# COMPUTING KNOWLEDGE ORGANISERS

## Spring 2

# Hanslope Primary School
## Computing Knowledge Organiser

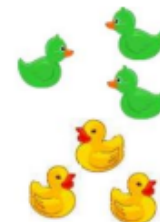**Year 1: Data and Information**

### National Curriculum Links:

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

### How does this link to my previous learning?

**Personal, Social and Emotional Development**
- Show resilience and perseverance in the face of a challenge.

**Physical Development**
- Develop their small motor skills so that they can use a range of tools competently, safely, and confidently.

### How does this link to my future learning?

- 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.

### What will I know by the end of this unit:

- To label objects.
- To identify that objects can be counted.
- To describe objects in different ways.
- To count objects with the same properties.
- To compare groups of objects.
- To answer questions about groups of objects.

### What key vocabulary will I learn:

- **Information** - Data put into a context that provides meaning.
- **Data** - Facts and statistics collected for reference or analysis.
- **Search** - Try to find something by looking or otherwise seeking carefully and thoroughly.
- **Group** - A number of people or things that are located, gathered, or classed together.
- **Describe** - give a detailed account in words.
- **Program** - A set of ordered commands that can be run by a computer to complete a task.
- **Properties** - A word or phrase that can be used to describe an object such as its colour, size, or price.
- **Similar** - A person or thing similar to another.
- **Different** - Not the same as another or each other; unlike in nature, form, or quality.

# Hanslope Primary School
## Computing Knowledge Organiser

**Year 2: Pictograms**

**How does this link to my previous learning?**

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

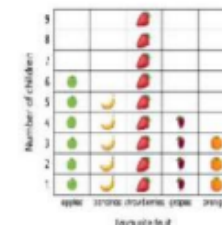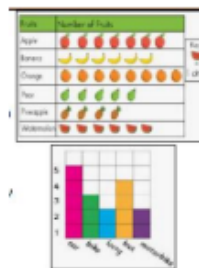**How does this link to my future learning?**

- 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.

**What key vocabulary will I learn:**

- **Information** - Data put into a context that provides meaning.
- **Data** - Facts and statistics collected for reference or analysis.
- **Pictogram** - A chart or graph which uses pictures to represent data in a simple way. Each picture in the pictogram represents a physical object.
- **Group** - A number of people or things that are located, gathered, or classed together.
- **Tally** - A current score or amount.
- **Tally chart** - A way of recording data and counting the amount of something (frequency).
- **Program** - A set of ordered commands that can be run by a computer to complete a task.
- **Properties** - A word or phrase that can be used to describe an object such as its colour, size, or price.

**What will I know by the end of this unit:**

- To recognise that we can count and compare objects using tally charts.
- To recognise that objects can be represented as pictures.
- To create a pictogram.
- To select objects by attribute and make comparisons.
- To recognise that people can be described by attributes.
- To explain that we can present information using a computer.

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## Computing Knowledge Organiser

### Year 3: Branching databases

### How does this link to my previous learning?

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

### National Curriculum Links:

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

### How does this link to my future learning?

- 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.

### What key vocabulary will I learn:

- **Information** - Data put into a context that provides meaning.
- **Data** - Facts and statistics collected for reference or analysis.
- **Attributes** - A piece of information which determines the properties of a field or tag in a database or a string of characters in a display.
- **Group** - A number of people or things that are located, gathered, or classed together.
- **Branching** - Branching is the practice of creating copies of programs or objects in development to work in parallel versions, retaining the original and working on the branch or making different changes to each
- **Database** - A structured set of data held in a computer, especially one that is accessible in various ways.
- **Multiple** - Having or involving several parts, elements, or members.
- **Classify** - Arrange (a group of people or things) in classes or categories according to shared qualities or characteristics.

