**Clarity – Using Simple Language**

**Introduction**

Despite needing to communicate at least some technical information to non-specific audiences when writing about science, you should always aim to be as concise and succinct as possible, and limit the use of complex language to ensure that your work is easy to understand.

One golden tip that you should try to put into practice is this: Read your sentences individually and ask yourself whether every single word is necessary. Then ask whether a friend with no science background could read your work without being confused. Often, when thinking like this, you will be able to reduce the length of your sentences and replace certain words to make things flow more smoothly.

When editing your work, you will often find that you can make things more concise by writing in the active voice (rather than the passive). For more information on this, see our resource for ‘Active vs. Passive’.

**The Importance of Using Simple Words**

One of the greatest misconceptions in writing is the idea that you need to use intellectual-sounding words to give your work a sense of power. Your only goal should be to write something that is easily understood by whoever reads it. The best way of achieving this is to write short sentences containing words used frequently by everybody.

So, instead of ‘**elucidating** a concept to change the views of your **myopic** readers’, why not just ‘**explain** a concept to change the views of you **short-sighted** readers?’ Similarly, why tell your audience that your invention will have ‘universal applications across the globe’ when they already know that ‘universal’ means that something will apply to every situation? Redundant qualifiers such as this should always be avoided, so, in the previous example, the author should simply have written: ‘universal applications.’

**Eliminating Ambiguous Words**

It is important to realize that different words can mean different things in certain contexts, and because science is a subject that inherently uses a lot of jargon, this can be a real problem. A word (or phrase) is ‘ambiguous’ if it could potentially mean different things to different people.

For example, the statement that ‘Male salmon grew *frighteningly* quickly’ could mean they grew much more quickly than expected, or that you were actually scared by their speed of growth. Similarly, the statement that ‘these males grew *significantly* faster than females’ is also potentially problematic because ‘significance’ means something different when it refers to a statistical comparison than when it is used to convey something noticeable; so, a scientific audience and a non-scientific audience might interpret the meaning very differently.

**Some Examples**

These examples are designed to highlight the importance of writing with clarity by contrasting short, simple, succinct sentences with long-winded, wordy, potentially ambiguous versions:

**1A)** Scientists recently used computer programs to show how some plant species become common when rabbits and deer are prevented from accessing forests.

**1B)** Scientists recently utilized computer models to highlight how certain angiosperms become dominant in frequency when mammalian herbivores are preferentially excluded from gaining access to forest habitats.

**2A)** The new electricity system will surprise its developers later this year when it is installed in many homes by increasing the inefficiency problem they designed it to solve.

**2B)** The novel electricity system will shock its proponents later this year when it is wheeled out to many residences, by exacerbating the inefficiency problem it was designed to dissolve.

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**Video Resource**

For a recap and for some extra information about the importance of clarity (and using simple language) in your science writing, please watch Grammar Squirrel’s [video](https://www.youtube.com/watch?v=MjKg7YtD3HE) on the UBC Science Writing [YouTube channel.](https://www.youtube.com/channel/UCvynvmsn_NTlS9lc8cH-OFw)

We then suggest you complete the quick quiz (below) to see whether you have mastered some of the important skills relating to clarity in writing.

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**Clarity – Using Simple Language Quick Quiz**

**1)** With clarity in mind, choose the best option from the following sentences.

**A)** *I am finding it difficult to work with my new electronics lab partner. We often get our wires crossed.*

**B)** *I am finding it difficult to work with my new electronics lab partner. We often misunderstand one another.*

**2)** With clarity in mind, choose the best option from the following sentences.

**A)** *Things are progressing better with my genetics partner though.*

**B)** *Things are evolving better with my genetics partner though.*

**3)** Which potential problem do the sentences in the paragraph below have in common?

*This new ice-based weapon is really chilling.* *But it isn’t as ground-breaking as the device that measures earthquakes more accurately than ever before.* *However, both of these products were announced by a PR company with a history of making relatively ineffective space travel inventions seem astronomically important.*

**A)** They are not succinct and hard to interpret

**B)** They use specialist language/jargon too often

**C)** They confuse the content with the description

**4)** Re-read the following sentence: *This new ice-based weapon is really chilling.* Which of the following options would be a much better choice?

**A)** *This new ice-based weapon is really scary.*

**B)** *This new ice-based weapon could curdle the blood.*

**C)** *This new ice-based weapon is really cooling.*

**5)** Re-read the following sentence: *But it isn’t as ground-breaking as the device that measures earthquakes more accurately than ever before.* Which of the following options would be a much better choice?

**A)** *But it isn’t as earthshattering as the device that measures earthquakes more accurately than ever before.*

**B)** *But it isn’t as revolutionary as the device that measures earthquakes more accurately than ever before.*

**C)** *But it won’t change the playing field as much as the device that measures earthquakes more accurately than ever before.*

**6)** Re-read the following sentence: *However, both of these products were announced by a PR company with a history of making relatively ineffective space travel inventions seem astronomically important.* Which of the following options would be a much better choice?

