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**Scientific Writing (accessible version)**

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 does not mean the same as related.

Example:

**Correlated:** Implies a precise, statistical relationship between two variables.

**Related:** Indicates that two things are similar or share a common trait.

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

Example:

**Instead of:** 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).

**Consider:** 20μL of 80% glycerol (v/v) was added to 80μL of solution A.

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

Example:

**Instead of:** The development rate was fastest in the higher temperature treatment.

**Consider:** The development rate in the 30°C temperature treatment was 10% faster than the rate in the 20°C treatment.

**CLARITY**

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

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

Examples:

**Improve** instead of **Ameliorate**

**Explain** instead of **Elucidate**

**Close** instead of **Proximal**

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

Examples:

**Instead of phrases such as:**

It should be noted that…

It is interesting that…

**Consider terms like:**

Concurrently…

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.

Example:

**Instead of:** In my opinion author X is wrong when they say….

**Consider:** In contrast to what author X states, author Y offers an alternative explanation…