

Articles

The use of articles (*a*, *an* and *the*) is very difficult in English. I have not written about each little rule, only the most important ones.

1 In front of singular countable nouns, there must be “something”.

- Students most often leave out “a/an”.

Examples:

Correct:

*Lemuel is **a** doctor.*

*Lemuel is **the** doctor* (for example, the only one in the village).

*Lemuel is **our** doctor.*

*Lemuel is **that** doctor* (he is standing there).

Incorrect:

Lemuel is doctor.

Other examples:

*Have you got **a** car?*

*This is **a** mouse.*

*There is **a** cap on Peter's head.*

2 In front of names, “the” is rare.

- There are some well-defined exceptions, but they simply “prove the rule”:

In front of names, “the” is not used.

(I provide a list of exceptions in a separate file.)

3 “a/an” is indefinite (it is not known or has not been mentioned before), the is

- definite

(known by everybody or has been mentioned before)

Example:

*I saw **a** lion.* (The lion was not mentioned earlier, I used „a”)

***The** lion was following **a** woman.* (The lion was mentioned earlier (“the”) but the woman was not (“a”))

***The** woman was pulling **a** cart.* (The woman was mentioned (“the”), the cart was not (“a”))

***The** lion was smelling **the** cart.* (Both the lion and the cart were mentioned earlier, therefore I used „the”)

***The** cart was full of Whiskas.*

“Definiteness” is very often expressed with a possessive structure.

*The length **of my car** is 385 cm.* (“Length” is made definite by “of my car”.)

4 There are three types of generalizations.

- **a)** *A tiger is a dangerous animal.* (It means tigers in general.)

Here, a singular noun is used with “a/an”. It is usually the subject.

b) *The dog is a mammal.*

The telephone was invented by Bell.

Here “the” is used with a singular noun. It is usually used with inventions and scientific categories.

c) No article is used (neither “the”, nor “a/an”). Countable nouns are used in the plural, uncountable nouns in the singular. This type of generalization is by far the most common. Examples:

Bears are dangerous. (generalization)

The bears are dangerous. (No generalization – we are talking about some bears who are definite, they were mentioned before.)

I like dogs. (generalization – countable – plural)

I like tea. (generalization – uncountable – singular)

I like apples. (generalization – countable – plural)

Let us see “definite” in a little more detail. Example:

The treatment improved mechanical properties.

You may think that *mechanical properties* is “definite” but grammatically, it is not. This problem is similar to the “definiteness” of abstract nouns, see below (5.).

Of course, if you want “mechanical properties” to be definite at all costs, there are ways to achieve that grammatically. Two common methods:

the mechanical properties of the material (possessive)

the mechanical properties that/which we tested (relative clause)

Use these tricks if you cannot accept in any way that “mechanical properties” alone is practically always indefinite, and therefore cannot take “the”. ☺ ☺ ☺

5 And now the greatest problem for most learners of English: abstract nouns.

• In English there must not be a definite article in front of abstract nouns (unless they are definite). Example:

Teaching is difficult.

a) Examples of abstract nouns (abstract nouns are usually uncountable)

1. Normal everyday words: *nature, life, love, anger, happiness...*

2. Everyday and technical words: *crystallinity, length, width, surface roughness, cell structure, delamination, time, (tensile) strength, wettability, foaming agent content, melt temperature, density, cross-link density, elongation at break, permeability, temperature, (cold) crystallization, average cell diameter, cell population density, T-RTM, aging/ageing, tool wear, layer thickness, particle size distribution, GTR content, cooling uniformity, cooling time, insert efficiency, cooling, light transmission, resistivity, conductivity, relative humidity, porosity, immersion, withdrawal (speed), impregnation...*

Some endings usually indicate an abstract noun.

b) Some endings usually indicate an abstract noun.

– *ing (often): longing, eating, bonding, injection molding*

– *age (often): shrinkage, postage,*

– *ance/ence: (often) brilliance,*

– *ancy/ency (often) hesitancy, complacency*

– *ery (when not a place, like bakery): slavery, bravery, machinery*

- *hood (often): childhood, manhood*
- *manship: marksmanship*
- *ness (often): kindness, loudness,*
- *ship (often): friendship*

However, this is only partial help.

