

1 Nouns: plurals, countable versus uncountable

1.1 regular plurals

1. To form the plural of most countable (1.6) nouns (including acronyms) simply add *s* or *es* to the end of the word.
2. In a *noun + of + noun* construction where the two nouns indicate a single entity, the first noun is made plural.
3. Adjectives are never made plural.
4. Nouns that act as adjectives are not made plural.
5. A noun which follows a number (or an implied number) is used in the singular form when acting as an adjective. Note the use of hyphens (25.6).
6. *-fold*, which is a suffix to indicate a specified number of parts or times, does not have a plural *-s*. Note the use of hyphens (25.6).

	YES	NO
1	We tested the engines of three cars , two taxis , six trains , and four buses .	
2	Several points of view have been put forward in the literature.	Several point of views have been put forward in the literature.
3	We also analysed three other papers on this topic.	We also analysed three others papers on this topic.
4	Car production is rising, but car sales are falling. = The production of cars is rising but the sales of cars are falling.	Cars production is rising, but cars sales are falling.
5	I have a 24-year-old student helping me in the lab. = The student is 24 years old.	I have a 24-years-old student helping me in the lab.
5	This work is part of a three-phase study into psychotic behavior amongst TEFL teachers.	This work is part of a three-phases study into psychotic behavior amongst TEFL teachers.
5	This would require a multi-megabyte memory.	This would require multi megabytes memory
6	The increase was 3-fold . = There was a 3-fold increase.	The increase was 3 folds . There was a 3 folds increase.

1.2 irregular plurals

1. Some nouns have irregular plurals: *child / children, man / men, woman / women, half / halves, knife / knives, life / lives, foot / feet, tooth / teeth.*
2. *Fish* and *sheep* are not made plural.
3. The plural of *mouse* (the animal) is *mice*, for the computer device the plural is *mouses*.
4. *Data* can be followed by the singular or plural – the plural form is more common in science. The singular form of data is *datum*, but *data* is more commonly used in both the singular and plural.
5. Datum / Data is an example of a Latin singular and plural. Other Latin and Greek words commonly used in scientific English are: *apex / apices, axis / axes, analysis / analyses, criterion / criteria, lemma / lemmata, optimum / optima, phenomenon / phenomena, vertex / vertices.*

	YES	NO
1	The patients consisted of three children , four adult men , and six adult women , all with persistent problems with their teeth .	The patients consisted of three childs , four adult mans , and six adult womans , all with persistent problems with their tooths .
2	This paper compares the relative brain powers of fish and sheep .	This paper compares the relative brain powers of fishes and sheeps .
3	All subjects were provided with PCs, monitors, headphones and mouses .	All subjects were provided with PCs, monitors, headphones and mice .
4	This data is / These data are inconsistent.	
5	This was true of the first analysis, but not of the other analyses .	This was true of the first analysis, but not of the other analysises .

1.3 nouns ending in -s

Some singular nouns finish in 's'. Such words behave in different ways:

1. *Economics, electronics, mathematics, physics, politics, statistics* – when these words describe a subject of study, they require a verb in its singular form (e.g. *is* not *are*).
2. If the words in Rule 1 are not used in the sense of a subject of study, they generally require the verb in the plural, but are also found with a verb in the singular. An exception is *electronics* which is found, indifferently, with a singular or plural verb.
3. *Means* can be the plural of *mean* (i.e. average). However, *means* is singular when the meaning is *way*, for example, *a means of transport*.
4. *News* is uncountable (1.8), also medical words such as *diabetes, mumps, and pus* are uncountable.
5. Nouns that end in *-is* form their plural with *-es* (e.g. *one analysis / thesis, two analyses / theses*).
6. *Species* is both singular and plural.

	YES	YES
1	Economics is one of the most popular subjects amongst students in our university.	
2	Statistics is a distinct mathematical science, rather than a branch.	It is not clear where these statistics come from.
2	In this case the physics are Eulerian invariant.	If the physics is the same in central and peripheral collisions, then Eq. 1 yields ...
2	Competition is different in knowledge-based industries, because the economics are different.	Climate change is a subject of vital importance but one in which the economics is fairly young.
3	This means of transport is the fastest.	Prison is another means of controlling young offenders.
4	This news is not good.	
5	In my thesis I conducted an analysis of ...	In their theses they conducted several analyses of ...
6	Genome transplantation in bacteria: changing one species to another	These species are subdivided into serotypes.

1.4 nouns indicating a group of people

1. Some nouns that have a plural form are often used in the singular but with either a singular or a plural verb. Such nouns all relate to humans and include: *army (navy, air force), audience, board, cabinet (council, government, senate etc.), class* (as in group of students), *committee, company (firm, corporation etc.), crew, department, faculty, family, jury, majority, media, minority, public, staff, team*. The choice of singular or plural depends on whether the people who make up the group are acting as individuals (generally plural verb preferred) or as a collective unit (generally singular verb).
2. *People* requires a plural verb. *persons* is often used as a more formal version of *people*. *persons* is frequently found in medical and psychology research papers, or when talking about the capacity of a machine to hold a certain number of persons. In other cases *people* is often more appropriate particularly when it refers to people in general, rather than a subset.
3. *Police* is followed by a verb in the plural (e.g. *the police do not intervene*).

