

Course N⁰= 5: Grammar Rules in English Scientific Writing -III-

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1 Clear and Concise

1.1 Starting a Sentence with *This*

Do not use a vague *this* to start a sentence. Instead, be sure the writer includes a noun or explicit statement to which the *this* refers.

Wrong: Alzheimer's disease is the leading cause of dementia and is characterized by amyloid plaques and tau tangles within the brain. **This has prompted researchers** to design and develop potential therapeutics. **(If we will take the second sentence alone, we will not understand what *this* refers to)**

Right: Alzheimer's disease is the leading cause of dementia and is characterized by amyloid plaques and tau tangles within the brain. **This devastating impact of the disease** has prompted researchers to design and develop potential therapeutics. **(We have clarified what *this* refers to)**

1.2 Empty Words and Phrases

Really, very, quite, extremely, severely, etc. do not intensify – use a thesaurus to find a better synonym

To avoid empty words and phrases, start with the subject of the sentence.

Wrong: **There are more than** five hundred people infected with the new Corona virus.

Right: Five hundred people or more are infected with the new Corona virus.

1.3 Redundancy

Avoid using more words than necessary.

Wrong	Right
Yang and Yu argued that emotion is necessary and essential (not necessary to add).	Yang and Yu argued that emotion is necessary.
Basic fundamentals	Fundamentals (is enough)
True facts	Facts (is enough)
Mix together (not necessary to add).	Mix
Small in size (not necessary to add).	Small

1.4 Clear Subject and Verb in Two-clause Sentences

Even if the grammar is correct, the message of a sentence may not be clear if a subject is missing or ambiguous.

Wrong: The children's parents completed questionnaires and were weighed weekly. **(Who was weighed weekly? Children or parents)**

Right: The children's parents completed questionnaires, and the children were weighed weekly.
(**We have clarified that the children are concerned**)

2 Nouns and Verbs

2.1 Verb Tense

- Use present tense for general truths and a temporal facts.

Examples: Microbes in the human gut **have** (in present) a profound influence on...

This paper **presents** (in present) the results of...

- Use past tense for work done, reported results, and observations.

Examples: We **collected** (in simple past) blood samples from...

Jankowsky et al. **reported** (in present) a similar decay rate...

- Use future tense for perspectives.

Example : In a follow-up experiment, we **will study**(in future) the role of...

2.2 Count vs. Mass Nouns

- Count nouns are discrete, individual entities that you can count and can be singular or plural.

Examples: *Nucleus vs. nuclei*

Datum vs. Data

- Mass nouns are uncountable, undifferentiated mass, or collection of material and are singular.

Examples: *Water, research, evidence*

Singular vs. plural verb form with collective nouns can depend on whether you want to emphasize the actions of the collective as a whole or the individual actions of its members. There are also differences between US and UK English (see appendix).

The list mass nouns (or noncount nouns) in English

1. **admiration**
2. **advice**
3. **air**

4. **anger**
5. **anticipation**
6. **assistance**
7. **awareness**
8. **bacon**
9. **baggage**
10. **blood**
11. **bravery**
12. **chess**
13. **clay**
14. **clothing**
15. **coal**
16. **compliance**
17. **comprehension**
18. **confusion**
19. **consciousness**
20. **darkness**
21. **diligence**
22. **dust**
23. **education**
24. **empathy**
25. **enthusiasm**
26. **envy**
27. **equality**
28. **equipment**
29. **evidence**
30. **feedback**
31. **fitness**
32. **flattery**
33. **foliage**
34. **fun**
35. **furniture**
36. **garbage**
37. **gold**
38. **gossip**
39. **grammar**
40. **gratitude**
41. **gravel**
42. **guilt**
43. **happiness**
44. **hardware**
45. **hate**
46. **hay**
47. **health**
48. **heat**
49. **help**

50. **hesitation**
51. **homework**
52. **honesty**
53. **honor/honour**
54. **hospitality**
55. **hostility**
56. **humanity**
57. **humility**
58. **ice**
59. **immortality**
60. **independence**
61. **information**
62. **integrity**
63. **intimidation**
64. **jargon**
65. **jealousy**
66. **jewelry**
67. **justice**
68. **knowledge**
69. **literacy**
70. **logic**
71. **luck**
72. **lumber**
73. **luggage**
74. **mail**
75. **management**
76. **merchandise**
77. **milk**
78. **morale**
79. **mud**
80. **music**
81. **nonsense**
82. **oppression**
83. **optimism**
84. **oxygen**
85. **participation**
86. **pay**
87. **peace**
88. **perseverance**
89. **pessimism**
90. **pneumonia**
91. **poetry**
92. **police**
93. **pride**
94. **privacy**
95. **propaganda**

