

Year 6 - Big Data 1 - HT1

Key Vocabulary

Barcode	A machine-readable code of lines and numbers, printed on an item and scanned to identify the item and information about it.
Boolean	A form of data, which consists of (true) 1s and (false) 0s values.
Brand	The mark or logo that identifies the object as belonging to a particular establishment or person.
Commuter	Someone who travels between places on a frequent basis, for example between work and home.
Contactless	Devices or codes that can be read wirelessly or without the need to touch surface-to-surface, object-to-object.
Data	Information used for a specific purpose or investigation.
Data privacy	The right to keep information private and away from those you do not wish to have access.
Encrypt	To secure information by converting it into a code made up of letters, numbers and symbols which cannot be understood by those that do not have access.
Infrared waves	The red section of the electromagnetic spectrum, which is invisible to the eye but can transmit small amounts of data.
NFC	Near Field Communication. Enables data transmission between 2 devices up to 4cm away. NFC is often used for contactless payments from devices such as smart watches.
QR code	Quick Response code. Is presented in a similar way to a bar code and when scanned, can take you to a specific website or provide information.
Radio waves	Invisible electromagnetic waves that can transmit information via an antenna, which converts the electrical signal it receives into another format, for example, a sound wave.
RFID	Radio Frequency Identification is a device that uses radio signals to check where something or someone is.
Signal	A voltage, current or electromagnetic wave that is either sent or obtained.
Systems or data analyst	A person who manages, sorts, analyses and models data to identify key trends and solve problems within a system.
Transmission	When something is passed or sent to another place.

Infrared light can be used to:

- > Transmit small amounts of data, such as a remote control beaming the instruction to turn the TV on and off or change channel.
- > Provide warmth from electrical heaters.
- > Heat up and cook food.
- > Detect heat through thermal imaging cameras.

How do barcodes help libraries track book borrowing?

1. Choose a book to borrow from the library and find the barcode.
2. Take it to the self-scan to check the book out of the library.
3. The system will warn the librarian that your book is almost due back.
4. Return and scan the book to check it back in to the library.

To know statements	✓ X
I know why barcodes and QR codes were created and how the data contained within barcodes and QR codes can be used by computers. I can create (and scan) own QR code using a QR code generator website.	
I know how infrared can be used to transmit a Boolean type signal.	
I know how RFID works, recall a use of RFID chips, type formulas into spreadsheets. I know how to type formulas into cells using a spreadsheet	
I know how to enter real time data into a spreadsheet. I can presenting the data collected as an answer to a question. I can recognise the value of analysing real time data.	
I know how to data within an Excel spreadsheet by inserting a table. I can recall how RFID can be used in data transfer.	

What can you remember from previous units?
 What data does the Mars Rover collect?
 What is binary? Can you count in binary?
 What input, processing and output does Mars Rover undertake?

Anything else you have learnt? What have you enjoyed?