



### Sticky Knowledge

#### Data Logging



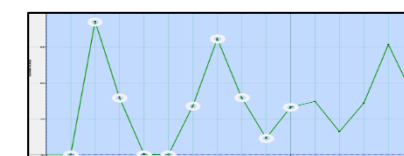
Arduino  
Science  
Journal App



- Choose a data set to answer a given question
- Use data from a sensor to answer a given question
- Identify the intervals used to collect data

### 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.

Some examples are:

- Microphones (sound)
- Camera (light)
- Touchscreen (touch)



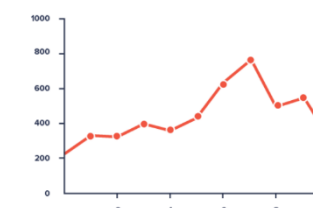
**- Data Loggers:** Data loggers have sensors built into them. They can be used to detect and record data. Data loggers often contain:

- 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.

### Important Vocabulary

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