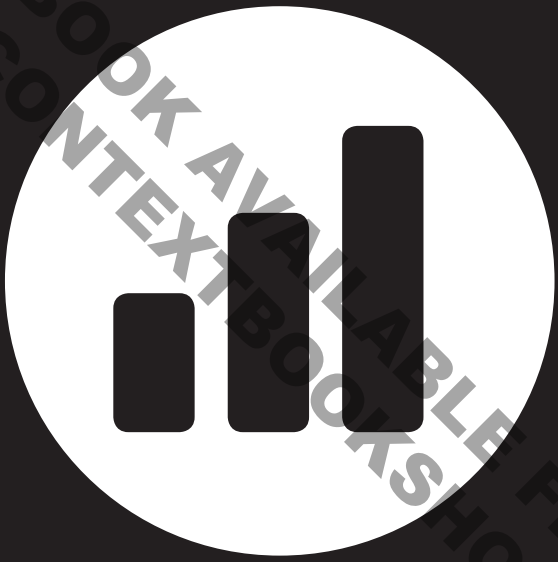
CONTENTS



PREPARING TABLES AND GRAPHS

01

Tables and graphs form a crucial part of any scientific or technical communication, so it is very important to plan and design these items carefully. To have the greatest impact they must present the technical or experimental data clearly and legibly. They need a descriptive heading so that they can be understood without detailed reference to the main text. They should look elegant and attractive on the page to encourage the reader to study them. All superfluous data must be excluded. Do not present the same data in a table and in a graph. Very extensive tables and graphs are means of transmitting information. However this is not the same as communication. Tables and graph which are too complicated defeat the objective of communication as frequently the reader will not bother to work through them.

TABLES

In many technical reports there is a need to present data in the form of a table. Creating tables is fairly simple with most word processing systems. The title of a table is usually on top of the table.

Care should be taken in table construction to avoid designs that leave blank spaces in tables. A dash (-) or zero (0) should not be used to indicate absence of data in a table. A dash can be confused as a minus sign and zero is a number and could be an actual result. For numbers smaller than 1.00 it is better to lead with a zero e. g. 0.527. It looks better and it is easier to read than .527. The use of an initial zero also makes the numbers easier to arrange in columns. It is generally best to avoid using more than 5 columns in a table. Tables 1 and 2 illustrate some of these points.

TABLE 1. FATTY ACID COMPOSITION OF FOODS A, B, C AND D.

Fatty acid	Ingredient A	Ingredient B	Ingredient C	Ingredient D
Butyric (mg/g DM)	.1	.2	.4	.3
Palmitic (mg/g DM)	8.4	-	7.8	7.9
Stearic (mg/g DM)	1.4	1.8	-	1.2
Oleic (mg/g DM)	14.5	12.3	15.7	13.6
Linoleic (mg/g DM)	.7	.5	.3	.9

TABLE 2. FATTY ACID COMPOSITION OF FOOD INGREDIENTS A, B, C AND D.

Fatty acid (mg/g DM)	Ingredient	Ingredient B	Ingredient C	Ingredient D
Butyric	0.1	0.2	0.4	0.3
Palmitic	8.4	nd	7.8	7.9
Stearic	1.4	1.8	nd	1.2
Oleic	14.5	12.3	15.7	13.6
Linoleic	0.7	0.5	0.3	0.9

nd: not determined

Table 2 is much less complicated than Table 1 even though it presents the same data. The units for the fatty acids (mg/g DM) is the same for all of them and therefore can be given at the top of the column as: Fatty acid (mg/g DM). This makes the table less complicated as it is not necessary to repeat (mg/g DM) on every line. Also Table 2 is now shorter than Table 1 and fits on the page better. Writing 0.1 in place of .1 is clearer. Where a measurement has not been made this can be indicated by: nd.

WRITING REPORTS AND TECHNICAL ARTICLES

02

Almost all companies, universities and government agencies require information or feedback in written form. Writing correct and comprehensible reports or scientific articles is hence a prerogative to a successful professional life. The purpose of a report or article is to provide information to an individual or a whole group of people. The person writing the report is expected to be more educated in the subject than his readers. Therefore it is important to use clear and easily understandable English.