**A)** *However, both of these products were announced by a PR company with a history of making relatively ineffective space travel inventions seem very important.*

**B)** *However, both of these products were announced by a PR company with a history of making relatively ineffective space travel inventions seem exorbitantly important.*

**C)** *However, both of these products were announced by a PR company that tends to make space travel inventions seem overly important.*

**7)** Choose the most suitable word to fill in the blank in the following sentence: *My friend has just published new research that focused on the \_\_\_\_\_\_\_\_\_\_ of birds, mammals, and fish.*

**A)** behaviour

**B)** conduct

**8)** Choose the most suitable word to fill in the blank in the following sentence: *She found that* ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** *conform to one of two foraging strategies; they are either adventurous consumers (AC), or dietary conservatives (DC).*

**A)** individuals

**B)** conspecifics

**C)** singletons

**9)** Choose the most suitable word to fill in the blank in the following sentence: *ACs quickly try new foods before deciding whether or not to include them in their diet, whereas DCs are* ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** *to try new foods. Interestingly, however, if they see competitors eat the new food and enjoy it, they will quickly incorporate it onto their own personal menu.*

**A)** disinclined

**B)** reluctant

**C)** reticent

**D)** loath

**10)** Choose the most suitable word to fill in the blank in the following sentence: *Therefore, particularly when food is scarce, competitors actually help DCs gain nutrition from their environment in a/an* ***secondary/indirect/ancillary/serendipitous/oblique*** *way.*

**A)** secondary

**B)** indirect

**C)** ancillary

**D)** serendipitous

**E)** oblique

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**Quick Quiz Answer Key**

**1)** With clarity in mind, choose the best option from the following sentences.

**A)** *I am finding it difficult to work with my new electronics lab partner. We often get our wires crossed. [*it could be confusing to a reader as to whether you don’t get along well or if you make mistakes with the hardware you are using*]*

**B) *I am finding it difficult to work with my new electronics lab partner. We often misunderstand one another. =* CORRECT**

**2)** With clarity in mind, choose the best option from the following sentences.

**A) *Things are progressing better with my genetics partner though. =* CORRECT**

**B)** *Things are evolving better with my genetics partner though. [*it could be confusing to a reader as to whether you are talking about your relationship or the project you are working on*]*

**3)** Which potential problem do the sentences in the paragraph below have in common?

*This new ice-based weapon is really chilling.* *But it isn’t as ground-breaking as the device that measures earthquakes more accurately than ever before.* *However, both of these products were announced by a PR company with a history of making relatively ineffective space travel inventions seem astronomically important.*

**A)** They are not succinct and hard to interpret

**B)** They use specialist language/jargon too often

**C) They confuse the content with the description = CORRECT**

**4)** Re-read the following sentence: *This new ice-based weapon is really chilling.* Which of the following options would be a much better choice?

**A) *This new ice-based weapon is really scary =* CORRECT**

**B)** *This new ice-based weapon could curdle the blood.* [not everyone will understand this reference, and it is a bit extreme anyway]

**C)** *This new ice-based weapon is really cooling.* [the ‘chilling’ refers to it being scary, not physically cooling]

**5)** Re-read the following sentence: *But it isn’t as ground-breaking as the device that measures earthquakes more accurately than ever before.* Which of the following options would be a much better choice?

**A)** *But it isn’t as earthshattering as the device that measures earthquakes more accurately than ever before.* [earthshattering and ground-breaking could both confuse the reader as to whether the new device is revolutionary, or if it actually damages the earth]

**B)** ***But it isn’t as revolutionary as the device that measures earthquakes more accurately than ever before. =* CORRECT**

**C)** *But it won’t change the playing field as much as the device that measures earthquakes more accurately than ever before.* [not everyone will understand ‘change the playing field’, so this is an example of an ambiguous description]

**6)** Re-read the following sentence: *However, both of these products were announced by a PR company with a history of making relatively ineffective space travel inventions seem astronomically important.* Which of the following options would be a much better choice?

**A)** *However, both of these products were announced by a PR company with a history of making relatively ineffective space travel inventions seem prodigiously important.* [prodigiously is an overly complex word]

**B)** *However, both of these products were announced by a PR company with a history of making relatively ineffective space travel inventions seem exorbitantly important. [*exorbitantly is another overly complex word, and the ‘orbit’ within it might confuse people as we are talking about space travel*]*

**C)** **However, both of these products were announced by a PR company that tends to make space travel inventions seem overly important. = CORRECT**

**7)** Choose the most suitable word to fill in the blank in the following sentence: *My friend has just published new research that focused on the \_\_\_\_\_\_\_\_\_\_ of birds, mammals, and fish.*

**A) behaviour = CORRECT**

**B)** conduct [animals don’t really have conducts]

**8)** Choose the most suitable word to fill in the blank in the following sentence: *She found that* ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** *conform to one of two foraging strategies; they are either adventurous consumers (AC), or dietary conservatives (DC).*

**A) individuals = CORRECT**

**B)** conspecifics [this is science jargon]

**C)** singletons [this is potentially ambiguous as it means different things to scientists and non-specialists]

**9)** Choose the most suitable word to fill in the blank in the following sentence: *ACs quickly try new foods before deciding whether or not to include them in their diet, whereas DCs are* ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** *to try new foods. Interestingly, however, if they see competitors eat the new food and enjoy it, they will quickly incorporate it onto their own personal menu.*

**A)** disinclined [this is overly wordy]

**B) reluctant = CORRECT**

**C)** reticent [this is overly wordy]

**D)** loath [this is overly wordy]

**10)** Choose the most suitable word to fill in the blank in the following sentence: *Therefore, particularly when food is scarce, competitors actually help DCs gain nutrition from their environment in a/an* ***secondary/indirect/ancillary/serendipitous/oblique*** *way.*

**A)** secondary [this is ambiguous; what is a primary/tertiary way?]

**B) indirect = CORRECT**

**C)** ancillary [this is overly wordy]

**D)** serendipitous [this is overly wordy and potentially ambiguous]

**E)** oblique [this is overly wordy and potentially ambiguous]