**Year 3 Computing Curriculum – Spring 2**

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| **Theme: Branching Databases** |
| **Curriculum objectives** | **Vocabulary** | **Links across the curriculum** |
| - Select, use and combine a variety of software (including internet services) on a range of digital devices to design an create a range of programs, systems and content that accomplished given goals, including collecting, analysing, evaluating and presenting data and information- Use technology safely, respectfully and responsibly | **Keyword** | Definition | structure | The make up of something | **[National curriculum links](https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study/national-curriculum-in-england-computing-programmes-of-study)*** select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
* use technology safely, respectfully and responsibly
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|  | attribute | The quality or characteristic of something | order | To group |  |
|  | value | An amount attributed to something | organise | To group or order |  |
|  | database | A comprehensive collection of data | selecting | The rationale behind which a decision is made |  |
|  | equal | To be of the exact same value as something |  |  |  |
|  | separate | To be singular or on one’s own |  |  |  |
| **Prior Knowledge:**Year 1 – Grouping Data; Year 2 - Pictograms | **Future Knowledge:**Year 4- Data Logging; Year 5 – Flat-File Databases; Year 6 - Spreadsheets |
| **Lesson Sequence** | **Key Knowledge** | **Key Skills** |
| 1 Yes or no questions | Learners will start to explore questions with yes/no answers, and how these can be used to identify and compare objects. They will create their own yes/no questions, before using these to split a collection of objects into groups. | To create questions with yes/no answers* I can investigate questions with yes/no answers
* I can make up a yes/no question about a collection of objects
* I can create two groups of objects separated by one attribute
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| 2 Making groups | Learners will develop their understanding of using questions with yes/no answers to group objects more than once. They will learn how to arrange objects into a tree structure and will continue to think about which attributes the questions are related to.  | To identify the attributes needed to collect data about an object* I can select an attribute to separate objects into groups
* I can create a group of objects within an existing group
* I can arrange objects into a tree structure
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| 3 Creating a branching database | Learners will continue to develop their understanding of ordering objects/images in a branching database structure. They will learn how to use an online database tool to arrange objects into a branching database, and will create their own questions with yes/no answers. Learners will show that their branching database works through testing. | To create a branching database* I can select objects to arrange in a branching database
* I can group objects using my own yes/no questions
* I can test my branching database to see if it works
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| 4 Structuring a branching database | Learners will continue to develop their understanding of how to create a well-structured database. They will use attributes to create questions with yes/no answers, and will apply these to given objects. Learners will compare the efficiency of different branching databases, and will be able to explain why questions need to be in a specific order.  | To explain why it is helpful for a database to be well structured* I can create yes/no questions using given attributes
* I can compare two branching database structures
* I can explain that questions need to be ordered carefully to split objects into similarly sized groups
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| 5 Planning a branching database | Learners will independently plan a branching database by creating a physical representation of one that will identify different types of dinosaur. They will continue to think about the attributes of objects to write questions with yes/no answers, which will enable them to separate a group of objects effectively. Learners will then arrange the questions and objects into a tree structure, before testing the structure. | To plan the structure of a branching database* I can independently create questions to use in a branching database
* I can create questions that will enable objects to be uniquely identified
* I can create a physical version of a branching database
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| 6 Making a dinosaur identifier | Learners will independently create a branching database to identify different types of dinosaur, based on the paper-based version that they created in Lesson 5. They will then work with a partner to test that their database works, before considering real-world applications for branching databases. | To independently create an identification tool* I can create a branching database that reflects my plan
* I can work with a partner to test my identification tool
* I can suggest real-world uses for branching databases
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| **Themes and links** |
| **Computing themes** | **Where these are covered:** |
| **Technology around us** Autumn 1  | * Scratch links to the real world and computer games the children know.
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| **Digital painting** Autumn 2  | * Understanding the need for coding and algorithms
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| **Programming A** Spring 1  | * Programming the Scratch
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| **Data /information** Spring 2  | * Storing the commands and the effect on language on the outcome of your commands.
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| **Creating media** Summer 1  | * Your own designs of Scratch
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| **Programming B** Summer 2  | * Using Scratch to implement an algorithm as a code
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