Several aspects must be taken into consideration before starting to write because they will determine the outcome of your writing process.

- Who is the intended reader of your document? For whom are you writing the document? It could be the managing director of a company, a newspaper publisher, an industrial supplier, a journal editor, a government employee or professional colleagues.
- What is expected of you? You can be asked to explain a project, to account for certain actions or investments, to report about a meeting or to describe your recent scientific work.
- What are your own objectives in writing the document? You can ask for funding, for more information about a project, you can apply for a job, submit a manuscript etc.

It is useful to keep these three points in mind to ensure that what you are writing is suitable and understandable, that it addresses the right audience and that you can achieve your own objectives.

Furthermore, it is important to present your materials in such a way that it helps the reader to quickly understand the important information and to easily read through the document. Scientists and business people are usually very busy nowadays. Therefore it is very important that your technical, scientific or business document obtains and keeps the reader's attention.

- **WHO IS THE INTENDED READER?**
- **WHAT IS EXPECTED OF YOU?**
- **WHAT ARE YOUR OWN OBJECTIVES IN WRITING THE DOCUMENT?**

When writing business reports or scientific articles, appropriate structural format needs to be considered. Every scientific journal has a particular style that must be followed. Abstracts for congresses always have a particular format. Many companies have their own in-house style.

Thought also has to be given to the form of presentation of the information. Documents do not only consist of words. Tables, pie charts, graphs and mathematical formulas may also be used in various documents.

Writing business reports or scientific articles requires attention to several structural features of writing.

- Sentence structure and paragraphs
- Title
- Abstract or Summary
- Introduction
- Materials and Methods
- Results
- Tables and Figures
- Discussion
- Conclusion
- Acknowledgements
- Bibliography
- Appendix

PREPARING ORAL PRESENTATIONS

03

There are many events in the modern world where oral presentations have to be given. This can be at internal meetings where new initiatives or current results would be presented to superiors and colleagues. Candidates for a new position in an international company are often requested to make an oral presentation as part of the assessment process. Many oral presentations are made at scientific conferences. Business people make presentations to convince potential investors to fund a project. In many cases today these will have to be made in English and both presentations and English language skills can well make the difference between success and failure.

In most cases the presenter will have a good knowledge of the subject of the presentation, but an effective presentation is more than just displaying data. The biggest impact on the audience comes from the delivery of the information not necessarily from the information itself. Conversely a poor presentation may not generate the impact that the data deserve if the audience could not easily follow or understand the presentation.

Every presentation needs a logical sequence that the audience can follow. Also the presentation must be tailored to the audience. More definitions and less scientific terminology will be needed when speaking to the general public than when presenting at

a scientific conference. It will be necessary to focus on the business impact behind the technology when speaking to business people or potential investors.

It is also very important to have a clear idea of what is your own objective in making the presentation. Most presentations are limited to 15-45 minutes and therefore only a few key points can be made. What message do you want the audience to receive? For example:

"here is a new analytical method"
"a new programme with several benefits for public health"
"this project can generate successful sales."

Do not ask the audience questions but make positive statements about the topic you are presenting.

A very important aspect of preparing and making an oral presentation is adequate practice. The finished presentation should be practised before the actual presentation to be sure that the time is correct. All presentations using computer-generated visual aids or graphics such as Powerpoint should be checked on a presentation screen before delivery. Frequently colour schemes which look good on a computer screen look quite different on a large presentation screen. For example red on a coloured background often shows up poorly on a large screen.

Every presentation should have a beginning, a middle and an end. Many people still overlook or forget this simple rule.

The beginning should introduce the subject and give a brief idea of what is to come, like chapter headings in a book. The middle should explain those chapter headings in more detail. The end is very important as that is what the audience will remember most easily and will have the greatest impact. Therefore the end should contain a summary of the major or central idea in the presentation.

