

Year 4 Computing – Data Logging

What I should already know

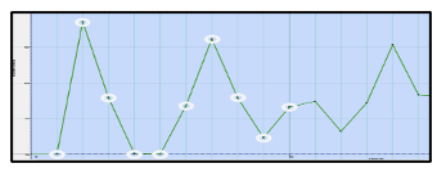
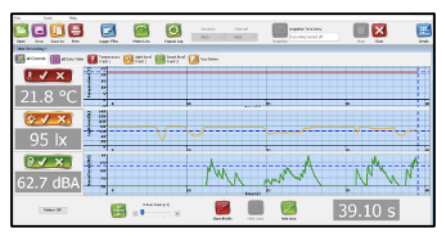
- To know that data can be numbers, words or figures and information is what we can understand from analysing data.
- To understand that objects can be organised into groups, based on what they are or their different attributes.
- To recognise that branching databases can help us to identify objects within sets of data.

What I will learn by the end of this unit

- To know that there are lots of different ways that we can collect, log and interpret data, including using data loggers.
- To recognise that data loggers and logging software can be used to automatically capture data.
- To draw conclusions in answer to our research questions.

Data Recording

- One way for us to record data is by writing it down. Some data loggers can also record data themselves, which we can download later. Computers can also help us to record data, e.g. by connecting our data loggers to computers and opening data logging software.
- An advantage of this is that computers can record data automatically, meaning that someone does not need to sit waiting for a long period of time. Data loggers can be set to measure at different intervals (points in time).
- Data logger software can also be used to show different charts and graphs. This can save the user a lot of time!



Data Collection

Asking Questions: Data gathered over time can be used to answer important questions. For example, the class register can be used to answer questions about children's attendance. Before collecting data, we need to carefully consider which questions we are trying to answer.

	23/02/16	01/03/16	08/03/16
Seb	✓	✓	✓
Anusha	✓	✓	✓
Belle	✓	✓	✓
Patrick	✓	✓	✓
Reece	✓	✓	✓
Ollie H	✓	✓	✓
Ollie	✓	✓	✓
Oliver D	✓	✓	✓

-Sensors: Our senses (sight, hearing, smell, taste, touch) detect things in our environment. Computers have input device sensors which help them to sense things.

- Data Loggers: Data loggers have sensors built into them. They can be used to detect and record data.



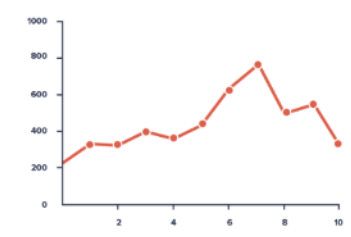
- Some examples are:
- Microphones (sound)
 - Camera (light)
 - Touchscreen (touch)



- Data loggers often contain:
- A heat sensor (to record the temperature)
 - A light sensor (to record brightness)
 - A sound sensor (to record the noise).

Analysing Data

- When scientists collect data, they usually store it so that it can be analysed at any time. The data can also be shared so that other scientists can use it.
- Tables and graphs can be used to present the data in a useful way for reading and understanding it. It is important to be able to see trends as clearly as possible.



Answering Questions

- Remember that data should be collected for a reason: to answer questions.
- It is very important to ensure that the testing that you do is fair and reliable, otherwise the data that you get back may not give you the accurate answers that you need.
- It is important to interpret your data carefully. You can then write a report detailing what your conclusions are.

Disciplinary Skills

- Use search technologies effectively.
- Appreciate how results are selected and ranked and be discerning in evaluating digital content.
- Create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Key Vocabulary

Input device	Sensor	Data logger	Logging
Data point	Interval	Analyse	Data set
Import	Export	Review	Conclusion