	YES	NO
1	The class is made up of 15 students.	The class are made up of 15 students.
1	The board of examiners is / are authorized to make decisions regarding ...	The board of examiners are a statutory body established by the department.
2	Under pressure, many people admit that they believe in ghosts.	Under pressure, much people admits that they believe in ghosts.
2	Title: Prevention of heart disease in older persons	
	Title: A hypnotherapy treatment for persons prone to criminal activities	
2	Title: Job satisfaction – How do people feel about their jobs?	Title: Job satisfaction – How do persons feel about their jobs?
3	The police are often perceived as being racist.	The police is often perceived as being racist.

1.5 number-verb agreement

- Generally speaking the noun closest to the verb determines whether the verb is in a singular or plural form. Example: *The majority of **books** **have** now been digitized by Google.* In this example there are two nouns – *majority* and *books* – but *books* is closest to the verb (*have been digitized*).
- *A number of* requires a verb in its plural form; *the number of* requires a verb in its singular form.
- *A set of* or *a series of* requires a verb in its singular form.
- The verb before *more than one* is in its singular form.

	YES	NO
1	Around 40% of the funds have been deposited.	Around 40% of the funds has been deposited.
1	The majority of those interviewed were African Americans .	The majority of those interviewed was African Americans.
1	Only a quarter of these men are still alive.	Only a quarter of all these men is still alive.
2	A number of papers have highlighted this major difference.	A number of papers has highlighted this major difference.
2	The number of papers being published on this topic has increased .	The number of papers being published on this topic have increased .
3	A set of three parameters is obtained.	A set of three parameters are obtained.
3	A series of four experiments was performed.	A series of four experiments were performed.
4	This happens when there is more than one possible answer.	This happens when there are more than one possible answer.

1.6 countable nouns: use with articles

A countable noun is something you can count: 30 books, many manuscripts, 100 apples, several PCs.

1. Before a singular countable noun you must put an article (*a / an* or *the*). For exceptions see 1.7.4.
2. If you are talking about something in general, then do not use *the* with plural nouns.
3. Scientific / technical acronyms (22) whose last letter stands for a countable noun behave like other countable nouns. They thus require an article when used in the singular, and an -s when used in the plural (22.3).
4. After *as* and *in*, a few singular countable nouns are used without any article.

	YES	NO
1	A book is still an excellent source of information.	Book is still an excellent source of information.
1	The book that I am reading is about ...	Book that I am reading is about ...
1	This acts as an alternative	This acts as alternative
1	When I was a student .	When I was student .
1	You cannot leave the country without a passport .	You cannot leave country without passport .
2	Funds are essential for research.	The funds are essential for research.
2	Throughout the world, full professors tend to earn more than researchers .	Throughout the world, the full professors tend to earn more than the researchers .
3	Access requires a PIN (personal identification number).	Access requires PIN (personal identification number).
3	The number of purchases of CDs is only 1% of what it was 25 years ago.	The number of purchases of CD is only 1% of what it was 25 years ago.
4	We used a 5-kR resistor placed in series .	We used a 5-kR resistor placed in a series .
4	All non dummy variables are in log form .	All non dummy variables are in a log form .
4	We used X as input , and Y as output .	We used X as an input, and Y as an output .

1.7 singular countable nouns: use with and without a / an in scientific English

1. Some singular countable nouns can be used with or without an article with no difference. There are no clear rules for this, and usage seems to vary from discipline to discipline, and from author to author.
2. If the noun is followed by *of* (i.e. to add further details), then this noun is preceded by *a / an*.
3. Some singular countable nouns are used without an article when they are used in an extremely generic way.
4. When preceded by *by*, means of transport are used without *a / an*; certain time expressions do not require *a / an* when used with prepositions.

	WITH A / AN	WITHOUT A / AN
1	It is stored in a compact form	It is stored in compact form .
1	As these parameters are fixed, a grammar is determined, what we call a "core grammar"	We call this kind of abstraction "aggregation."
1	These were obtained by using 3-chloro-1-propanol as the internal standard .	These fats were used as internal standard .
1	An analysis of the data showed that ...	Analysis of the data showed that ...
1	... with a probability of 0.25	... with probability 0.25.
1	The software is used under a license from IBM.	The software is used under license from IBM.
2	This analysis indicated that the number of strata could be reduced considerably without a loss in the precision of the values found.	This analysis indicated that the number of strata could be reduced considerably without loss of precision and without loss of generality.
2	The guinea-pigs were housed singly or in pairs at a room temperature of 20–22°C.	The samples were stored at room temperature .
2	This was followed by etching in an aqueous solution of phosphoric acid and chromic acid.	We examined the reaction between methylchloride and chloride ion in the gas phase and in aqueous solution using techniques based on ...
3	Their new perfume depicts a strawberry on the label.	Their new perfume smells of strawberry .
4	They rented a car to travel through India.	They traveled through India by car . They drove by night . They discovered that it often rains in India in [the] summer .

