

ICT – Year 7/It – Wed -13-01-21 – Database

Databases in Excel

LO: Explain the main features of a database

Homework Solutions

1. Match the chart types to the description of how they can be used.

Chart	Purpose
	Finding maximums and comparing
	Seeing what the majority is
	Show changes over time

LO: Explain the main features of a database

Homework Solutions

a) What is the chart title?

% Students gaining A*-C at GCSE in 2015

b) Which subject did boys do better in than girls in 2015?

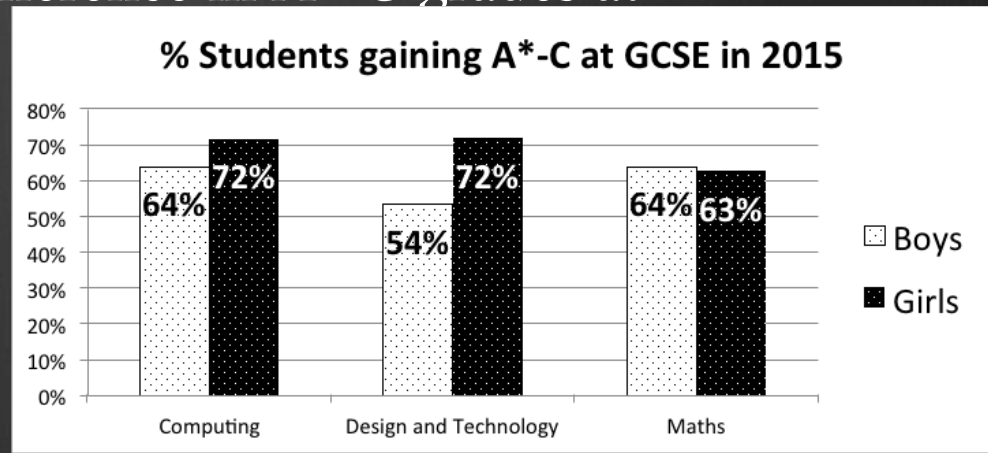
Maths

c) What percentage of girls who took Computing GCSE in 2015 gained an A* to C grade?

72%

d) Which subject has the biggest difference in A*-C grades at GCSE?

Design and Technology



LO: Explain the main features of a database

This Lesson

Explain the main features
of a database.

LO: Explain the main features of a database



What is a
database?


LO: Explain the main features of a database

Database

Definition of *database* in English:

database 



Pronunciation: /'deɪtəbeɪs/ 

NOUN

A structured set of data held in a computer, especially one that is accessible in various ways:

'a database covering nine million workers'

LO: Explain the main features of a database

The Human Database

- ⊗ Did you know, this room is like a database? Each of you is a **record**.
- ⊗ We can **query** the database using **criteria** to find out **information** from the **data**.
- ⊗ For example:
 - ⊗ How many people have **Eye Colour - Blue**?
 - ⊗ How many people are **Gender - Male**?
 - ⊗ How many people use **Transport To School – Bus**?
- ⊗ In these cases we apply a **criteria** to a particular **field**.

LO: Explain the main features of a database

Fields and Records

- ⦿ **Fields** are like the column headers – they tell you what type of information they contain. E.g. “Name”, “Gender”
- ⦿ **Records** are the individual rows in the database. E.g. “Mark, Male, Blue, Brown, 7”

	A	B	C	D	E
1	Name	Gender	Eye Colour	Hair Colour	Shoe Size
2	Mark	Male	Blue	Brown	7
3	Priscilla	Female	Brown	Blonde	6
4	Hassan	Male	Brown	Brown	3
5	Iman	Female	Brown	Brown	5
6	Demi	Female	Blue	Blonde	3
7					

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Recap: Data Types

- ⦿ Fields can contain different TYPES OF DATA
 - ⦿ **Text** - Any kind of text or number
 - ⦿ **Number** - Any kind of number
 - ⦿ **Currency** - Only money (£ or \$ for example)
 - ⦿ **Date** - Such as 03/11/14
 - ⦿ **Time** - Such as 10:55
 - ⦿ **Boolean**- Such as Male/Female

LO: Explain the main features of a database

Creating a database

- ⊗ What are some of the different pieces of data we could collect about this class?
- ⊗ What data type will it be?
 - ⊗ Text
 - ⊗ Number
 - ⊗ Currency
 - ⊗ Date
 - ⊗ Time
 - ⊗ Boolean

Extension:
What data type
would a phone
number be?

LO: Explain the main features of a database

Primary Key

- ⊗ How can we make sure that each record is **unique**?
- ⊗ One of our fields will be called a **primary key**.
- ⊗ The primary key must not contain any **duplicates**.
- ⊗ All databases must contain a unique **ID** for each record.
- ⊗ Can you think of a good **Primary Key** for this class?
 - ⊗ **Hint: How do you log in to your computers?**

LO: Explain the main features of a database

Task 1

- ❁ You have been asked to create a database about the other students in the class.
- ❁ Your database should contain at least 5 **fields**, and 5 **records**.
- ❁ You should create a list to explain what your **fields** are, your **primary key** and a list of each record's unique **ID**.

	A	B	C	D	E
1	User Name	Gender	Eye Colour	Hair Colour	Shoe Size
2	Mark1	Male	Blue	Brown	7
3	Priscilla1	Female	Brown	Blonde	6
4	Hassan1	Male	Brown	Brown	3
5	Iman1	Female	Brown	Brown	5
6	Iman2	Female	Blue	Blonde	3
7					
8	Fields:	User Name, Gender, Eye Colour, Hair Colour, Shoe Size			
9	Primary Key:	User Name			
10	Record IDs:	Mark1, Priscilla1, Hassan1, Iman1, Iman2			
11					

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Extension

- **Make the** column headers **BOLD**
- Fill each column with a different colour
- **Change the text in the Records to italic.**

	A	B	C	D	E
1	User Name	Gender	Eye Colour	Hair Colour	Shoe Size
2	Mark1	Male	Blue	Brown	7
3	Priscilla1	Female	Brown	Blonde	6
4	Hassan1	Male	Brown	Brown	3
5	Iman1	Female	Brown	Brown	5
6	Iman2	Female	Blue	Blonde	3
7					
8	Fields:	User Name, Gender, Eye Colour, Hair Colour, Shoe Size			
9	Primary Key:	User Name			
10	Record IDs:	Mark1, Priscilla1, Hassan1, Iman1, Iman2			
11					

Activity2: Database

- ⊗ Create a document in PowerPoint
- ⊗ This document will be used as a revision tool.
- ⊗ You need to include:
 - ⊗ What is a database?
 - ⊗ What is a field and a record?
 - ⊗ What is the difference between a flat file and a relational database?

Extension

Activity 3 : Create a database with information that your school will hold about you.

Surname						Class

LO: Explain the main features of a database

Plenary

Can anyone of explain some of the main features
of a database?

Can you give me an example?