A major challenge with an oral presentation is to attract and maintain the audience's interest. Your objective is to ensure they understand and remember you main message. As soon as a presentation stops being interesting the attention of the listeners will fade away. Generally at the beginning of a presentation audience attention will be high due

WRITING LETTERS AND CVs

04

LETTERS

Even in the modern world of E-mail and text messages, formal letters still need to be written in business and science. It is also important to remember that E-mail is a written form of communication and therefore most of the points discussed below in terms of writing formal letters also apply to E-mails.

It is always best to plan or draft the letter before you write the final version. A letter generally must be short and to the point. Keep the paragraphs short. Use short sentences that will be easily understood.

Reduced punctuation is commonly used for letters. This means that apart from the main body of the letter, punctuation is kept to a minimum. There are no commas after the lines of the address and no full stops after abbreviations. The address should be placed at the top right-hand corner of the page. Each line of the address should be aligned vertically. The date should be set underneath it with a line space above.

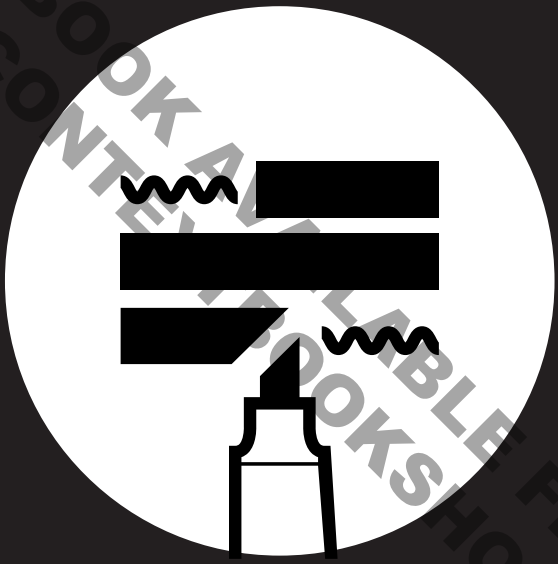
BASIC ENGLISH GRAMMAR

05

A lot of our modern languages stem from the Indo-European languages. These are Proto-Germanic, Celtic, Italic, Greek, Albanian, Armenian, Anatolian, Balto-Slavic, Indo-Iranian and Tocharian. They all have the same origin, namely the Proto-Indo-European language which was spoken in Europe *ca.* 4000-3500 B.C., but they all have quite a different history. The main reason is that language is a living thing and is never static. Sounds change, pronunciation can differ, new words are created or borrowed from other languages and other words simply become disused. That is why some of the languages today are very similar, while others can differ immensely. In this chapter we describe the basic grammar rules as they are used in the English language.

WORDS

In most languages new words are derived or compounded from elements original to that language, English in contrast frequently uses a French or Latin word instead.



VERBS AND TENSES

06

A basic knowledge of the verbs and tenses is indispensable to understand the structure of the English language.

There are quite a number of differences in the uses of verbs and tenses between the different languages. For example, not all languages use the same auxiliary as the English *have* to form the past perfect tense. In English we often see gerunds, which are verb forms that are being used as a noun. Other verbs such as **to learn, to teach, to live, to borrow, to know** and **to understand** often cause confusion because they can be interpreted in different ways or have different meanings. In French **je sais nager** means I know how to swim but **je peux nager** means I have the possibility to swim, while in English **I can swim** is used in both cases. The correct use of the verbs and verb forms and the typical problems that can occur with verbs and their tenses will be discussed and illustrated in this chapter.

SENTENCE BUILDING

07

The vital skill of effective writing is to arrange words and phrases into well-formed sentences. This applies to all languages. This arrangement of words and phrases into well-formed sentences is called syntax.

In English, neither the definite article the, nor the personal pronoun you is subject to declension (unlike for example German: der- die- das-die or du-dich-dir). They remain the same in all grammatical situations. Also many verbs have the same form for different persons in the present and past tenses.

