Holmesdale Infant School
Yearly Knowledge and Skills Progression
Subject: Computing
Year 2

We have identified 3 BIG IDEAS that run through our computing curriculum. These are evident threads that run through the year group

. 1)internet safety 2) computer science 3) using technology purposefully/IT

Internet Safety	Computer science	Using technology purposefully
		
Throughout the year, children will learn about the importance of being safe online, building upon the knowledge they have gained in year 1. They will learn about ownership and copyright of information on the internet as well as discussing types of bullying behaviour which can occur online.	Throughout the year children will have the opportunity to apply the coding skills they learnt in year 1. They will continue to develop these as they learn how to debug simple programs	Throughout the year children will have opportunities to develop their internet research skills by refining key word searches. They will also have the opportunity to create digital content to support other areas of their learning.

Autumn Term

Key Knowledge gained:

- Understand and explain the school SMART rules
- Understand that some things on the internet may not be true and begin to recognise which websites might be child friendly.
- Understand that other people's identities online can be different to their identities in real life.
- Understand and follow rules for keeping personal information safe online, including using simple passowrds
- Give examples of issues online that might make me feel sad or worried
- Know who to talk to if someone has made a mistake by putting something online
- Recognise types of bullying behaviour and how it might look online
- Understand how bullying can make someone feel
- Recognise and explain how someone can get help if they are being bullied online
- Know that when a computer does something it is following instructions called 'code'
- Understand that algorithms are implemented on programs on digital devices

Key Skills developed:

- Analyse the differences between real and made up information on the internet
- Identify where to go for help when I have concerns about content I find online
- Identify ways in which people might make themselves look different online
- Give simple instructions (code) by selecting buttons/instructions that will make an object move on the screen
- Use logical reasoning to predict the behaviour of simple programs

Key vocabulary to be grasped:

code	***algorithm***	***input***	***output***	***identity***
cyber bullying	***reliability***	***ownership***	***content***	***accountability***
trusted adult	**implement**			

Enrichment opportunities:

Internet research to support topics

Use of tablets to support learning in other subjects

British Values/SMSC:

Being a responsible citizen-using technology and the internet safely and responsibly

Cultural capital and diversity:

Link digital behaviour to respect for differences
Create poster about digital behaviour
Explicitly teach vocab; algorithm, sequence, debug, code
Discuss how we should speak kindly to people online who may speak another language, live in another country
Explore the ways in which people in other countries might use technology to communicate with friends and family around the world

Barriers to learning/scaffolding:

Use visual instruction cards to plan out algorithm visually before inputting
Use widget sequencing of instructions for children to follow
Use partner talk so that one child 'drives' and the other 'navigates'
Pre-teach key vocabulary
Use role-play scenarios to support understanding of digital rules
Repetition of digital rules throughout the year

Unit Outcomes

Pupils who are secure will be able to:

- **Explain that not everything they find on the internet is true**
- **Explain what 'code' is**
- **Identify some examples of bullying behaviour online**
- **Explain how someone can get help if they are being bullied online e.g. who to speak to/how to report it**

Spring Term

Key Knowledge gained:

- Know that information put online about me can last for a long time
- Understand why other people's work belongs to them (copyright)
- Recognise that content on the internet may belong to other people
- Understand that algorithms are implemented as programs on digital devices
- Understand that programs execute by following precise and unambiguous instructions/algorithms
- Give examples of how they might use technology to communicate with others they don't know well e.g. email
- Know how to find my saved work on a computer
- Know how to open and use specific programs

Key Skills developed:

- **Use a key word search to find specific information**
- **Navigate around a web page e.g. go back/forwards**
- **Create cross curricular work combining text and graphics (and sound where applicable), organising my work in a purposeful way for the audience.**
- **Use the internet (as a class) to communicate with people they don't know e.g. email**
- **Write unambiguous code where the blocks/inputs can be used to make multiple characters move around the screen at the same time**
- **Debug a simple program**

Key vocabulary to be grasped:

algorithm	***identity***	***copyright***	***precise***	***unambiguous***
purposeful	***code***	***debug***	***email***	***combining***
content				

Enrichment opportunities:

Safer Internet Day

British values/SMSC:

Link learning about 'online content' to individual liberty and mutual respect

Cultural capital and diversity:
Program characters in scratch to wear traditional clothing from another country
Program characters in scratch to act out a story from another culture
Talk about how technology can be used to communicate with people all around the world
Use key word searches to explore other countries and cultures
Explore virtual tours of museums to support understanding of other cultures and support topic learning
Create a digital postert or presentation about a local landmark or class trip

Barriers to learning/scaffolding:
Visual word mats/ sequencing to support instructions for task
Pre-teach key vocab or skills
Pair children up so one child 'drives' and one 'navigates'
Visual instruction cards to plan our algorithms

Unit Outcomes
Pupils who are secure will be able to:

- **Recognise and explain that content online may belong to others**
- **Explain types of technology we use to communicate with others**
- **Debug a simple program**

Summer Term

Key Knowledge gained:	**Key Skills developed:**
• Understand how e-safety rules affect their technology use. • Understand how info put online about them can last a long time.	

- Understand how to retrieve work they have saved.

- Create cross curricular work combining text, graphics and sound, organising my work in a purposeful way. (Use Busythings e.g. English; writing composition; posters or fact files)
- Retrieve stored content by finding file name.
- Write code where different inputs can be used to make the characters move around the screen.
- Write code to create a simple game where objects move around the screen.
- Debug a simple program (Espresso Coding/ Scratch)

Key vocabulary to be grasped:

retrieve	***input***	***code***	***debug***	***algorithm***

Enrichment opportunities:

Use of Busythings to support other aspects of the curriculum

British values/SMSC:

Link 'online bullying' to British value of 'mutual respect'

Cultural capital and diversity:

Create cultural stories using scratch coding or games where characters move through different countries
Create posters on landmarks from another country they have been studying
Create digital art from around the world
Look at examples of how technology is used around the world

Barriers to learning/scaffolding:

Pre-teach skills and knowledge if required
Use visual prompts (widget aids) for task instructions and/or reminders of coding sequences

Unit Outcomes

Pupils who are secure will be able to:

- **Create a sequence of code (algorithm) to move one or more online characters around a screen, using directional blocks of code**
- **Explain the rules they need to follow when online and why these are important.**
- **Debug a simple algorithm and explain what is wrong/why it doesn't work.**
- **Use a program such as paint, busy things writing to create a poster/presentation, combining text and graphics**

End points – by the end of Year 2 pupils should be able to:

- **Explain that not everything they find on the internet is true**
- **Explain what 'code' is (a set of instructions which can control something online)**
- **Identify some examples of bullying behaviour online**
- **Explain how someone can get help if they are being bullied online e.g. who to speak to/how to report it**
- **Recognise and explain that content online may belong to others**
- **Explain types of technology we use to communicate with others e.g. phone, email, video calls**
- **Create a sequence of code (algorithm) to move one or more online characters around a screen, using directional blocks of code**
- **Explain the rules they need to follow when online and why these are important.**
- **Debug a simple algorithm and explain what is wrong/why it doesn't work.**
- **Use a program such as paint, busy things writing to create a poster/presentation, combining text and graphics**