# Exploring Databases
## Grade 4 ICT

**Learning Objective: I can define the data type to be used in a field**

### Read below article from your book

**Data types**

Computers need to know what type of data you want them to store. For example, will the field need to store a number? Will it need to store letters?

The table describes some common data types you find in a database.

**Order:** the arrangement of items, for example alphabetical order.

| Data type | Description | Examples |
|---|---|---|
| Text | This will store letters (a-z, A-Z), symbols (for example, !,./") and numbers that you will not do calculations with (for example, a telephone number). | • Hello<br>• this is all text!!<br>• This is also text 123<br>• 0028374637282 |
| Number | This will only store numbers. | • 123<br>• 5<br>• 2.6<br>• 59865212356 |
| Date | This will store dates, that is, day, month, year (you can change the **order** you want it displayed in). | • 1/2/1990<br>• 12/12/1953 |
| Boolean | This will only store Yes or No. | • Yes<br>• No |
| Currency | This will store numbers with a currency symbol, for example, £, $. | • £2.00<br>• $3999.99 |

**Did you know?**

Boolean got its name from a mathematician named George Boole.

It means one, or the other, that is, TRUE or FALSE, yes or no.

A person's first name uses letters. The only data type that allows letters is Text. The data type for the field 'First Name' is Text.

A person's age uses numbers. You might want to do calculations with the number, for example, add ten to it. The data type for the field 'Age' is 'Number'.

A question with only two possible answers can be stored as a Boolean, for example: Do you have a television? Yes or No.

# Activity

identify the data types for each field below for the sample 'Superheroes' database

| ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |

| Superhero Name ▾ | First name ▾ | Second nam ▾ | Gender ▾ | Fly? ▾ | Invisibility? ▾ | Mask? ▾ |
|---|---|---|---|---|---|---|
| Cloudlily | Cindy | Cross | Female | ☑ | ☑ | ☐ |
| Fennick | Krit | Yuvaves | Male | ☑ | ☐ | ☐ |
| Moledigger | Kevin | Cave | Male | ☐ | ☑ | ☑ |
| Pollenander | Pru | Fena | Female | ☐ | ☑ | ☑ |
| Rainymph | Zhang | Chen | Female | ☑ | ☑ | ☐ |
| Skyman | Kim | Yau | Male | ☑ | ☐ | ☑ |
| Swiftswan | Kali | Okeke | Female | ☐ | ☑ | ☐ |
| Treewisp | Tracey | Scott | Female | ☑ | ☑ | ☑ |
| ✳ | | | | ☐ | ☐ | ☐ |

| ↑ | ↑ | ↑ | ↑ | ↑ |

| ty? ▾ | Mask? ▾ | Date Of Birt ▾ | Suit colour ▾ | Special Ability ▾ | Country ▾ | Height(cm) ▾ |
|---|---|---|---|---|---|---|
| | ☐ | 05/05/1995 | White | | Russia | 166 |
| | ☐ | 25/12/1989 | Other | Produce fire | Thailand | 184 |
| | ☑ | 05/03/1983 | Other | Disappear into the ground | Australia | 182 |
| | ☑ | 06/12/1988 | Yellow | | Peru | 162 |
| | ☐ | 15/11/1980 | Blue | Manipulate water | China | 167 |
| | ☑ | 01/01/1991 | Blue | Control birds | Iceland | 178 |
| | ☐ | 09/09/1990 | White | Hold breath underwater | Madagascar | 164 |
| | ☑ | 18/10/1995 | Green | Control weather | Canada | 164 |
| | ☐ | | | | | 0 |

1) this will store letters, symbols and numbers that you will not do calculations with (ex. Telephone number)

    A. number               C. currency

    B. text                  D. date

2) this will only store number

    A. number               C. currency

    B. boolean             D. date

3) this will store dates, that is, day, month, year ( you can change the order you what it displayed in

    A. number               C. currency

    B. boolean             D. date

4) this will only store YES or NO

    A. number               C. currency

    B. boolean             D. date

5) this will store numbers with a currency symbol. For example $, €,£,¥

    A. number               C. currency

    B. boolean             D. date

6) the arrangement of items. For example, alphabetical order

    A. filter                C. number system

    B. order                D. query

**Match the following**

1. Text

2. Number

3. Date

4. Boolean

5. Currency

6. Order

- this will only store YES or NO

- this will store letters, symbols and numbers that you will not do calculations with (ex. Telephone number)

- the arrangement of items. For example, alphabetical order

- this will only store number

- this will store numbers with a currency symbol. For example $, €,£,¥

- this will store dates, that is, day, month, year ( you can change the order you what it displayed in