Cares Curriculum: Computing

Information and Data Progression Map KS1

National Curriculum

Pupils should be taught to:

- 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.

Y1 Grouping Data

Vocabulary

Object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, least, fewest, the same

Knowledge

- Recognise that data can be presented in different ways
- Identify that objects can be counted
- Computers require input from humans to perform tasks

Skills

- Identify attributes of an object
- collect simple data
- describe the properties of an object
- Group objects to answer questions
- Explain that objects can be grouped by similarities (attributes)

Y2 Pictograms

Vocabulary

More than, less than, most, least, organise, **data**, object, tally chart, votes, total, pictogram, enter, compare, count, explain, more common, least common, **attribute**, group, same, different, most popular, least popular, conclusion, block diagram, common, sharing, data

Knowledge

- recognise that people, animals and objects can be described by attributes
- we can present information using a computer
- suggest appropriate headings for tally charts and pictograms
- give simple examples of why some information should not be shared

Skills

- Use a tally chart to collect data
- compare objects that have been grouped by attribute
- use pictograms to answer single-attribute questions
- use a computer to view data in different formats
- enter data onto a computer

Information and Data Progression Map LKS2

National Curriculum

Pupils should be taught to:

- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- 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; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Y3 Branching Database

Vocabulary

Attribute, value, questions, table, **objects**, branching database, database, attribute, equal, even, separate, database, structure, compare, order, organise, selecting, information, decision tree

Skills

- create questions with yes/no answers
- identify an object using a branching database
- retrieve information from different levels of the branching database

Knowledge

- identify attributes that you can ask yes/no questions about
- investigate questions with yes/no answers
- explain that a branching database is an identification tool
- recognise that a data set can be structured using yes/no questions
- relate two levels of a branching database using AND
- suggest real-world applications for branching databases

Y4 Data Logging

Vocabulary

Data, table, layout, **input device**, sensor, data logger, logging, data point, interval, analyse, **data set**, import, export, logged, collection, review, conclusion

Skills

- use a digital device to collect data automatically
- choose how often to automatically collect data samples
- use a set of logged data to find information
- use a computer program to sort data by one attribute
- export information in different formats

Knowledge

- suggest questions that can be answered using a table of data
- identify data that can be logged over time
- identify that sensors are input devices
- recognise that a sensor can be used as an input device for data collection
- explain that a data logger captures 'data points' from sensors over time

Information and Data Progression Map UKS2

National Curriculum

Pupils should be taught to:

- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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

Y5 Flat File Database

Vocabulary

Database, **data**, **information**, record, field, sort, order, group, search, value, criteria, graph, chart, axis, compare, filter, presentation

Knowledge

- explain that a computer program can be used to organise data
- explain that tools can be used to select data to answer questions
- outline how ordering data allows us to answer some questions
- outline how operands can be used to filter data
- outline how 'AND' and 'OR' can be used to refine data selection
- explain that computer programs can be used to compare data visually
- explain that we present information to communicate a message

Skills

- choose different ways to view data
- choose which attribute and value to search by to answer a given question (operands)
- ask questions that need more than one attribute to answer
- choose multiple criteria to search data to answer a given question (AND and OR)
- choose suitable ways to present information to other people

Y6 Introduction to Spreadsheets

Vocabulary

Data, collecting, table, structure, spreadsheet, cell, cell reference, data item, format, formula, calculation, **input**, **output**, calculate, operation, range, duplicate, sigma, propose, question, data set, organised, chart, evaluate, results, comparison, **software**, tools

Knowledge

- identify questions that can be answered using spreadsheet data
- explain what an item of data is in a spreadsheet
- outline that there are different software tools to work with data
- explain how the data type determines how a spreadsheet can process the data
- explain that formulas can be used to produce calculated data
- recognise cells can be linked
- explain why data should be organised in a spreadsheet
- recognise that a cell's value automatically updates when the value in a linked cell is changed
- evaluate results in comparison to the question asked

Skills

- calculate data using a formula for each operation
- use functions to create new data
- use existing cells within a formula
- choose suitable ways to present spreadsheet data