1.8 uncountable nouns: general rules

An uncountable noun is seen as a mass rather than as several clearly identifiable parts, for example chemicals, gases, metals, and materials. There are hundreds of uncountable nouns, some examples frequently used in research are:

*access, accommodation, advertising, advice**, *agriculture* (and other subjects of study), *capital, cancer* (and other diseases and illnesses), *consent, electricity* (and other intangibles), *English* (and other languages), *equipment**, *evidence**, *expertise, feedback, functionality, furniture**, *gold** (and other metals), *hardware, health, industry, inflation, information**, *intelligence, luck, knowhow, luggage**, *machinery**, *money, news, oxygen* (and other gases), *personnel, poverty, progress, research, safety, security, software, staff, storage, traffic, training, transport, waste, wealth, welfare, wildlife.*

The uncountable nouns listed above with an asterisk (*) can be used with *a piece of*. This means that they can be used with *a / an, one* and be made plural. Examples: *a piece of advice, two pieces of equipment, one piece of information.*

Uncountable nouns cannot be:

1. Made plural, i.e. you cannot put an 's' at the end of the word; this means that they are not used with plural verbs (e.g. *are, have*).
2. Preceded with words such as: *a, an, one, many, few, several, these* (i.e. words that in some way indicate that a distinct number of items is involved).

	YES	NO
1	This information is confidential.	These informations are confidential.
1	Feedback from users on usage of the software has shown that ...	Feedbacks from users on usage of the software have shown that ...
1	The news is good – our manuscript has been accepted.	The news are good – our manuscript has been accepted.
2	We need several new pieces new equipment and [some] new software.	We need several new equipments and a new software.
2	Our institute only has a little money available for funding.	Our institute only has few money available for funding.
2	We have not done much research in this area.	We have not done many researches in this area.
2	Written consent was obtained from all patients.	A written consent was obtained from all patients.
2	She has expertise in this field.	She has an expertise in this field.

1.9 uncountable nouns: using a different word or form

1. To express the plural of certain uncountable words, sometimes you need to choose another word.
2. On other occasions you may need to place the uncountable noun in an adjectival position before another noun.

	YES	NO
1	She is an expert in many areas.	She has expertises in many areas.
1	The features of this application are outstanding.	The functionalities of this application are outstanding.
	The functionality of this application is outstanding.	Note: Although theoretically uncountable, <i>functionalities</i> is gaining acceptance
1	They have a new advertisement on TV.	They have a new advertising on TV.
1	I have done several jobs both in industry and research.	I have done several works both in industry and research.
1	They work in research and also for a manufacturing company .	They work in research and also for an industry .
1/2	We need a program / an app .	We need a software .
	We need a software application .	
2	We have a training course tomorrow.	We have a training tomorrow.

1.10 uncountable nouns: more details

1. Some nouns are both countable and uncountable, but with a difference in meaning.
2. Some nouns are used in both their singular and plural forms, with no difference in meaning.
3. Some uncountable nouns can be used in a countable way when preceded by an adjective.

	UNCOUNTABLE	COUNTABLE / PLURAL FORM
1	Paper and coffee are becoming expensive commodities.	She has a coffee (i.e. a cup of coffee) and reads a paper (i.e. a newspaper) every day. She has just finished another paper (i.e. a manuscript)
1	The role of traditional medicine is being undermined by alternative medicine .	The occurrence and fate of medicines in the environment – i.e. how they are absorbed into the water and soil systems – has rarely been investigated.
1	The explosion caused considerable damage to the machine.	The company has been awarded damages (i.e. compensation) as a result of the lawsuit.
1	Dealing with waste is a major problem in the West.	The conference was a waste of time .
1	This work (i.e. this research, manuscript) is worth publishing.	The field of the cultural heritage investigates ways of preserving works of art.
2	This data is fascinating.	These data are fascinating.
2	Teenagers often exhibit behavior that is annoying for adults.	Some autistic children exhibit behaviors that are potentially ...
2	Several devices were tested and their performance was evaluated.	Several devices were tested and their performances were evaluated.
3	This does not imply prior knowledge of ...	She has a good knowledge of English.

2.1 position of the 's with authors and referees

1. The 's is placed immediately after the last letter of the author (or name, country, etc.). Note: do not use *the* before the name of the author.
2. Even if the last letter of the author's name is an s, then still put an 's. Exceptions: non-English surnames that end in a silent -s (e.g. *Camus' first novel, Descartes' meditations*).
3. When a paper has been written jointly by two authors, only put an 's after the last name or after et al. A similar rule applies to compound nouns (e.g. *his mother-in-law's house*).
4. If two papers were written by two authors separately, then the 's must be used for both authors.
5. If the noun is in the plural (e.g. referees, those authors, editors), then put just an apostrophe (i.e. no s) after the plural -s.
6. When a referee is referred to by a number, put the 's after the number.

