

Subject: Computing

Year group: 4

Term: Spring Term

Unit name: Data logging (Information Technology)

Vocabulary	
Database creation	Interrogate
Database searches	Time Interval
Inaccurate data Information	Regular interval
Collection	Data point
Criteria	Data set
Data logger	Question
Sensor	Interrogate

Big idea: To use data loggers to collect, review and analyse data sets over time.

This unit explores how and why data is collected over time. Pupils will consider the senses that humans use to experience the environment and how computers can use special input devices called sensors to monitor the environment. Pupils will collect data as well as access data captured over long periods of time. They will look at data points, data sets, and logging intervals. Pupils will spend time using a computer to review and analyse data.

Within Science sound unit, pupils will pose questions and then use data loggers to automatically collect the data needed to answer those questions.

Progression of skills :

- Knows that computers collect data from various input devices, including sensors and application software.

This unit introduces the idea of automatic data collection and that data can be collected over time.

Prior learning:

Year 1 grouping data

Children learn that labelling, grouping and sorting data are all parts of data and information . Searching is also a common operation and therefore labelling and grouping are important.

Year 2 Pictograms

Children collect data as a tally and turn into a pictogram. They learn how to use a question to interrogate data.

Year 3 Branching databases

They create a branching database and learn what attributes are and how to use them.

National Curriculum links :

Computing – Key stage 2

- ...work with various forms of input
- 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

Science – Lower key stage 2/Year 4

- making systematic and careful observations and, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- They should learn how to use new equipment, such as data loggers, appropriately. They should collect data from their own observations and measurements, using notes, simple tables and standard units, and help to make decisions about how to record and analyse this data.

Future learning:

Year 6 Spreadsheets

Learners create their own dataset and organise data into columns and rows. They learn how to format data, use formulae and interrogate a set of data.

Implementation:

Children consider how data can be collected and when .

Explore questions that can be answered by collecting data over time.

Children will explore how data can be collected over time and learn how sensors are input devices which can be built into data loggers to do this.

They will see that data collected automatically and over time will be stored for use later.

Learn how to use the data loggers and the buttons on them, being made aware of the sensors and features.

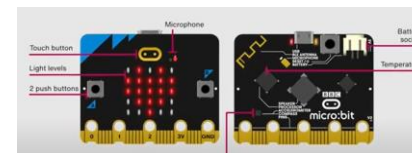
Children explore data collected over time and use it to answer questions .

Children will explore questions within the Science topic of Sound eg. Where is the quietest point in the school/classroom?

They will use and analyse their data collected.

The BBC Microbits could be used within this unit as input devices to record the data.

See instructions: <https://microbit.org/get-started/user-guide/data-logging/>



We also have Easy sense data loggers in school



Software should be on main Computers in 4G1 and 4G2 . It can be downloaded from :

<https://store.data-harvest.co.uk/easysense>

