

SUBJECT: BTEC Tech Award Digital IT

UNIT: Component 2: Learning Aim A



Characteristics of data and information

Data has no meaning or context. Data is often stored in spreadsheets or databases. Data needs to be given a clear meaning or context to become information. Information is processed data with meaning and context.

For example, the class achieved an average of 71% in Science.

The characteristics of data are:

- No meaning
- No structure
- No context
- Unprocessed

The characteristics of information are:

- Has meaning
- Has structure
- Has context
- Is processed

Representing information

- Text
- Numbers
- Tables
- Charts
- Graphs
- Infographics

Qualitative information uses the qualities of something that are described rather than numeric. For example, a description of the weather could be: "It's a glorious day. Utter perfection. The snow was pristine and an incredibly deep blue filled the sky."

Quantitative information includes any information where we know the quantity and can measure it. For example, a description of the weather could be: 27°C

Ensuring data is suitable for processing

It is important that when data is collected it is as accurate as possible. In IT, the phrase Garbage In, Garbage Out (GIGO) is often used. If poor quality data is collected, then after processing, poor quality data will be output.

Validation is checking that data meets certain rules.

Verification is checking that information is correct.

Data collection

Primary data is often collected direct from the participants using:

- Surveys
- Interviews
- Observations
- Polls

The data is secondary as it wasn't originally collected by you or the organisation you work for:

- National statistics (ONS in the UK)
- Data from other websites, especially companies that collect data
- Census
- Other companies

Threats to individuals

Invasion of privacy
Identity Theft
Fraud
Inaccurate Data
Hacking
Social Engineering – Phishing emails

Data Protection Act 2028:

The Data Protection Act 2018 controls how your personal information is used by organisations, businesses or the government.