	YES	NO
1	Simpson's paper is an excellent introduction to the topic.	The Simpson's / Simpson paper is an excellent introduction to the topic.
1	We have answered the referee's questions there is just one referee involved	We have answered the referee questions.
1	I have just received the editor's decision along with the committee's report.	I have just received the editor decision along with the committee report.
2	Jones's seminal paper.	Jones' seminal paper.
3	Smith and Simpson's paper.	Smith's and Simpson's paper.
3	Smith et al's paper.	Smith's et al paper.
4	Smith's paper and Li's paper take two very different positions.	Smith and Li's paper take two very different positions.
5	It is each applicant's responsibility to ensure that the three Referees' Reports are submitted by ...	It is each applicants' responsibility to ensure that the three Referee's Reports are submitted by ...
6	We have answered the three referees' questions, and specifically, we have added a new section as per Referee 1's request.	We have answered the three referees' questions, and specifically, we have added a new section as per Referee's 1 request.

2.2 theories, instruments etc.

1. Do not use *the + name of person + 's*.
2. *The + name of person + noun*: this construction can be used instead of the genitive, with no change in meaning. This construction is very formal and is only used with famous scientists. This means that you cannot write ~~the Adrian Wallwork theory of writing~~, because Adrian Wallwork (the author of this book) is not sufficiently famous!
3. *Name of person + 's + noun*: the focus is usually (but see Rule 5) more on the scientist. We are talking about their original concept, their life etc.
4. *Name of person (used adjectivally) + noun*: when the focus is primarily on the use that the author of the paper has made of the scientist's method, rather than the focus being on the scientist himself / herself.

	GENITIVE	NO GENITIVE
1	Adrian Wallwork's manual on writing. The Adrian Wallwork's manual on writing.	
2	As predicted by Newton's theory of gravity, Mercury's orbit is elliptical.	The Newton Theory of Gravity states that ...
2	The premise of Darwin's theory of evolution is that ...	This work was inspired by the Darwin Theory of Evolution.
3,4	Fourier's analysis of linear inequality systems highlights that he placed more importance on ...	We used Fourier analysis to evaluate the ...
3,4	Turing's machine was designed to be an idealized model of a human computer.	We may think of a Turing machine as a ...
3,4	George Boole's father was a tradesman who gave his son his first lessons in logic and mathematics.	Boolean algebra is a logical calculus of ...

2.3 companies and politicians

Rules 2 and 3 in 2.2 also apply to companies and politicians.

	GENITIVE	NO GENITIVE
2,3	Nike's decision to raise the prices of their shoes is in direct contrast to Camper's decision to lower their prices.	The survey found that typical consumers had, over the 12-month period, bought at least two Nike products and one Apple <i>i</i> -phone or <i>i</i> -pad.
	Nike is seen here as a group of managers within a company.	Nike and Apple are used like adjectives to describe a product, the two companies are not being seen in terms of their managers.
2,3	Obama's administration was initially much more popular than Bush's or Clinton's.	The Obama tried to block Alabama's new administration immigration laws.
	Focus on the president contrasted with other presidents	Focus on all the people who worked for Obama seen as a whole

2.4 universities, departments, institutes etc.

1. High positions of people associated with universities etc. tend to be written without using the genitive.
2. Use *the + university + of + town* in formal situations (e.g. in prospectuses, on websites, in articles, in official documents).
3. Use *town + university* when we see things from the student's point of view. This construction is less formal, but in any case can always be replaced by the construction given in Rule 2.

	YES	NOT COMMON (1,2), WRONG (3)
1	The Chancellor of the University of Cambridge is meeting the Rector of the University of Coimbra .	The University of Cambridge's chancellor is meeting the University of Coimbra's Rector .
2	The University of Bologna is the oldest university in the world.	Bologna University is the oldest university in the world.
3	I studied at Bologna University / the University of Bologna .	I studied at Bologna's University .

2.5 animals

1. Use 's when referring to the parts of the body of a living animal.
2. Use 's when referring to the products of living animals.
3. Do not use 's for dead animal body parts or products.

	YES	NO
1	The temporal lobes of the monkey's brain .	The temporal lobes of the monkey brain .
2	We used ewe's milk rather than cow's milk .	We used ewe milk rather than cow milk .
2	Lamb's wool is ideal for this kind of outdoor clothing.	Lamb wool is ideal for this kind of outdoor clothing.
3	Collagen can be obtained from calf skin or rat skin .	Collagen can be obtained from calf's skin or rat's skin .
3	In some parts of the world they eat monkey brain .	In some parts of the world they eat monkey's brain .

2.6 genitive with inanimate objects

The genitive is not generally used with non-human subjects, apart from those categories mentioned in the previous subsections (companies, countries, towns, planets). However in some cases – for which there are no rules – the genitive is used with inanimate things. Its usage varies from discipline to discipline, and may break the usual rules of English grammar. In most cases a *the + noun + of + the + noun* construction can also be used. Thus if you are not sure, use the *of* construction. See also 16.10 and 16.11

YES (NEARLY ALWAYS CORRECT)	YES (BUT ONLY IN SOME CASES)
The role of the brain is crucial.	The brain's role is crucial.
The tasks of the network is to converge to a particular output.	The network's task is to converge to a particular output.
An understanding of the effects of malaria on the region's inhabitants is vital.	An understanding of malaria's effects on the region's inhabitants is vital.
The radius of the circle .	The circle's radius.
The approximate time of the arrival of the plane was calculated.	The approximate time of the plane's arrival was calculated.
The occupants of the flat were all arrested.	The flat's occupants were all arrested.

