Scientific Writing

Scientific writing is concise, impartial and logical writing, usually directed at a scientific audience. It facilitates the effective communication of new information or ideas.

Scientific writing can be improved by the use of **precision, clarity** and **objectivity.**

PRECISION

Precision is the use of exact language when trying to convey theories, methods, or results.

1. ***Words and Phrasing:*** make sure that all the words you use are appropriate for what you are trying to say, for example, correlated ≠ related.

Correlated	Related
Implies a precise, statistical relationship between two variables.	*Indicates that two things are similar or share a common trait.*

2. ***Level of Detail:*** only add enough detail such that a person could repeat the experiment by themselves, without error.

Instead of:	Consider:
20µL of 80% glycerol (v/v) (taken from bench 3 in bottle 2) was added to 80µL solution A (from freezer 9, drawer 7, box 5, tube 1).	*20µL of 80% glycerol (v/v) was added to 80µL of solution A.*

3. ***Quantitative vs. Qualitative Information:*** report results using quantitive information (values) over qualitive information (types), whenever possible.

Instead of:	Consider phrases such as:
The development rate was fastest in the higher temperature treatment.	*The development rate in the 30°C temperature treatment was 10% faster than the rate in the 20°C treatment.*

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CLARITY

Clarity is conveying your messages clearly to allow easy interpretation of your writing.

1. *Language Choice:* use simple language to convey your message clearly.

Instead of:	Consider terms such as:
Ameliorate	*Improve*
Elucidate	*Explain*
Proximal	*Close*

2. *Wordiness:* avoid using unnecessary phrases and be as concise as you can.

Instead of:	Consider terms such as:
It should be noted that…	*Contrastingly*
It is interesting that…	*Concurrently*
The fact that…	*Furthermore*

OBJECTIVITY

Objectivity is ensuring that any claims made in the writing are based in fact, not intuition or emotion.

1. *Bias:* ensure that results, discussions and conclusions are supported by data e.g. referenced publications or experimental findings.
2. *Identify Limitations:* be aware of limitations in research, this will increase your objectivity.
3. *Passive Voice:* using the passive voice removes the person who performed the action, which helps to reduce bias in the writing.

Instead of:	Consider terms such as:
In my opinion author X is wrong when they say….	*In contrast to what author X states, author Y offers an alternative explanation…*

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