



Computing End of Year Expectations

Nursery – developing computational thinking

Birth to 3

- Listen to simple stories and understand the order
- Build independently with a range of tools
- Saying number sequences
- Create puzzles
- Notice patterns and arrange patterns.
- Make rhythmical and repetitive sounds

3-4 year olds

- Finding solutions to conflicts
- Use one handed tools and equipment
- Create patterns i.e. ABAB
- Talk about and identify patterns around them.

Reception - developing computational thinking

- Show resilience and perseverance in the face of challenge
- Continue, copy and create repeating patterns

Year 1

Computing systems and networks

- To identify technology
- To identify a computer and its main parts.
- To use a mouse and keyboard in different ways
- To create rules for using technology

Creating media

- To describe what different free hand tools do.
- To use the shape and line tools and explain choices
- Make careful choices when painting a digital picture and create an independent piece.
- To compare computer and paper paintings and computer and paper writing.
- Use a computer to write, add and remove text and change the look of text.

Data and information

- Label objects and identify through counting.
- Describe objects in different ways.
- Group objects with the same properties, compare the groups and answer questions about them.

Programming

- Explain a given command
- Act out a given word
- Combine all directions to create a sequence
- Plan a simple program and solve a problem.

Year 2

Computing systems and networks

- To recognise the uses and features of IT.
- To identify the uses of IT in school and beyond.
- Explain how IT helps us and how to use it safely.
- Recognise choices are made when using IT.

Creating media

- To use a digital device when taking a photo and explain choices.
- To decide what makes a good photo and how it can be improved.
- To recognise photos can be changed and use tools that can do that.



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- To identify how music makes us feel and identify the patterns.
- Create music with a purpose using a computer and refine where necessary.

Data and information

- Recognise that a tally chart can help with counting and comparing.
- Recognise that objects can be presented as a picture and create a pictogram.
- Understand and select attributes and how people can be compared and described by attributes.
- Information can be presented using a computer.

Programming

- Describe a series of instructions as a sequence and where it starts/ends.
- Explain what happens if we change the order of instructions and predict outcomes.
- To understand code and artwork.
- Design an algorithm, then debug for a program
- Create a program using a design and make changes as necessary.
- Discuss how to improve my project.

Year 3

Computing systems and networks

- To explain how digital devices function
- To identify input and output devices
- To explain how a computer network can be used to share information
- To explore how digital devices can be connected
- To recognise the physical components of a network

Creating media

- To know what an animation is, plan and create an animation using a sequence of movements.
- To evaluate an animation
- To recognise that text and images convey information and can be laid out in different ways.
- To create a desktop publishing publication and evaluate its usefulness.

Data and information

- To understand a branching database.
- To create a branching database with yes or no answers

Programming

- Understand that commands in a sequence create an outcome
- To change an appearance of a tack
- Create a series of commands from a task design (creating sounds)
- To identify a sprite and make it move in all directions
- To add features to a program.
- To create a maze based challenge.

Year 4

Computing systems and networks

- To understand networked devices and multiple networks make up the Internet.
- To know that the Internet is and the WWW.
- To understand how the WWW can be contributed to.
- To evaluate the usefulness of the WWW.

Creating media

- To identify that sound can be recorded.
- To use recorded sounds in a podcast.
- To use audio editing to create a full podcast.
- To know that digital images can be changed.
- To change the composition of an image using different tools.

Data and information

- To use data loggers to collect data over time.
- To understand that data loggers collect data using sensors.



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- To use a computer to analyse the data.
- To use data collected to answer questions.

Programming

- To create a program in a text based language.
- To explain and use the repeat function.
- To understand and use a count-controlled loop to give an outcome.
- To apply count controlled loop to a different context (repetition in games)
- To use the repeat function in a game.

Year 5

Computing systems and networks

- To know computers can be connected to create systems.
- To understand what a search engine is, use one and that results are ranked.

Creating media

- To use tools to create a desired effect.
- To create a vector drawing by combining shapes.
- To capture video using different techniques.
- To improve video through reshooting and editing.

Data and information

- To compare paper and computer databases.
- To use tools to select data and answer questions from this.
- To explain that different computer programs can compare data visually.

Programming

- To write a program that contains count controlled loops.
- To explain a loop can stop when a condition is met
- To use selection in a physical computing project (crumbles)
- To design and create and program that uses selection

Year 6

Computing systems and networks

- To explain how search engines select results.
- To explain how results are ranked.

Creating media

- To identify digital 3D models and how they can be modified and combined.
- To create a digital 3D model
- To review webpages to evaluate their structure.
- To plan a webpage including text and images and ownership rights.

Data and information

- To understand what spreadsheets are.
- To create a build data sets in spreadsheets.
- To use formulas in spreadsheets.

Programming

- To define a variable
- To use variables in a program
- To run a program on a controlled device
- To use inputs and outputs on a controllable device.