2.7 periods of time

1. The genitive is used when a time period is used adjectivally.
2. The genitive is not used when time periods are preceded by *a / the*.
Note that the first noun in the noun + noun construction is in the singular form. This is because the first noun functions as an adjective to describe the second noun.

	YES	NO
1	I'm taking three weeks' vacation next month. = three weeks of vacation	I'm taking three weeks vacation next month.
2	He's on a 3-week vacation. He's on a three-week vacation.	He's on a three weeks' vacation. He's on a three weeks vacation.

3 Indefinite article: *a* / *an*

3.1 *a* versus *an*: basic rules

a is used before:

1. All consonants (but see Rule 8 below).
2. *U* when the sound is like *you* (e.g. *university, unique*).
3. *Eu* (but not in acronyms).
4. *One*.
5. *H*, except for the words listed in Rule 8 below.

an is used before:

6. *A, e* (but not *eu*) *i*, and *o*.
7. *U* when the sound is like the *u* in *understanding, unpredictable*.
8. *Hour, honor, heir, honest* and their derivatives, and *herb / herbicide* (US English). *an* is not used before other words that begin with *H*, unless the *H* appears in an acronym. Note: both *a* and *an* are commonly used before *historical*.

	A	AN
1,6	a Sony laptop, a Vodafone application	an Apple laptop, an Orange telephone
2,7	a universal law	an undisputed argument
3	a European project	an EU project
4	a one-off payment, a one-day trial	
5,8	a hierarchy, a Hewlett Packard computer	an hour, an HP computer

3.3 a / an versus one

one is a number (*one, two, three*). Use *one* instead of *a / an*:

1. When it is important to specify the number.
2. Before *another*.
3. Before *way* when not preceded by an adjective.
4. In expressions of this type: *one day next week*.

	ONE	A / AN
1	We need one manual, not two manuals.	We need a manual, not just any type of document.
1	Unfortunately, there is only one solution in such cases – surgical intervention.	In this paper we present an innovative solution to the three-bus problem.
1		This parameter has a unique value.
1	If you make even one mistake with Prof Syko, she will fail you.	If you make a mistake with Prof Normo, it's not a problem – he's really relaxed.
1	We conducted one experiment in which students had to memorize 100 words in English, and another in which they had to remember 200 words.	We conducted an experiment in which students had to memorize 100 words in English. This was the only experiment we conducted and it proved that ...
2	We went from one town to another .	The conference is in a town near Istanbul.
3	One way to do this is to ...	A novel way to do this is ...
4	We could have the meeting one day next month.	A good day to meet would be next Tuesday.

3.4 *a / an* versus *the*: generic versus specific

1. Use *a / an* first time you mention something.
2. Use *the* on subsequent occasions (i.e. when the reader / listener already knows what you are talking about).
3. Use *a / an* to refer to something generic, *the* to something specific or something which the reader will already be familiar with.

	A / AN	THE
1,2	The only thing you can take into the examination tomorrow is a dictionary .	The only thing you can take into the examination is a dictionary. The dictionary you choose can either be mono- or bi-lingual.
1,2	This paper presents a new system for modeling 4D maps.	This paper presents a new system for modeling 4D maps. The system is based on ...
1,2	I don't have a computer at home.	I have a computer at home and at work. The computer that I have in my office is a Mac and the one at home is an HP.
1,2	ABSTRACT In this work, we make an attempt to test the efficiency of ...	RESULTS In this work, the attempt to assess the relative efficiency of the tested methods was carried out on two levels.
3	A comparison of our data with those in the literature indicates that ...	The comparison given in Sect. 2.1 highlights that ...
3	We are now in a position to apply Theorem 13.	The diagram indicates the position of each piece of equipment.
3	Contrary to what is currently thought, there is a growing demand for experts in this field.	We need to satisfy the growing demand for experts in this field, which looks set to increase even further.
3	This is a first step towards combatting terrorism in that area. We cannot be sure of the outcome ...	This is the first step towards combatting terrorism in that area. The second step is to ...

3.5 a / an versus the: definitions and statements

1. Use *a / an* when talking about one example of a category (i.e. a division of people or things with similar characteristics). In such cases *a* means *any* (6.2, 6.3).
2. Use *the* to generalize about the entire set of components in a class. In such cases *the* means *all the*.
3. Use *a / an* in definitions.
4. Use *the* to make general statements about some entity.

	A / AN	THE
1, 2	A camel (= <i>any camel</i>) can go for days or even months without water because, unlike other animals, camels retain urea and do not start sweating until their body temperatures.	The panda (= <i>all the pandas in the world</i>) is in danger of becoming extinct.
3, 4	A computer is an electronic device for storing and processing data.	The computer has changed the way we live.

4 Definite article: *the*

4.1 definite article (*the*): main usage

The principle use of *the* is to refer to something specific (i.e. particular cases rather than all cases). However, the distinction between general and specific is not always straightforward, as illustrated by these two examples:

a) **Male professors** of physics from China who also work in the field of mathematics and how have studied in the USA, tend to ... b) **The male professors** of physics who also work in the field of mathematics that **Anna met** at the conference are ...