Internet sources define abstract nouns as things that cannot be perceived with the five senses. That would be a nice, simple definition (if it worked ☺) but I started thinking. How about *surface roughness/loudness/brightness/hardness/temperature*, etc.?

(touch) (hearing) (sight) (touch) (touch) ☺

Because these are abstract nouns, too! ☺

Examples of abstract nouns:

I love *sport/nature/life*. (not definite)

Life in 13th century England was not easy. (still not definite)

The sport (that) they love best is curling. (definite – *that/which* defines the abstract noun)

He lives *the life* he has always dreamed of. (definite – see above)

Anger can be controlled. (not definite)

We can make an abstract noun definite in several ways (for example with a defining relative clause – *that/which*) but the most common way is with a following “*of...*” construction.

Some more examples:

We treated the samples. As a result, *crystallinity* increased by 20%. (not definite)

The crystallinity of the samples increased by 20%. (definite)

Humidity influences several properties of the material. (not definite)

The humidity of ambient air needs to be measured. (definite)

Quality depends on *treatment time*. (not definite)

The quality of the products depends on *treatment time*. (definite + not definite)

Activator *concentration* did not change during the process. (not definite)

The concentration of the activator influences the process. (definite)

Activation increased *the concentration of –OH groups* on the surface (not definite + definite)

c) Abstract nouns can be general or “concrete”. It is easier to imagine that an abstract noun in a general context does not have “the” because we do not have “the” in the most common type of generalization, either (see 4.). Examples:

Length is an important characteristic.

Roughness has an effect on *bonding strength*.

With these interlayer techniques, *interlaminar fracture toughness* can be enhanced.

There are no standard test methods for measuring *interfacial adhesion* between layers printed by FFF.

Therefore, an increase in *bed temperature* can help *adhesion*.

d) However, when the abstract noun has a “concrete” meaning, the situation is trickier. If the meaning is concrete, is it not definite? Can we not use “the”? Examples of concrete situations:

We measured *elongation at break*.

Crystallinity did not change.

The process decreased *foam density*.

Foaming agent content had an effect on mechanical properties.

We used a simpler method to determine *cell population density*.

Particle size distribution was measured twice.

Efficiency was not affected.

The most important parameters were *melt temperature* and *holding pressure*.

Holding time was doubled.

Average tensile strength was determined before *flexural strength*.

The filling of nanocomposites also decreases *creep deformation*.

Hardness decreased by 50%.

This is a very tricky situation: we are talking about a concrete situation, so **logically** it may be definite but is it definite **grammatically**? Well, it is far more “difficult” for an abstract noun (noun phrase) to be definite grammatically than logically. The above examples are not definite enough to be definite grammatically! Actually, it is quite difficult for an abstract noun (noun phrase) to be grammatically “definite” without “external help”, so the easy rule is that it is best to consider an abstract noun (noun phrase) indefinite when it is “alone”. The most common construction that makes an abstract noun definite in technical English is the “of...” construction. Let us see examples:

The length of the product is important.

We measured *the length of the product*.

Let me show you an advanced trick ☺: when you feel the abstract noun (which is alone) is (logically) definite but you are not sure if it is grammatically definite (it would require a practically native-level knowledge of English to decide), you can make it definite with an “of...” construction.

Let us take an example from above:

Crystallinity did not change.

“Crystallinity” is not definite grammatically, even though you did a concrete experiment with well-defined (and previously mentioned) materials!!! If you feel it should be definite, make it so:

The crystallinity of the specimen did not change.

And voilà! You got what you wanted (“the” in front of “crystallinity”), and still you can be sure that the sentence is correct! ☺☺☺ Wow! What more could a researcher ask?

☺☺☺

Here are some more examples of abstract nouns (noun phrases) that can be used in the above example sentences as well:

width, surface roughness, quality, cell structure, cross-link density, permeability, layer thickness, GTR content, cooling uniformity, cooling time, insert efficiency, cooling, light transmission, resistivity, conductivity, porosity, withdrawal (speed) ...

6 ‘In front of’ the ‘of’ structure, there is almost always a ‘the’.

• ~~*Legs of the table are thin.*~~

The legs of the table are thin.

She lives in the United States of America.