



Holmesdale Infant School
Yearly Knowledge and Skills Progression
Subject: Computing
Year 1

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



Throughout the year, children will build upon their understanding of how to stay safe online. They will identify the types of information it is safe or unsafe to share online. They will identify trusted adults both in school and at home and begin to understand how to behave in a kind and considerate way online.

Computer Science



Throughout the year, children will develop and apply their knowledge and skills of computer coding. They will use a 'block coding' programme to learn what an algorithm is and how to create simple algorithms to control on screen characters.

Using Technology Purposefully



Throughout the year, children will have the opportunity to use technology in a purposeful way to support other areas of their learning.

Autumn Term

Key Knowledge gained:

- Recognise that there are rules that keep us safe when we are using technology both in school and at home.
- To give examples of rules for using technology safely.
- To recognise that there may be people online who could make them feel sad/embarrassed/worried.
- To understand the importance of telling a trusted adult if they come across something that makes them sad/uncomfortable online.
- Identify trusted adults in home and school and how and when I can speak to them about my concerns.

Key Skills developed:

- To tell an adult if something comes up online that I am unsure of.
- To begin to use a child friendly search engine to find out information from the internet.
- To use a keyword search to find information on the internet.
- To use digital tools to create a piece of artwork
- To save my own work by giving it a suitable name e.g. file, save as...

Key vocabulary to be grasped:

internet	trusted adult	search engine	key word search	concerns
save	tools	graphics	digital	content

Enrichment opportunities:

Create fireworks picture using paint.
Use key word searches to enhance topic learning.

British values/SMSC

Being a good citizen-using technology and the internet responsibly

Cultural capital and diversity:

Use keyword searches to support learning about other cultures or countries.
Link digital behaviour to respect for differences
Consider opportunities to use paint to create art from other cultures e.g. aboriginal

Barriers to learning/scaffolding:

Visual support for tasks in the form of widget sequencing
Widget word mats with symbols to support computer software
Pair children with a 'helping friend/computer expert friend who can model how to use the program
Pre-teach key vocabulary and/or skills for those who would benefit

Unit Outcomes

Pupils who are secure will be able to:

- Explain some rules they need to follow to keep themselves safe on the internet.
- Name some examples of trusted adults (at home and school) who they can talk to if they encounter a problem online.

- Use a keyword search to find information on a given topic.
- Use basic paint tools (changing colour, changing type or thickness of brush) to create a picture.

Spring Term

Key Knowledge gained:

- Identify types of personal information and explain which bits of information can be shared online.
- Recognise and explain examples of information which is personal to me
- Recognise that information which is shared online can stay online and could be copied
- Describe what information should not be shared online without asking a trusted adult first.
- Understand that passwords can be used to protect personal information and devices
- Explain why I should always ask a trusted adult before sharing any information about myself online
- Begin to understand what an algorithm is- a set of instructions to control a real or virtual sprite/character within a programme.

Key skills developed:

- Apply a simple keyword search to help me find information relevant to a topic
- Log on to a tablet/computer using a given login
- Begin to create a simple algorithm by selecting coding blocks to give instructions to an online character
- Create a simple program using a beebot and beebot direction cards

Key vocabulary to be grasped:

<i>beebot</i>	<i>algorithm</i>	<i>code</i>	<i>input</i>	<i>output</i>
<i>forward</i>	<i>back</i>	<i>right turn</i>	<i>left turn</i>	<i>outcome</i>
<i>program</i>	<i>search engine</i>	<i>key word</i>	<i>trusted adult</i>	<i>personal information</i>

Other vocabulary:

- Online
- Virtual
- Save
- Instructions

Enrichment opportunities:

Safer Internet Day

British values/ SMSC:

SMSC link to 'Healthy Me' Jigsaw unit

Cultural capita and diversity:

Embed cultural contexts into programming challenges e.g. beebot maps featuring world map, different landscape or a multicultural town

Explore the idea of technology and internet use around the world

Explore the fact that no matter where we are in the world, regardless of nationality, race, gender etc we all have the same sort of personal information

Barriers to learning/scaffolds:

Use visual sequencing cards for beebots to physically plan out instructions before inputting them to beebot

Pre-teach key vocab e.g. right turn, left turn, forward and backward.

Pre-teach skills of how to programme the beebot as needed

Visual widget sequencing to support the task

Word mats/picture prompts of different types of personal information

Unit Outcomes

Pupils who are secure will be able to:

- name several piece of personal information that they should not share online
- explain what a password is for
- create a simple algorithm for a beebot using direction cards
- use two or three coding blocks to give instructions to an online character

Summer Term

Key Knowledge gained:

- to understand why it is important to be kind and considerate online
- to begin to recognise the impact of 'code' on a screen character e.g. if I use this code then the character will do X
- To understand how to behave online in ways that do not upset others. Give examples

Key skills gained:

- Use simple algorithms to create a short digital game or interactive scene
- Predict the behaviour of a simple coding programme e.g. if I use this code the character will do X

Key vocabulary to be grasped:

<i>algorithm</i>	<i>code</i>	<i>block code</i>	<i>input</i>	<i>output</i>
<i>outcome</i>	<i>outcome</i>	<i>impact</i>	<i>considerate</i>	

Enrichment opportunities:

- Year 2 to share their coding games with Year 1 so they can see what the skills they are learning can be used for

British values:

Be a responsible citizen-use technology responsibly

Cultural capital and diversity:

Link digital behaviour to respect for differences

Discuss how we should speak kindly to people online who may speak another language, live in another country

Explicitly teach vocab e.g. algorithm and sequence

Barriers to learning/scaffolding:

Pre-teach skills of how to create a simple algorithm using block code

Visual widget sequencing to support the task

Use coding cards with visuals to physically create sequence prior to creating it online

Unit Outcomes**Pupils who are secure will be able to:**

- **Explain some ways to behave in a considerate manner online**
- **Create a simple algorithm to move an online character and explain it to someone else e.g. if I press this arrow then the witch will go up.**

End points – by the end of Year 1 pupils should be able to:

- I can use block code to create a simple algorithm to control an onscreen character.
- I can explain how to keep myself safe online and give specific examples.
- I can explain which personal information should not be shared online.
- I can create a piece of digital work using a variety of paint tools.
- I can use a key word search to find some information on a given topic.