Sentence (a) seems very specific - but it isn't. For something to be specific we have to be able answer the question "which one/s?". In (a) we don't know which specific professors. In the second sentence (b) the fact that Anna met them means that we are not referring to all such professors in the world, but a very specific subset of them, i.e. the ones that Anna met at the conference.

The examples below show typical cases where the definite article must be used in English, but where it may not be used in your language.

YES	NO
The aim of this document is to prove ... Our aim	Aim of this document is ...
The computers that are used in our department are all Hewlett Packard, and the software that we use is all proprietary software. Our computers and software	Computers used in our department are all Hewlett Packard, and software that we use is all proprietary software.
The government have increased taxes. The government of our country	Government have increased taxes.
As reviewed in the literature ... The literature in our field	As reviewed in literature ...
All the samples were cleaned in the laboratory. The lab in our institute	All the samples were cleaned in laboratory .
The results of the present study show ... Our results	Results of the present study show ...

4.2 specific versus general: examples

The term 'specific' with reference to the definite article means that the noun is qualified in some way. Typical qualifications are:

1. Another noun: a *noun1* + *of* + *noun2* construction indicates that probably *noun1* is being specified by *noun2*. In such cases, *noun1* should be preceded by *the*.
2. A noun + (*that*) + (subject) + verb.
3. A superlative (19), e.g. *the best*, *the simplest*.
4. An adjective such as *first*, *second* (etc.), *main*, *principal*, *only*, *initial*.
5. Adjectives (even a whole sequence) don't necessarily make their noun specific.

	SPECIFIC	GENERAL
1	The life of a peasant in the Middle Ages was hard.	Life in the Middle Ages was hard.
1	The history of English is fascinating.	History was my favorite subject at school.
2	The problems that we've been having with our English pronunciation are very serious.	Problems when learning English are very common.
2	The wheat used in some types of food is derived from ...	Studies were carried out on wheat .
2	The hydrochloric acid employed in our studies was purchased from ...	Hydrochloric acid is twelve times more active than sulfuric acid.
3	This is the worst paper in the collection	Poorly written manuscripts are very common.
4	The main differences are: X, Y and Z.	Differences in opinions on this subject are very common.
5,2	The red wine that we had last night.	I prefer dark red wine from Chianti to sparkling white wine from Asti.
5,2	The intelligent female Ph.D. students from non-European countries who have studied English that have attended my course tend to get better results than ...	Intelligent female Ph.D. students from non-European countries who have studied English tend to get better results than ...

4.3 other uses of the definite article

Use *the*

1. With certain expressions: *the Internet, the weather, the sun, the environment, the dark*.
2. To indicate a class of objects in an abstract sense. Note: in a definition use *a / an* (e.g. *A computer is a machine that performs calculations*).
3. With *last* and *next* in time expressions to indicate a specific week, month, year etc. rather than the current week etc.

	YES	NO
1	We found your address on the Internet .	We found your address on Internet .
1	Samples were stored in the dark at room temperature.	Samples were stored in dark at room temperature.
2	The computer and the telephone have changed the way we live.	Computer and telephone have changed the way we live.
3	The conference has been organized for the last week in May.	The conference has been organized for last week in May.
3	We will be sending you our manuscript next week.	We will be sending you our manuscript the next week.

5 Zero article: no article

5.1 zero article versus definite article (*the*): main usage

The term 'zero article' refers to cases where no article is required. Use the zero article if you are talking about something in general and the noun is:

1. In the plural, e.g. *computers, books*.
2. Uncountable (1.8), e.g. *hardware, information*.
3. Abstract – either singular countable (1.6) or uncountable e.g. *life, success, performance*.

Note that:

4. Some words change meaning if they are used with or without *the*.
5. Titles to papers occasionally omit the article of the first noun. Both forms (i.e. with and without *the*) are common.
6. Captions to figures often omit the definite article.

	ZERO ARTICLE	THE
1	Oracle do not sell computers .	The computers that we have at our institute are ...
2	Oracle sell software .	The most commonly used software is
2	Research is essential if progress is to be made.	The research that we have conducted so far proves that ...
3	There was a significant effect of the road conditions on speed .	The speed of the car was optimal.
4	I love nature .	The nature of this problem is not clear.
4	The probe has been launched into space .	The space between A and B must be wide enough to accommodate C.
5	Development and validation of a test to measure competence in English	The development and validation of a group testing of logical thinking
6	Figure 1. Average rainfall 2010–2020.	We predicted the average rainfall for 2020.

5.2 other uses of the zero article

1. In expressions containing *from ... to*, e.g. *from top to bottom, from coast to coast*.
2. With names of public buildings and places when used to refer to their primary purpose (*he is a Ph.D. student, he studies at university*). These include: *school, university* (but not *department or institute*), *college, work* (but not *office*), *home, church, hospital, prison*.
3. Before the names of people, unless the name is being used adjectivally (2.2).

	ZERO ARTICLE	THE
1	Figure 5: From left to right , the Dean, the Dean's husband, and Prof. Donald Duck.	In GB they drive on the left , in the rest of Europe on the right .
2	Before going to school I was educated at home . I then left school at 18 and then went to university .	The editors also wish to record their thanks to the School of Sociology and Social Policy at the University of Leeds for its continuing support.
3	Davidson's article is important for several reasons.	This paper deals with the Davidson method which computes a few of the extreme eigenvalues of a symmetric matrix and corresponding eigenvectors.

