Subject: Computing
Topic: Spreadsheets/ Databases

Summary of key information:
•**What is a database?**
•A database is a collection of data on one topic or theme. A database package like Microsoft Access is an example of software we use for data handling.
•**What is a table?**
•This is where the data is stored. There may be one or more tables.
•The table consists of a number of fields, each of which is a label for the individual data item stored.
•**What is a field?**
•Each column heading is called a field.
•These are the categories under which we store information.
•**What is a record?**
•Each row in the table is called a record.
•It contains information about one thing.
•**What is a query?**
•Queries allow you to ask the database a question to answer. They are saved searches that can be run when you need them. The results of a query search may change when a data are added or removed.
•**What is a report?**
•Reports are a way of presenting data in an attractive and readable form to be printed.
•Like queries, reports change when the data they are based on changes.

Key terms: Database, Table, Query, Field, Record, Column, Report, Parameters, Validation

Summary of key information:

•**What is validation?**

•Data entered in a database needs to be correct. Otherwise, any output from the database could be flawed, and decisions based on the information could be wrong.

•Incorrect data needs to be trapped and rejected, and the user told what is wrong, so that the data can be re-entered, correctly.

•Data can be incorrect for two reasons. The data may be:

   – Valid – i.e. reasonable – but untrue, or
   – Invalid – i.e. – unreasonable and not at all suitable

•Validation techniques, of which there are many, can be used to check that the data is reasonable.

•**Types of Validation**

•Range Check - A range check rejects data outside a valid range of values.

•List Check - A list check compares the data entered against a list of acceptable values that are already saved within the database.

Tasks to complete in preparation for your end of half term multiple choice quiz are:

TASK 1:
Define key terms associated with Databases?

TASK 2:
What databases do you know exist? Think about where your information might be kept for future use.

Head over to Google classroom or use your revision guide to find other activities to help you extend and secure your knowledge.

Summary of key information:
•What is a Spreadsheet?
•A spreadsheet or worksheet is a file made of rows and columns that help sort data, arrange data easily, and calculate numerical data. What makes a spreadsheet software program unique is its ability to calculate values using mathematical formulas and the data in cells.
•Spreadsheets are made up of rows (numbers) and columns (letters). Combining these together gives you a cell reference (e.g. A4).
•Data can be formatted into many different types – such as text, dates, numbers and percentages.
•Formulas
•A formula is a mathematical equation that be applied to a set of data.
•All formulas begin with an equals sign.
•Formulas can be written and edited in the formula bar.
•Functions
•Like formulas, functions allow the processing of data found within the cells of a worksheet. Functions also allow for more complex processes to be calculated and can use pre-written commands such as AVERAGE or SUM.

Key terms: Workbook, worksheet, cell, column, row, cell reference, formula, function, formatting
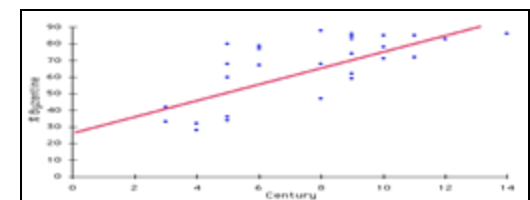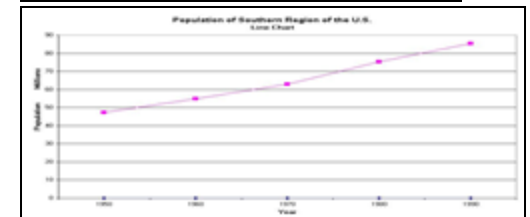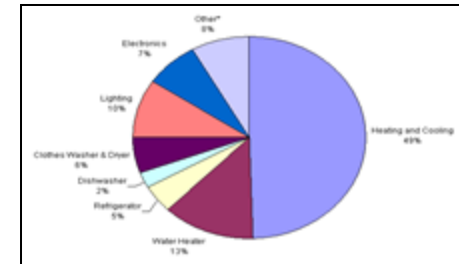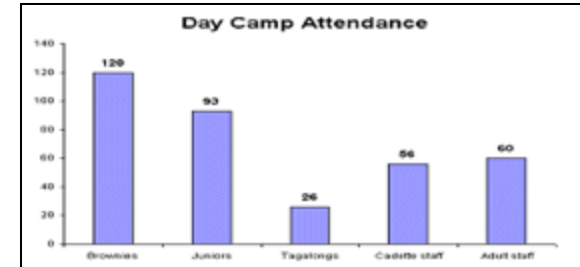
Summary of key information:
•**Graphs and Charts**
•**Column** - Displays a category on the x-axis and a value on the y-axis. The categories are discrete, separate from each other.

•**Pie** - Shows the contributions of categories to a total

•**Line** - Used when the data on the x-axis isn't in categories, For example time.

•**Scatter** - Shows the relationship between two sets of data – one on the x-axis and one on the y-axis. Has a trend line to make the relationship clearer.

Key terms: Workbook, worksheet, cell, column, row, cell reference, formula, function, formatting