

# Objects, Properties, Methods, and Events

There is an entire grammar of objects, properties, methods and events associated with Excel VBA. Just as there are rules for using adverbs and adjectives in a certain way in English, objects, properties, methods and events have certain grammatical requirements in VBA. In the early stages we learned English by using it without knowing grammar, you'll find that up until now, we have been doing the same with VBA.

However, before you can write the VBA instructions needed to customise an application fully, you must become familiar with the objects that make up the Excel Object Model.

The Object Model contains a list of objects (nouns) that you can work with in Excel. Commonly used objects include workbooks, worksheets, a cell, a range of cells, a chart, toolbars and forms.

In VBA you must identify an Object before you can do something to it:

| <b>Properties, Methods, Events:</b>   | <b>Structure</b>   |
|---|--|
| <i>Change the value of one of its <b>properties</b> (properties define an object's characteristics)</i>           | ObjectName.property<br><br><i>e.g. name, size, colour</i>  |
| Apply one of the object's <b>methods</b> (pre-written Microsoft code which tells the object to perform something) | ObjectName.method<br><br><i>e.g. Print, Copy</i>   |
| <i>Set an <b>event</b> (an action in response to a users action)</i>  | ObjectName.event<br><br><i>e.g. clicking on a button on Screen, opening up a particular workbook</i> |

## We have many "objects" around us in our everyday lives.

An object such as a person could have their own set of characteristics (properties) e.g. hair colour, eye colour, size and ways of doing things (methods). In the (event ) that some one asks them to do something they can choose to respond or not respond.

An object such as a Town contains streets, which contain buildings, which contain rooms, which contain furniture.

Some properties of the town object could be the town's name, the street name, the building name and number, the room location, the type of furniture in the room e.g. a chair

The chair could have the following: a **property** called (*legs*), a **method** called (*sit*) and an **event** such as (*break*).