5.3 nationalities, countries, languages

1. When talking in general, *the* must be used with 'uncountable' nationalities that end in *-h* (e.g. *English, French*) and *-ese* (e.g. *Chinese, Portuguese*). Most other nationalities (*Italians, Swedes* etc.) are countable and can be used with or without *the*.
2. If a nationality that ends in *-h* or *-ese* is found with another nationality, then for the sake of consistency all the nationalities are preceded by *the*.
3. Rule 1 above does not apply if these words are being used as adjectives rather than nouns, e.g. before *people, men, women*.
4. Continents and countries do not require the article: *Europe, Asia, Italy, France, Russia*. Exceptions: *the UK, the USA, the Ukraine, the United Arab Emirates, the ex-USSR, the Arctic, the Antarctic*.
5. Do not use *the* with languages when these languages are being talked about in general.

	ZERO ARTICLE	THE
1	Italians do it better than Americans .	The English are not as tall as the Portuguese .
2		The English are not as tall as the Portuguese or the Italians .
3,1	Chinese people are not as tall as Japanese people .	The Chinese are famous for their culture.
4	We have offices in France, Spain and Italy .	We have offices in the UK and the USA, France, Spain and Italy .
5	The English of this paper needs to be revised.	English is not an easy language to learn.

5.5 zero article versus a / an

1. *A / An* must be used before a singular countable noun (1.6), the zero article before an uncountable noun (1.8).
2. *A / An* must be used before names of instruments, pieces of equipment etc.
3. With reference to an academic position, *a / an* refers to a job that is held by several people. The zero article is used when stating a specific job position that is only held by one person.

	A / AN	ZERO ARTICLE
1	When I was a student , I was a member of the students' union.	The referees gave us feedback on our manuscript.
1	You cannot travel there without a passport or without a visa .	You cannot travel there without providing information about the reason for going.
2	A Thermoquest Trace GC gas chromatograph with a PTV injector and coupled with an ion trap mass spectrometer PolarisQ was used.	We used equipment located in our laboratory.
3	He is an assistant professor at the University of Seoul.	He is Assistant Professor of Pediatrics at the University of Seoul.
3	She is a professor , not a senior researcher .	She is Professor of Education at the University of Atago.

5.6 zero article and *a / an*: contradictory usage in scientific English

The second column in the table below lists some occasions where the normal rules of the use of articles in English have apparently been broken but such occurrences are nevertheless frequently found in research papers written by native speakers.

NORMAL ACCEPTED USAGE	ALSO POSSIBLE IN SCIENCE
An analysis of the data showed that ...	Analysis of the data showed that ...
A further analysis of the data showed that ...	Further analysis of the data showed that ...
A statistical analysis of the data showed that ...	Statistical analysis of the data showed that ...
We investigate natural products of an animal origin .	They include strains of animal origin and strains of human origin from HC.
The total amount of protein was determined by spectrophotometry using BSA as a standard .	The protein content of each well was then determined using the Pierce protein assay, using BSA as standard .
We may assume without any loss of generality that the quantity "M(ca)" is computable for any M.	For simplicity, and without loss of generality , we will assume that ...
Without a loss of generality we assume that $E\{ n_i ^2\} = 1$.	
This may occur at an intermediate level .	This is far more difficult when working at advanced level .

6 Quantifiers: *any, some, much, many, much, each, every* etc.

6.1 quantifiers used with countable and uncountable nouns

The table lists words that indicate an indefinite quantity. These are words that you can generally use with countable (1.6) and uncountable nouns (1.8) in a research paper. Note however that the expressions *with a piece of* are not commonly used in research papers.

QUANTIFIER	COUNTABLE (SINGULAR)	COUNTABLE (PLURAL)	UNCOUNTABLE
a / an	a book		a piece of information
a (large / small) amount of		a large amount of books	a small amount of information
a bit / piece of			a piece of information
a few		a few books	
a great deal of		a great deal of books	a great deal of information
a little			a little information
a lot of		a lot of books	a lot of information
a number of		a number of books	
a series of		a series of books	
all		all the books	all the information
any	[see 6.2.4]	any books	any information
each	each book		each piece of information
enough		enough books	enough information
every	every book		every bit of information
few		few books	
little			little information
many		many books	many pieces of information
most		most books	most (of the) information
much			much (of the) information
no	no book	no books	no information
none of		none of the books	none of the information
one	one book		one piece of information
several		several books	
some		some books	some information
the	the book	the books	the information

6.2 any versus some

The following rules apply to *any* and *some* and derivatives (e.g. *something*, *anywhere*, *anyone*)

1. As a general rule *any* is used in negative phrases and *some* in affirmative phrases.
2. *Not ... any* = zero, *not ... some* = not all.
3. *Any* is used to indicate doubt, we are not sure whether the event will take place or not.
4. If you use *any* in a sentence that contains no negation and which is not covered by Rule 3, then it means 'one thing or person at random from all the individuals in the world'. *some* and *someone* mean one particular thing or person, although exactly what or who is not important.
5. *Any* is used in questions where the answer is not known; *some* is used in questions where the expected answer is affirmative (e.g. in offers and some kinds of requests).

