

Computing – Year 2

Content

| NC objectives - areas of study | End point of area of study | Vocabulary | | |
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| <ol style="list-style-type: none"> 1. Use technology safely and respectfully, keeping personal information private; identify where to go to for help and support when they have concerns about content or contact on the internet or other online technologies.-how to be kind, passwords. 2. Understand what algorithms are/create and debug simple programs/use logical reasoning to predict the behaviour of simple programs-Daisy the dinosaur. 3. Use technology purposefully to create, store, manipulate and retrieve digital content. -creating a poster on Microsoft word | <ol style="list-style-type: none"> 1. Children will know how to keep themselves safe and keep information private. (connect and communicate) 2. Children will be able to explain what an algorithm is. They will be able to sequence instructions, design an algorithm and predict its outcome. Children will be able debug their algorithm. (code) 3. Children will be able to use Microsoft word effectively to manipulate text and pictures. They will know how to save and then retrieve their work. (create) | Basic | Adventurous | Technical |
| | | <u>Communicate and connect</u> e-safety online kind help <u>Code</u> Instructions, sequence, predict <u>create</u> delete, space, information, type, keyboard | <u>Communicate and connect</u> Personal Private Password Share <u>Code</u> code, programming <u>create</u> retrieve, manipulate, edit, bold, underline, keys | <u>Communicate and connect</u> respectful secure <u>code</u> Algorithm, debug, execute <u>create</u> italic, word processing, |

Knowledge

| Substantive Knowledge | Disciplinary Knowledge |
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| e-safety and understanding technology-concepts- Communicate and Connect <u>How do we keep our personal information private?</u> <u>Lesson 1</u> <u>L.O: To understand that e-safety is about keeping ourselves safe online.</u> Vocab: e safety, online, respectful -recap what e safety is and what it applies to. | Working as a junior safeguarding officer e-safety -At the beginning of the lesson tell the children that we are learning how to keep ourselves safe within the context of the online world. Reflect -circle time- reflect on what is kind and unkind behaviour. |

-what are the rules of being safe online?

Lesson 2

L.O: To understand that it is important to be kind online and offline.

Vocab: kind, e-safety, help

- what is kind and unkind behaviour?

-recognise that it is important to be kind online and offline.

-Explain how we can be kind.

-recognise that there are trusted adults we can talk to if we see something online that made you feel upset or worried.

Lesson 3

L.O: To understand that personal information is private and we do not share it.

Vocab: personal, private

- identify and list examples of personal information

-sort information into what is Ok to share and what is not OK to share.

Lesson 4

L.O: To understand what a password is.

Vocab: password, private, personal

-understand that passwords are to keep our information safe.

-give examples of when we may use a password.

Lesson 5

L.O: To know what a 'good' password looks like.

Vocab: password, private

-list things we would keep safe on a computer.

-discuss what would make a good password and what would not

-create a set of rules for creating a password.

Lesson 6

L.O: To understand that we do not share our passwords with anyone.

Vocab: password, share, secure

-look at different information-how would you feel if people had access to this information?

Evaluate- discuss what would make a good and bad behaviour.

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| <p>-what would happen if information was not secure.</p> | |
| <p>Programming-concepts-code</p> <p><u>Why do instructions need to be clear?</u></p> <p><u>Lesson 1</u></p> <p><u>L.O: To understand a set of instructions as a sequence.</u></p> <p>Vocab: instructions, sequence</p> <ul style="list-style-type: none"> -children follow instructions given to them to create a drawing. -Devise a list of words that can be used to give directions. E.g. go forwards -children give instructions to one another in a sequence (2 or 3 at a time). <p>Partner can only follow instruction when the word 'go' has been used.</p> <p><u>Lesson 2</u></p> <p><u>L.O: To know what happens when we change the order of instructions.</u></p> <p>Vocab: algorithm, instruction</p> <ul style="list-style-type: none"> -introduce that an algorithm is a precise set of ordered instructions. -children to create algorithms using 4 instructions in a different order. -try each algorithm out on beebot. -children to understand that although the same instructions have been used in each algorithm the outcome/where the beebot ended up was different because of the order. <p><u>Lesson 3</u></p> <p><u>L.O: To know how to predict the outcome of a program.</u></p> <p>Vocab: algorithm, predict</p> <ul style="list-style-type: none"> - children predict what would happen if followed a set of instructions. -children to write an algorithm for partner. Partner to predict where beebot will end up and then test. -increase number of commands to make a prediction about. <p><u>Lesson 4</u></p> <p><u>L.O: To know that programming projects have code and art work.</u></p> <p>Vocab: programming, code</p> | <p>Working as a computer programmer- Why is what we have learned today important to our understanding of using technology?</p> <p>Problem solving- find errors in an algorithm and debug. How can problems be solved?</p> <p>Design –plan and write a set of instructions to give to each other to move around a room and then to Daisy the dinosaur to move around a map.</p> <p>Predict- predict what will happen to the algorithm. Where will it end up?</p> <p>Sequence- put instructions and algorithms in the correct order to make them work. Why is the correct sequence important?</p> |

- children to design a mat for their beebots focussed on a particular theme.
- children to test their mats be using an algorithm to go around the obstacles on the mat. Children to choose a start and end square.

