**Numbers, Units and Mechanics**

**Post-Class Activities**

Following the pre and in-class activities that focused on the correct use of numbers, units, abbreviations and mechanics in writing, you should be feeling more confident about getting your style right with regard to these important components.

As ever, your primary goal when communicating science to any audience should be to tell an interesting story in a way that is easily understandable. These post-class activities have been designed to give you specific practice in capitalizing words correctly, and in working more with units. Other activities deal with editing text to make it more engaging while following the rules you have learned already.

**Using Capitalization Appropriately**

It can be especially hard to learn when you should (and should not) capitalize certain words in your writing. The following list includes a few of the most important, common rules that you should always try to apply:

**1:** Capitalize the first word of a new sentence, or quote, but **not** if it follows a semicolon or colon. Do **not** capitalize the first word in the second part of an open/divided quote (e.g. Learning cellular processes is difficult; there are so many names and theories involved).

**2:** Capitalize people’s names, but titles **only** when they come before those names.

**3:** Capitalize points of the compass **only** when referring to specific geographic places (e.g. Northwest Territory, and northern Canada).

**4:** Capitalize proper nouns and place names, but **not** seasons (e.g. Vancouver General Hospital is situated just off Broadway in Vancouver).

**5:** Capitalize the titles of publications, in print, online, and in video (e.g. New Scientist).

**6:** Capitalize the names of specific academic courses but do **not** capitalize non-specific topics or subjects.

**Questions 1, 2, 3, 4, 5, 6, 7 and 8 (1 mark each, 8 marks total)**

There is **one** capitalization-based error in each of the following questions. Try to find the error and re-write the sentence correctly. Copy and paste the sentence and **bold** the change you have made (1 mark for each question).

**Q1:** The Street next to the Nitobe Memorial Garden is called Lower Mall.

**Q2:** The current President of UBC’s Biological Society is President Ivy Wang.

**Q3:** Richard and Lily are members, along with Sophie, Lily’s Sister.

**Q4:** The society had a movie night in November but did not show March of the Penguins, which shows how the penguins’ march to sea gets easier by march each spring.

**Q5:** Despite being bordered by the icy Southern Ocean, rivers do exist in Antarctica. The most northerly is called the Rezovski creek.

**Q6:** Science and Geography would be useful subjects to know in some detail if you were a research scientist working in the intense cold of Antarctica.

**Q7:** Some believe evolution can be used as an argument against the existence of God. Atheists do not believe in God, but polytheists believe in more than one God.

**Q8:** Agnostics believe that it is impossible to know whether God exists, but this does not make them atheists. “The mystery of the beginning of all things is insoluble to us,” said Mr. Charles Darwin, “And I for one must be content to remain an agnostic.”

**Using Plurals and Punctuation**

Another difficult combination of mechanics rules to learn incorporates the mixing of rules dictating capitalization, pluralization, and the basic punctuation around numbers and units that you commonly use in scientific communication. For example:

**1:** You should include a space between a number and unit (20 m), but **not** if the unit is a degree (180°) or a percentage (55%).

**2:** You should **not** pluralize units (20 kg, not 20 kgs) unless you also write out the number (eight kilograms).

**3:** You should **not** capitalize unit names (centimetres, not Centimetres) unless you are talking about Celsius or Fahrenheit (because these two are named after scientists).

As ever, remember that consistency is everything; this is why it is acceptable to use numbers when using units, but why you should instead write them when writing out the units in full (5 m or five metres).

**Questions 9, 10, 11 and 12 (3 marks each, 12 marks total)**

There are **three** numbers and/or mechanics-related errors in the following four sentences (questions). Try to find the three errors and re-write the sentences correctly. Do this by copying and pasting the sentences before **bolding** the changes that you have made (3 marks for each question).

**Q9:** My girlfriend is 174cm tall but I am taller by nine cm at 183cm.

**Q10:** When we first bought our dog, he weighed six kilograms and was approximately three ft long. Now he weighs 25 kgs, and is approximately four ft long.

**Q11:** 88percent of people polled in a recent survey admitted that they did not know what a temperature of 80° F would approximate to on the celsius scale.

**Q12:** My goldfish is 112 mms long, which makes him 27 mms (or 19.4 %) shorter than my friend’s goldfish.

**Question 13 (10 marks)**

In the paragraph below there are **10** major stylistic errors. These include mistakes relating to the use of numbers, abbreviations, units, and basic punctuation and writing mechanics. Copy and paste the text and **bold** your re-written versions of the errors that were originally present (1 mark for each correctly re-written part).

“The Pearson published Biological Science continues to be a very popular textbook at many Universities in North America (USA and CAN). When first printed in the late 00’s, the diagram focused book did not feature as many research issues as relevant to Canadian Students as the current edition, published in 2011. Although it is not cheap to buy at approximately 160 dollars, there are over 1500 pages full of useful information. Different courses require different textbooks, but much of the material in one book will also be present in another; for example, if you were to take introductory biology: Biology 100 at UW (the University of Washington), this book would probably be fine.”

**Questions 14 and 15 (5 marks each, 10 marks total)**

To answer the following two questions (scenarios), try to write just **one** sentence that incorporates all the information included in each scenario of Table 1 (below). Remember to follow all style-based rules and try to write the sentences in an engaging, simple way.

**Table 1: You must write two sentences (one for each scenario/question) to tell a story incorporating all the elements in each specific scenario. *Hint: every element has been written in words in the table, but you might need to change the styles appropriately in your sentences/stories.***

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| --- | --- | --- | --- | --- |
| **Question** | **Organization or company** | **Focus of sentence** | **Measurement (size and units)** | **Mechanics to include** |
| **Q14** | National Aeronautics and Space Administration  (1 mark) | ‘Project Constellation’ was originally designed to send humans to the Moon (1 mark) | The Altair landing unit was thirty two feet tall  (1 mark) | Apostrophe, semicolon  (1 mark each, 2 marks total) |
| **Q15** | University of British Columbia  (1 mark) | The ‘Start An Evolution’ campaign re-unites alumni with university programs  (1 mark) | One and a half billion dollars must be raised by alumni (1 mark) | Plural, semicolon  (1 mark each, 2 marks total) |