96. **public**
97. **punctuation**
98. **recovery**
99. **rice**
100. **rust**
101. **satisfaction**
102. **shame**
103. **sheep**
- 104. slang**
105. **software**
106. **spaghetti**
107. **stamina**
108. **starvation**
109. **steam**
110. **steel**
111. **stuff**
112. **support**
113. **sweat**
114. **thunder**
115. **timber**
116. **toil**
117. **traffic**
118. **training**
119. **trash**
120. **understanding**
121. **valor**
122. **vehemence**
123. **violence**
124. **warmth**
125. **waste**
126. **weather**
127. **wheat**
128. **wisdom**
129. **work**

2.3 Parallel Structure

Parallel structure is the repetition of a chosen grammatical form within a sentence to provide clarity and enhance readability; it is used when you connect two or more clauses or phrases for coordinating conjunctions, comparisons, or lists.

Wrong: Ecological studies focus on inspecting, the inventories, and to study the climate.

Right: Ecological studies focus on inspecting, inventorying, and studying climate.

2.4 Infinitives

Infinitives are verbal phrases consisting of *to* followed by a verb used as nouns, adjectives, or adverbs. Some verbs require actors prior to the infinitive, some cannot have an actor, and some go either way. See appendix.

Wrong: The ageing-associated decrease in paravascular recirculation of CSF and ISF is thought **to, at least in part, be responsible** for the accumulation of amyloid- β in the brain parenchyma.
*We cannot split **to be responsible***

Right: The ageing-associated decrease in paravascular recirculation of CSF and ISF is thought **to be responsible**, at least in part, for the accumulation of amyloid- β in the brain parenchyma.

2.5 Compound Words

Hyphenated compound words avoid ambiguity or are used as a compound modifier. Hyphenate a modifier or adjective if before a noun (includes numbers + unit as an adjective). Do not hyphenate if after the noun or if it ends in *-ly*.

Examples: English-language learners vs. English language-learners

A well-known study vs. a study that is well known

Close compound words are two individual words that have an entirely new meaning when combined.

Examples: Key and board have two different meanings, while *keyboard* has a new meaning

Not and pad have two different meanings, while *notepad* has a new meaning

Air and port have two different meanings, while *airport* has a new meaning.

Closed compound words typically include preposition/adverbs + nouns or compound words with a prefix. Words with prefixes are usually hyphenated if the word after the prefix starts with a vowel. Compound words are usually closed when used as a noun, hyphenated as an adjective, and open as a verb.

Some commonly confused compound words include *never mind*, *altogether*, and *every day*.

Wrong: Nevermind

Right: Never mind

Compound word	Meaning
Altogether	Entirely
All together	As a group
Everyday	Common place
Every day	Duration or time

3 Numbers

3.1 Numerals vs. Spelling

Spell the number if used as the first word or if it is less than 10, counted (not measured), and not in a list.

Wrong: 4 specimens were collected.

Right: Four specimens were collected.

3.2 Units

Use abbreviations unless the number is spelled out or if the unit is not attached to a numeric value.

Exemples: It is many **Kilometers** far from here.

We do not abbreviate, because the unit is not attached to a numeric value

It is **one Kilometer** far from here.

We do not abbreviate, because the number is spelled

We have inserted it in **100 Km** far from here.

We can abbreviate, because the unit is attached to a numeric value

Space between numeral and symbol/abbreviation except for ‘, ‘’, °, %, and g.

3.3 Hyphens: numbers and units of measurement

Follow the guidelines below in deciding whether to use a hyphen with numbers and units of measurement.

3.3.1 Compound numerals

Hyphenate compound cardinal and ordinal numerals from *twenty-one* (*twenty-first*) to *ninety-nine* (*ninety-ninth*) when they are written out:

- There are twenty-nine members on the committee.

3.3.2 Compound adjectives containing a number

Hyphenate a compound adjective in which one element is a cardinal or ordinal number and the other a noun:

- A two-car family
- A five-kilometre trek
- A \$4-million project
- A first-class coach
- A third-rate play
- An 18th-century novel

However, do **not** hyphenate the compound adjective if the number, written in full, is itself a compound:

- A two hundred and fifty millilitre flask
Compound number **Compound adjective**

In cases such as the above, use the abbreviated form (a 250 ml flask) if at all possible.

