**Elworth CE Primary School**

**Data and Information Skills Progression**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Y1** | **Y2** | **Y3** | **Y4** | **Y5** | **Y6** |
| **Data & Information** | To label objects* I can describe objects using labels
* I can match objects to groups
* I can identify the label for a group of objects
 | 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
 | 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
 | To explain that data gathered over time can be used to answer questions* I can choose a data set to answer a given question
* I can suggest questions that can be answered using a given data set
* I can identify data that can be gathered over time
 | To use a form to record information* I can create multiple questions about the same field
* I can explain how information can be recorded
* I can order, sort, and group my data cards
 | To identify questions which can be answered using data* I can explain the relevance of data headings
* I can answer questions from an existing data set
* I can ask simple relevant questions which can be answered using data
 |
| To identify that objects can be counted* I can count objects
* I can group objects
* I can count a group of objects
 | 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
 | To identify the object attributes needed to collect relevant data* 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
 | To use a digital device to collect data automatically * I can explain that sensors are input devices
* I can use data from a sensor to answer a given question
* I can identify that data from sensors can be recorded
 | To compare paper and computer-based databases* I can navigate a flat-file database to compare different views of information
* I can explain what a ‘field’ and a ‘record’ is in a database
* I can choose which field to sort data by to answer a given question
 | To explain that objects can be described using data * I can explain what an item of data is
* I can apply an appropriate number format to a cell
* I can build a data set in a spreadsheet application
 |
| To describe objects in different ways* I can describe an object
* I can describe a property of an object
* I can find objects with similar properties
 | 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
 | 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 prove my branching database works
 | To explain that a data logger collects ‘data points’ from sensors over time* I can identify a suitable place to collect data
* I can identify the intervals used to collect data
* I can talk about the data that I have captured
 | To apply my knowledge of a database to ask and answer real-world questions* I can explain how information can be grouped
* I can group information to answer questions
* I can combine grouping and sorting to answer more specific questions
 | To explain that formula can be used to produce calculated data* I can explain the relevance of a cell’s data type
* I can construct a formula in a spreadsheet
* I can identify that changing inputs changes outputs
 |
| To count objects with the same properties* I can group similar objects
* I can group objects in more than one way
* I can count how many objects share a property
 | 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
 | To explain why it is helpful for a database to be well structured* I can create yes/no questions using given attributes
* I can explain that questions need to be ordered carefully to split objects into similarly sized groups
* I can compare two branching database structures
 | To use data collected over a long duration to find information* I can import a data set
* I can use a computer to view data in different ways
* I can use a computer program to sort data
 | To explain that tools can be used to select data to answer questions* I can choose which field and value are required to answer a given question
* I can outline how ‘AND’ and ‘OR’ can be used to refine data selection
* I can choose multiple criteria to answer a given question
 | To apply formulas to data, including duplicating* I can recognise that data can be calculated using different operations
* I can create a formula which includes a range of cells
* I can apply a formula to multiple cells by duplicating it
 |
| To compare groups of objects* I can choose how to group objects
* I can describe groups of objects
* I can record how many objects are in a group
 | 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
 | To identify objects using a branching database* I can select a theme and choose a variety of objects
* I can create questions and apply them to a tree structure
* I can use my branching database to answer questions
 | To identify the data needed to answer questions* I can propose a question that can be answered using logged data
* I can plan how to collect data using a data logger
* I can use a data logger to collect data
 | To apply my knowledge of a database to ask and answer real-world questions* I can select an appropriate chart to visually compare data
* I can refine a chart by selecting a particular filter
* I can explain the benefits of using a computer to create graphs
 | To create a spreadsheet to plan an event* I can use a spreadsheet to answer questions
* I can explain why data should be organised
* I can apply a formula to calculate the data I need to answer questions
 |
| To answer questions about groups of objects* I can decide how to group objects to answer a question
* I can compare groups of objects
* I can record and share what I have found
 | 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
 | To compare the information shown in a pictogram with a branching database* I can explain what a pictogram tells me
* I can explain what a branching database tells me
* I can compare two ways of presenting information
 | To use collected data to answer questions * I can interpret data that has been collected using a data logger
* I can draw conclusions from the data that I have collected
* I can explain the benefits of using a data logger
 | To apply my knowledge of a database to ask and answer real-world questions* I can ask questions that will need more than one field to answer
* I can refine a search in a real-world context
* I can present my findings to a group
 | To choose suitable ways to present data* I can produce a graph
* I can use a graph to show the answer to questions
* I can suggest when to use a table or graph
 |