**Year 2 Computing Curriculum – Autumn 2**

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| **Theme: Pictograms** |
| **Curriculum objectives** | **Vocabulary** | **Links across the curriculum** |
| - Use technology purposefully to create, organise, store, manipulate and retrieve digital content- 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 | **Keyword** | Definition | data set | A group of numbers that are related | [**Maths**](https://assets.publishing.service.gov.uk/media/5a7da548ed915d2ac884cb07/PRIMARY_national_curriculum_-_Mathematics_220714.pdf)Building on Year 1 number and place value:* Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: ‘equal to’, ‘more than’, ‘less than’ (‘fewer’), ‘most’, ‘least’

Year 2* interpret and construct simple pictograms, tally charts, block diagrams and simple tables
* ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
* ask and answer questions about totalling and comparing categorical data
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| Block diagram | A form of representing data | more | Increasing in number |
| attribute | Something that belongs to something or someone | less | Decreasing in number |
| Tally chart | A form of collecting data | fewest | The lowest value |
| conclusion | Something that has been discovered following an investigation | most | The highest value |
| compare | To contrast two or more items together  |  |  |
| **Prior Knowledge:**Year 1 – Grouping Data | **Future Knowledge:**Year 3 – Branching Databases; Year 4- Data Logging; Year 5 – Flat-File Databases; Year 6 - Spreadsheets |
| **Lesson Sequence** | **Key Knowledge** | **Key Skills** |
| 1 Counting and comparing | During this lesson learners will begin to understand the importance of organising data effectively for counting and comparing. They will create their own tally charts to organise data, and represent the tally count as a total. Finally, they will answer questions comparing totals in tally charts using vocabulary such as ‘more than’ and ‘less than’. | To recognise that we can count and compare objects using tally charts* I can record data in a tally chart
* I can represent a tally count as a total
* I can compare totals in a tally chart
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| 2 Enter the data | During this lesson learners will become familiar with the term ‘pictogram’. They will create pictograms manually and then progress to creating them using a computer. Learners will begin to understand the advantages of using computers rather than manual methods to create pictograms, and use this to answer simple questions. | To recognise that objects can be represented as pictures* I can enter data onto a computer
* I can use a computer to view data in a different format
* I can use pictograms to answer simple questions about objects
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| 3 Creating pictograms | During this lesson learners will think about the importance of effective data collection and will consider the benefits of different data collection methods: why, for example, we would use a pictogram to display the data collected. They will collect data to create a tally chart and use this to make a pictogram on a computer. Learners will explain what their finished pictogram shows by writing a range of statements to describe this. | To create a pictogram* I can organise data in a tally chart
* I can use a tally chart to create a pictogram
* I can explain what the pictogram shows
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| 4 What is an attribute? | During this lesson learners will think about ways in which objects can be grouped by attribute. They will then tally objects using a common attribute and present the data in the form of a pictogram. Learners will answer questions based on their pictograms using mathematical vocabulary such as ‘more than’/’less than’ and ‘most’/’least’. | To select objects by attribute and make comparisons* I can tally objects using a common attribute
* I can create a pictogram to arrange objects by an attribute
* I can answer ‘more than’/’less than’ and ’most/least’ questions about an attribute
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| 5 Comparing people | During this lesson learners will understand that people can be described by attributes. They will practise using attributes to describe images of people and the other learners in the class. The learners will collect data needed to organise people using attributes and create a pictogram to show this pictorially. Finally, learners will draw conclusions from their pictograms and share their findings.  | To recognise that people can be described by attributes* I can choose a suitable attribute to compare people
* I can collect the data I need
* I can create a pictogram and draw conclusions from it
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| 6 Presenting information | During this lesson learners will understand that there are other ways to present data than using tally charts and pictograms. They will use a pre-made tally chart to create a block diagram on their device. Learners will then share their data with a partner and discuss their findings. They will consider whether it is always OK to share data and when it is not OK. They will know that it is alright to say no if someone asks for their data, and how to report their concerns. | To explain that we can present information using a computer* I can use a computer program to present information in different ways
* I can share what I have found out using a computer
* I can give simple examples of why information should not be shared
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| **Themes and links** |
| **Computing themes** | **Where these are covered:** |
| **Technology around us** Autumn 1  | * The use of Robots in our 21st century world
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| **Digital painting** Autumn 2  | * To use robots for artwork
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| **Programming A** Spring 1  | * Programming and giving commands to the robots
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| **Data /information** Spring 2  | * Storing the Algorithms and understanding clear and precise instructions
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| **Creating media** Summer 1  | * Decomposition and Debugging of Algorithms
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| **Programming B** Summer 2  | * Variables in programming and what to do to debug
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