3.3.3 Number before a symbol

Do **not** hyphenate before a symbol that is not a letter:

- A 100 °C thermometer
- A 30% increase

Do **not** hyphenate before a metric unit symbol:

- A 5 km trail
- 35 mm film
- A 100 W bulb

3.3.4 Number before a possessive noun

Do **not** hyphenate a possessive noun preceded by a number (*A possessive noun is a noun that possesses something—i.e., it has something. In most cases, a possessive noun is formed by adding an apostrophe +s to the noun, or if the noun is plural and already ends in s, only an apostrophe needs to be added.*):

- One week's pay
- 40 hours' work
- Three weeks' vacation
- 10 months' leave

4 Formatting

4.1 Italics

Gene names (protein in standard form)

Algebraic symbols and mathematical constants

Foreign words (typically Latin phrases, acronyms and abbreviations are standard form) – journal specific

Titles of books, journals, magazines etc. that are stand-alone works

Note: If something is supposed to be italics but is within italics, write in standard form

4.2 Bolding

Use to add emphasis (in some forms of scientific writing).

5 Appendix :

5.1 Commonly used singular-plural words in science

Singular	Plural
Addendum	Addenda or addendums
Analysis	Analyses
Antithesis	Antitheses
Appendix	Appendices or appendixes
Axis	Axes
Bacillus	Bacilli
Bacterium	Bacteria
Basis	Bases
Criterion	Criteria or criterions
Curriculum	Curricula or curriculums
Datum	Data
Diagnosis	Diagnoses
Ellipsis	Ellipses
Erratum	Errata
Focus	Foci or focuses
Formula	Formulae or formulas
Fungus	Fungi or funguses
Genus	Genera or genuses
Hypothesis	Hypotheses
Index	Indices or indexes
Locus	Loci

Matrix	Matrices or matrixes
Medium	Media or mediums
Nucleus	Nuclei or nucleuses
Ovum	Ova
Parenthesis	Parentheses
Phenomenon	Phenomena or phenomenons
Phylum	Phyla
Radius	Radii or radiuses
Referendum	Referenda or referendums
Series	Series
Species	Species
Stimulus	Stimuli
Stratum	Strata
Swine	Swine
Syllabus	Syllabi or syllabuses
Symposium	Symposia or symposiums
Synopsis	Synopses
Tableau	Tableaux or tableaux
Thesis	Theses
Vertebra	Vertebrae or vertebrae
Vertex	Vertices or vertexes
Vortex	Vortices or vortexes

5.2 Infinitives – verbs with and without actors

With Actors	Without Actors	With or Without Actors
Advise	Agree	Ask
Allow	Begin	Expect
Appoint	Continue	(Would) like
Convince	Decide	Want
Encourage	Fail	Need
Force	Hesitate	
Hire	Hope	
Instruct	Intend	
Invite	Learn	
Incite	Neglect	
Implore	Offer	
Order	Plan	
Permit	Prefer	
Remind	Pretend	
Teach	Promise	

Tell	Refuse	
	Start	
	Remember	
	Try	

5.3 Empty words and phrases Phrases to Leave Out

There are / It is...	The fact that...
I believe...	It is interesting to note that...
In my opinion...	It should be pointed out that...
It appears...	

5.4 Concise phrases

Wordy Phrase	Concise Phrase
Adequate number of	Enough
As a matter of fact	In fact
At the present time	Now
By means of	By
Due to the fact that	Because
For the purpose of	For
In a timely manner	On time
In spite of the fact that	Despite
Over the duration of	During
Take into consideration	Consider
Until such time as	Until

5.1 Phrasal repetition

Phrasal repetition	Concise phrase
Small in size, large in size	Small, large
True facts	Facts
Basic fundamentals	Fundamentals
Current trend	Trend
Equal to one another	Equal
Evolve over time	Evolve
Consensus of opinion	Consensus
In the year 2020	2020
Component parts	Component OR parts
Brief summary, brief moment	Summary, moment
During the course of	During
Future plans	Plans
Join together, merge together	Join, merge
Joint collaboration	Collaboration
Unintentional mistake	Mistake

5.2 Collective nouns – US vs. UK verb form

US English (Singular)	UK English (Plural)
The team usually wins.	They usually win.
The herd migrates in summer.	The herd migrate in summer.
The WWF invites its members to a meeting.	The WWF invite their members to a meeting.