Lesson 5

L.O: To know how to design a algorithm.

Vocab: algorithm, execute

- use mats from previous lesson to decide on a start and end square.
- draw the route you want the beebot to take and say the instructions out loud to a partner.
- write algorithm and test using the beebot.

Lesson 6

L.O: To know how to debug a program.

Vocab: debug, program

- explain what a bug is.
- explain that programmers break complicated tasks down into smaller chunks.
- children test their algorithm from previous lesson in small sections and debug where necessary.

Microsoft word- concepts- create

How can I change how a text looks on a computer?

Lesson 1

L.O: To know how to use a computer to write.

Vocab: type, keyboard, word processing

- explain what a word processor is used for
- look at a keyboard-what do you notice? E.g. keys are not in alphabetical order, letters are all capitals, some keys have more than one thing on them.
- Children use a keyboard to practise writing their name or other key words.

Lesson 2

L.O:To know to add and remove text on a computer.

Vocab: delete, space, keys

Working as a computer scientist/designer- Why is what we have learned today important to our understanding of using technology and word processing?

Design- manipulate the text (font size, colour, back space, bold, italic, underline, caps lock and adding a picture).

Evaluate- when handwriting what changes could I make? How could I fix mistakes? Discuss how this is different on a computer. Compare paper and computer. Express preferences-I liked writing on...because....., I liked using.....

- Introduce space bar, delete key.
- children to practise using keys on key board by creating a lost poster for a teddy bear.
- children to use letters and numbers.

Lesson 3

L.O: To understand that the look of text can be changed on a computer.

Vocab: bold, underline

- children to use word.
- children to understand the keys space, enter (to start a new line), backspace,
- Children learn how to use caps lock to make capital letters.
- look at formatting tools bold, underline, italic and demonstrate how these make the text change.

Lesson 4

L.O: To know when to change how a text looks.

Vocab: retrieve, edit, italics

- open a saved document (lost poster)
- Discuss how we can change the text to make it better. E.g. making title bold and underlined.
- Model how to select text by clicking and dragging to highlight.
- Children to edit their posters by using the different tools.

Lesson 5

L.O: To explain why I used the tools that I chose.

Vocab undo, redo

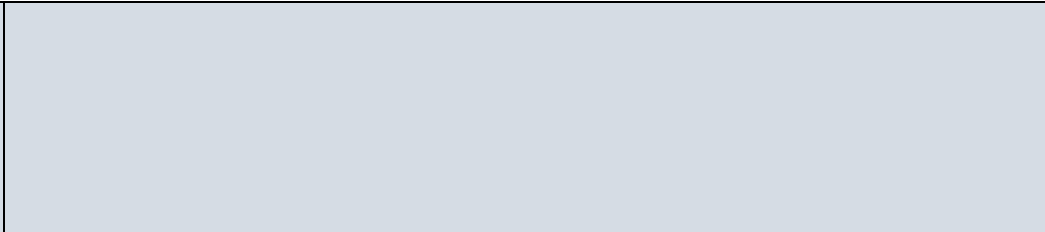
- introduce undo and redo buttons.
- explain that if you want to undo one thing you have to undo everything you have done after that point to.
- Open up lost poster and make changes, using undo and redo until they are happy.
- children explain to a partner why they have used the tools they have.

Lesson 6

L.O: To understand and compare typing on a computer to writing on paper.

Sequence- save work by following instructions in the correct sequence and naming it an appropriate name so it can be easily found when opening it again.

Vocab; word processing, information
-display a misspelt sentence. How could I improve this sentence.
-children to type on to the computer. How will I make changes to this on the computer? What would I have to do if I was writing on paper?
-What is the same and what is different between a computer and paper?
-When would you use each one?



Concepts

Connect and communicate

Code

Create

ASSESSMENT

KNOW MORE, REMEMBER MORE, DO MORE...

In this unit of learning, progress has been made when a learner knows more. This 'distance travelled' from the starting point is evidenced through them remembering more and doing more: in books, low stakes quizzes, retrieval, use of mind maps, answering the big question and being able to feel more confident about this unit.