I	give, go, catch, make, run, see, send, travel, work,
You (singular and plural)	give, go, catch, make, run, see, send, travel, work,
We	give, go, catch, make, run, see, send, travel, work,
They	give, go, catch, make, run, see, send, travel, work,
I	gave, went, caught, made, ran, sent, travelled, worked
You (singular and plural)	gave, went, caught, made, ran, sent, travelled, worked
He, she, it	gave, went, caught, made, ran, sent, travelled, worked
We	gave, went, caught, made, ran, sent, travelled, worked
They	gave, went, caught, made, ran, sent, travelled, worked

NUMBERS, TIME AND PUNCTUATION

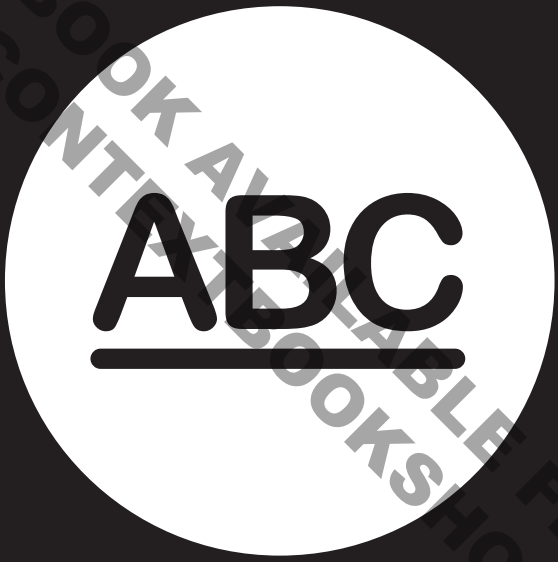
08

NUMBERS

Reading or writing numbers in different languages can be confusing. This is due to the order of the numbers used. In English, you read the tens first, while in other languages those might come last.

NUMBERS				
Number	English	French	DUTCH	GERMAN
21	**twenty-one**	vingt et un	eenentwintig	einundzwanzig
47	**forty-seven**	quarante sept	zevenenveertig	siebenundvierzig

Be extra careful especially when writing scientific or business texts, because it will make a world of difference to report that there were 83 boxes of product in the warehouse if there were in fact only 38 !



SPELLING

09

The rules for spelling in English are not very consistent. The pronunciation of words has changed a lot over the years, whilst the spelling has usually remained the same. Consequently English is not a very phonetic language as are many other European languages.

Luckily, there are some general rules for spelling in English.

One simple rule is that in many words **i** comes before **e**

ach**ie**ve	bel**ie**ve	fr**ie**nd	p**ie**ce	retr**ie**ve

except after **c**

c**ei**ling	dec**ei**t	perc**ei**ve	rec**ei**ve

However there are also many exceptions where **e** comes before **i**

eight	fo**ei**gn	h**ei**ght	n**ei**ghbour	v**ei**n

VOCABULARY

10

Many English words look similar or sound the same although they can have quite different meanings. Other words may have the same spelling but have different meanings. There are also many words with similar spelling but different meanings. These words may cause recurring problems, even for an advanced student of English with a solid vocabulary.

HOMOPHONES

English words that have the same pronunciation but different meanings, origins or spelling are known as homophones. These are widely used to suggest multiple meanings, in puns or to deceive the reader as in crossword puzzles.

fair	fare	
new	knew	
night	knight	
plane	plain	
to	too	two

REVIEW EXAMPLES

"We all accepted the proposal except for William. He was averse to the whole project because he thought it would have adverse consequences for his members."

"It helps to remember that "advice" and "practice" are both nouns but "advise" and "practise" are both verbs."

"The construction of wind turbines detracts from the beauty of the countryside and the noise they make distracts me from my work."

"Gorillas are gentle animals whereas guerrillas are far from gentle and are often terrorists."

"You must insure your car in order to ensure that you can pay compensation to another person, if you have an accident."

"After a long illness he has become so weak that he cannot work for a full week of 40 hours."