### What will I know by the end of this unit:

- To create questions with yes/no answers.
- To identify the object attributes needed to collect relevant data.
- To create a branching database.
- To identify objects using a branching database.
- To explain why it is helpful for a database to be well structured.
- To compare the information shown in a pictogram with a branching database.

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## Computing Knowledge Organiser

**Year 4: Data Logging**

### How does this link to my previous learning?

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

### National Curriculum Links:

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

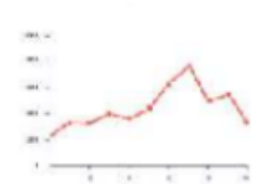### How does this link to my future learning?

- 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.

### What key vocabulary will I learn:

- **Information** - Data put into a context that provides meaning.
- **Data** - Facts and statistics collected for reference or analysis.
- **Collection** - The action or process of collecting someone or something.
- **Sensor** - A device that detects or measures a physical property and records, indicates, or otherwise responds to it.
- **Analysis** - Detailed examination of the elements or structure of something.
- **Data Logger** – An electronic device that automatically monitors and records environmental parameters over time, allowing conditions to be measured, documented, analysed, and validated.
- **Software** - The programs and other operating information used by a computer.
- **Interpret** - Explain the meaning of (information or actions).
- **Conclusion** - A judgment or decision reached by reasoning.

### What will I know by the end of this unit:

- To explain that data gathered over time can be used to answer questions.
- To use a digital device to collect data automatically.
- To explain that a data logger collects 'data points' from sensors over time.
- To use data collected over a long duration to find information.
- To identify the data needed to answer questions.
- To use collected data to answer questions.

# Hanslope Primary School
## Computing Knowledge Organiser

**Year 5: Flat-file Databases**

### National Curriculum Links:

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

### How does this link to my previous learning?

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

### How does this link to my future learning?

- 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.

### What key vocabulary will I learn:

- **Information** - Data put into a context that provides meaning.
- **Data** - Facts and statistics collected for reference or analysis.
- **Collection** - The action or process of collecting someone or something.
- **Database** - A structured set of data held in a computer, especially one that is accessible in various ways.
- **Search** - Try to find something by looking or otherwise seeking carefully and thoroughly.
- **Sort** - The arrangement of data in a prescribed sequence.
- **Filter** - A function that lets you single out a range of data based on the values in a formula.
- **Software** - The programs and other operating information used by a computer.
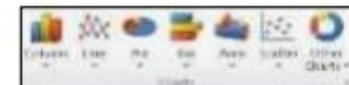- **Fields** – Names you give to the columns in a table.

### What will I know by the end of this unit:

- To use a form to record information.
- To compare paper and computer-based databases.
- To outline how grouping and then sorting data allows us to answer questions.
- To explain that tools can be used to select specific data.
- To explain that computer programs can be used to compare data visually.
- To apply my knowledge of a database to ask and answer real-world questions.

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## Computing Knowledge Organiser

### Year 6: Spreadsheets

### How does this link to my previous learning?

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.

### What key vocabulary will I learn:

- **Information** - Data put into a context that provides meaning.
- **Data** - Facts and statistics collected for reference or analysis.
- **Spreadsheet** - an electronic document in which data is arranged in the rows and columns of a grid and can be manipulated and used in calculations.
- **Format** - Arrange or put into a format.
- **Formula** - A mathematical relationship or rule expressed in symbols.
- **Accounting** - The process or work of keeping financial accounts.
- **Filter** - A function that lets you single out a range of data based on the values in a formula.
- **Software** - The programs and other operating information used by a computer.

### National Curriculum Links:

- 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.

### How does this link to my future learning?

- Design, use, and evaluate computational abstractions that model the state and behaviour f real-world problems and physical systems.
- Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting, and analysing data

### What will I know by the end of this unit:

- To identify questions that can be answered using data.
- To explain that objects can be described using data.
- To explain that formula can be used to produce calculated data.
- To apply formulas to data, including duplicating.
- To create a spreadsheet to plan an event.
- To choose suitable ways to present data.