	ANY	SOME
1	This did not give any interesting results.	This gave some interesting results.
2	We were not able to understand any of the figures – they were all too complicated and unclear.	We were not able to fulfill some of the referees requests, specifically the first and last requests.
3	The table shows significant results, if any , of each test. Some tests may not have given significant results.	The table shows some significant results, in fact ...
3	If you need any clarifications, then do not hesitate to contact me. I don't know if you require clarifications or not.	I need some clarifications with regard to points 3 and 8.
4	Anyone can tell you that one plus one equals two.	Someone is at the door.
4	Any book on the subject will tell you all you need to know.	I read about it in some book, but I don't remember which one.
5	Excuse me, do you have any idea where the local mosque is?	Would you like some wine?

6.3 *any* versus *no*

1. *No one* is preferred to *not ... anyone* in formal situations such as research papers.
2. *Without* and *hardly* require *any* rather than *not*.

	YES	NO
1	To the best of our knowledge no one has found similar results to these.	To the best of our knowledge there isn't anyone who has found ...
2	You can do this without any problems or at least with hardly any problems.	You can do this without no problems or at least with hardly no problems.

6.4 *a little, a few* vs. *little, few*

1. *A little* (uncountable nouns) and *a few* (plural nouns) indicate a limited quantity of something. They could be replaced by *some*.
2. *Little* (uncountable nouns) and *few* (plural nouns) indicate an extremely low or surprisingly low number. They have a negative sense.

	A LITTLE VS. LITTLE	A FEW VS. A FEW
1	We have a little time left, so does anyone else have any questions?	We have a few more experiments to do, five or six I think, and then we have finished.
2	Little is known about this very rare disease. Almost nothing is known.	Few researchers have investigated this complex phenomenon. Maybe only two or three researchers.

6.5 *much, many, a lot of, and lots of*

1. *Much* is used with uncountable nouns, and *many* with plural nouns.
2. *Lots of* is considered to be too informal, prefer *a lot of* (which some authors still avoid on the basis that it is not sufficiently formal).
3. *A lot of* is usually replaced by *not much* or *not many* in negative phrases.

	YES	WRONG (*) OR TOO INFORMAL
1	There is not much information on this topic.	We do not have many information .*
1	We have not made much progress .	We have not made many progresses .*
1	There have been many advances in this technology.	
2	We have a lot of data on this issue.	We have lots of data on this issue.
3	There are not many accessible papers on this subject.	There are not a lot of accessible papers on this subject.

6.6 *each* versus *every*, *every* versus *any*

1. *Each* is used when it is important to underline that you are viewing things as individual items, *every* when these things are seen as a mass.
2. Only *each* can be used before a preposition.
3. Some expressions require *every* and not *each*.
4. Often, there is no real difference between *each* and *every*.
5. *Any* = only one, but it is indifferent which one, *every* = all.

	EACH, ANY	EVERY
1	An acronym is a word in which each letter stands for another word.	She is only two years of age and already knows every letter in the alphabet.
1	Each patient was given a slightly different dosage of the medicine.	Every patient in their hospital has medical insurance.
	No patient had the same dosage	All patients
1	Each volume deals with a different topic.	I have read every book on the topic.
1	Each individual case will be analysed separately.	In every case death occurred within three months.
		In all cases
1	It is each applicant's responsibility to ensure that they provide references.	What every applicant should know about the interview process.
2	Each of them has a different name.	
	= All of them have different names.	
3		Patients will be examined every week / every three months / every third month.
4	Each time we do the experiment something goes wrong.	Every time we do the experiment something goes wrong.
5	Any element in a set can be used.	Every element in this set is important.
	Just one element, it does not matter which one	All the elements

6.7 *no* versus *not*

1. *No* + *noun* and *not* + *a / the* + *noun* are similar in meaning. The form *not* + *noun* is incorrect (e.g. ~~we have **not reason** to suppose that~~).
2. *No* + *noun* is often replaced with *not* + *verb* + *any* + *noun*.
3. Adjectives that follow the verb *to be* and which are not associated with a noun are generally preceded by *not*.
4. Use *not* before an adverb.
5. *No longer* can be written more informally as *not ... any more / longer*.
6. *No* + *comparative adjective* (19.1) means that the two things compared are equal; *not* + *comparative adjective* means that the first thing is not, for example bigger or stronger, than the second thing.

	USAGE WITH 'NO'	USAGE WITH 'NOT'
1	There is no reason to suppose that this is due to ...	This is not a good reason for ...
1,2	We encountered no problems with the calculations.	We did not encounter any problems ...
1,3	There are no unusual species in this area.	It is not unusual to find strange species in this area.
1,4	It is no surprise that the cardiovascular system is the first organ system to reach a functional state in an embryo.	Not surprisingly , the cardiovascular system is the first organ system to reach a functional state in an embryo.
5	This system is no longer used.	This system is not used any more .
		This system is not used any longer .
6	Verifying X turns out to be no easier than verifying Y.	X is not easier to solve than Y.
	X and Y have the same level of difficulty.	Y is probably easier to solve than Z