identification of turns and direction of turn.
- Improve the children's ability to predict what will happen when a code is executed.
- Combine blocks to execute multiple functions when the code is executed.</td><td>- Typing a short paragraph to caption a photograph.
- Upload an image to use a cover.
- Record a voiceover using a microphone.
Adding additional pages to a document.
- Saving and loading data

<u>Code.org</u>
- Using the repeat function to optimise code.
- Understanding the number of repetitions required to execute a function.</td><td>- Copy/clone a frame and move objects to create an animation.
- Selecting objects to manipulate them.
- Move and rotate objects without accidentally resizing the object.

<u>Code.org</u>
- Utilizing events to change the algorithm.
- Creating two games of different genre.
- Creating graphs to display data.</td></tr>
<tr><td>Opportunities for Cross-curricular work</td><td> 
<u>Internet Research</u>
Specific tasks using the internet to research figures from history this can start to link discretely to eSafety and reliability of sources found on the internet.

PSHE – feeling safe and asking for support
Maths – using quarter turns and ° in coding</td><td> 
<u>Digital Art</u>
- Use lines and fill tools to make interesting patterns.
- Add a variety of shapes (outlines and fill) and label them with text.
- Re-create a graphic using pixels of different colours.</td><td> 
<u>Data Handling</u>
– Understand what data is and collect it
– Use software to label a pictogram and add data to each column.
– Edit a table with correct titles and numbers.
– Use software to create a bar chart/pie chart/line chart suitable for the data.</td></tr>
<tr><td>Key Vocabulary</td><td><u>E-safety</u>

appropriate
inappropriate
content
search engine
secure
insecure</td><td><u>Recognize uses of Computing</u>

technology
mobile
fixed
commercial
industrial
education</td><td><u>Coding</u>

algorithm
loop
function
execute
angle
turn</td><td><u>E-safety</u>

cyberbullying
manipulating
persistent
harassment
screen grab
screen capture</td><td><u>E-book</u>

voiceover
upload
caption
graphics
save
load</td><td><u>Coding</u>

algorithm
loop
optimized
repeat
efficient</td><td><u>E-safety</u>

micro-transaction
bill-payer
consequence
intentional
unintentional
virus</td><td><u>Animation</u>

rotate
select
deselect
stop-motion
gradual
layers
resize</td><td><u>Coding</u>

algorithm
loop
event
survival game
pursuit game
affect
effect</td></tr>
<tr><td>Pupil Outcomes</td><td colspan="3"><u>E-safety</u>
Children understand how and why they need to keep their personal information private.
They know how to seek help.

<u>Recognise uses of Computing</u>
- Children understand what a computer is and how to use it.</td><td colspan="3"><u>E-safety</u>
Children understand that the internet is forever and anything put on the internet can be taken and manipulated.
Children understand what cyberbullying is and that it is unacceptable.</td><td colspan="3"><u>E-safety</u>
- Children will be able to identify suspicious links and have a clear understanding of what could potentially go wrong if they do click on an unsecured link.
- Children understand that they cannot always trust the internet and that they have to check</td></tr>
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	- Children can find technology around them and identify how it helps us. Code.org - Children will be able to write simple code to execute functions. - Children will identify flaws in code and understand how to debug them. - Children will start to use their ability to code to create artwork and apply coding in a different context.	Children know that adults sometimes pretend to be children on the internet to talk to interact with children. E-book creation - Children will create their own eBook. - Children will also read eBooks by their teacher and other pupils in the class. Code.org - Children will create efficient, optimized code to solve a maze. - Children will start to use a wider range of functions in their coding to achieve a wider range of outcomes.	multiple sources to be sure that they can trust the information that they have read Introduction to animation - Children will create simple animations - Children will become adept at moving, rotation and changing objects to fit their purpose. Code.org Children will create a game using a variety of different events Children will create and store data using playlab.