**Paragraph Structure, Topic Sentences and Transitions**

**Post-Class Activities**

These post-class activities have been designed to give you further practice in spotting paragraphs with a good structure, that feature appropriate topic sentences, and which are bound together by effective transition words and phrases.

**Question 1 (4 marks)**

Below are four paragraphs containing similar content, but each one features **one different** basic error. These errors relate to paragraph structure and/or the logical development of ideas in the piece of writing. Try to match the main problem to the paragraph in which it is present.

**Paragraph 1:** Exploring space is challenging because the universe is cold, unpredictable, and huge. Scientists have recently suggested that to explore the deeper parts of the galaxy they will need to find alternative ways of powering spacecraft. This is because it is not possible to equip a craft with sufficient fuel to travel long distances in space. However, there is hope that innovation and improving technology will allow us to explore deeper and deeper. For example, some believe it will be possible to construct very big "sails" to catch solar energy, which will in turn push the craft forwards at increasing speeds.

**Paragraph 2:** Scientists believe that building giant "sails" in space could help astronauts explore the deeper parts of the universe. These sails would be used to catch solar energy, which possesses momentum that could be used to drive a spacecraft forwards to wherever its pilots wished to go. Despite this hope, it might be hundreds of years before the technology exists to build these sails. Although NASA and other space agencies have made tremendous progress in recent decades, designers are still frequently dismayed by their inability to make computer systems reliable in anti-gravity situations. For example, basic programs that perform calculations can inexplicably malfunction once operating outside our atmosphere.

**Paragraph 3:** "Sails" that catch solar energy and transfer photons with incredible kinetic potential into forward thrust might one day allow astronauts to explore the depths of the universe. Because photons behave like other atomic particles, in that they are reflected off mirror-like surfaces when colliding, they can transfer momentum to an object. Critically, it is this momentum that could be used to drive a spacecraft forwards toward its destination. Exploring deep space remains one of mankind's greatest challenges because navigating long distances requires a lot of fuel and/or other ways of powering flight.

**Paragraph 4:** Solar energy might one day power spacecraft and astronauts into deep space. Scientists believe that constructing huge "sails" would catch solar rays. Solar particles can transfer momentum to objects when they collide, which would theoretically be enough to power a craft into deep space. This would be a major factor in allowing astronauts to go further than ever before because modern explorations are limited by fuel reserves. Most space explorations use the majority of their fuel loads just in getting out of Earth's atmosphere.

**Problem A:** The order of information is poorly developed (in terms of specificity).

**Problem B:** The topic sentence is poorly chosen.

**Problem C:** The transitions are poor.

**Problem D:** The information should be split into more than one paragraph.

**Question 2 (5 marks)**

Read the paragraph about temperatures and traffic accidents below. You have been provided with three ideas for stylistic ‘alterations’ that you could make to improve this paragraph. Your task is to rank these in order from the one that would make the biggest improvement to the smallest (3 marks).

Once you have done this, cut and paste the original paragraph and put your first choice alteration into practice by editing the paragraph in this way (2 marks).

*People often wrongly imply that a correlation between two variables means there is a cause and effect relationship between them. For example, last summer, when temperatures were hotter, a higher number of traffic accidents occurred in certain cities around the world. Soon after, reports appeared that said the extra heat must have been causing motorists to be more impatient and make poor decisions when they were behind the wheel. Although many people made the common mistake of jumping to that conclusion based on data from unrelated variables, even more hold the misconception that a correlation can never imply a cause and effect relationship. When all other variables are held constant in an experiment, it is possible to suggest one factor is directly responsible for causing a change in the other one, if the results back this up. For example, if 100 fish are kept in identical conditions but their weight gain is measured in different temperatures, a correlation between the two factors would suggest that temperature is directly responsible for influencing weight gain.*

**Alteration A:** Improve transition words/phrases.

**Alteration B:** Split information into more than one paragraph.

**Alteration C:** Improve the topic sentence.

**Questions 3, 4 and 5 (3 marks each, 9 marks total)**

For each of the following topics, choose the suitable topic sentence and **match** the reasons that make the others unsuitable to the unsuitable topic sentences. In all cases, when choosing your suitable topic sentence, imagine that you are just beginning to write an essay on the topic.

**Question 3 (3 marks)**

**Topic 1: Antibiotic resistance in bacteria.**

**Topic Sentence 1:** One of the main causes of bacteria developing resistance to antibiotics is the over-prescription of drugs.

**Topic Sentence 2:** Bacteria can develop resistance to specific antibiotics for a variety of reasons.

**Topic Sentence 3:** In less than 20 years the percentage of *S. pneumoniae* strains that developed resistance to Penicillin-based drugs rose from 4% to 33%.

**Option A:** Information is too specific for a topic sentence.

**Option B:** The focus is too narrow for the information that will follow about this topic.

**Option C:** Suitable topic sentence.

**Question 4 (3 marks)**

**Topic 2: Plagiarism in science**

**Topic Sentence 1:** Many people believe that plagiarism in science is a simple case of quoting someone else’s published work and passing it off as their own.

**Topic Sentence 2:** What does – and does not – constitute plagiarism in science is a multi-faceted issue that many scholars will debate and debate and still disagree about.

**Topic Sentence 3:** Plagiarism in science is a complex topic and includes many different types of academic fraud.

**Option A:** Too difficult to interpret.

**Option B:** Suitable topic sentence.

**Option C:** Too narrow in focus for the information that should follow about this topic.

**Question 5 (3 marks)**

**Topic 3: Catchy headlines in science articles.**

**Topic Sentence 1:** A recent study suggested members of the general public would be 36% more likely to read a science article if the headline was catchy and non-specific.

**Topic Sentence 2:** Do you think that scientists should write in a more engaging style if it would result in more people reading their articles?

**Topic Sentence 3:** When polling a total of 1135 New York citizens, it was discovered that these people would be 36% more likely to read a science article if the headline was written in a more catchy, accessible style than is typical for such articles.

**Option A:** Suitable topic sentence.

**Option B:** Information is too specific for a topic sentence.

**Option C:** Suitable topic sentence, but there is a catchier, more attention-grabbing option.

**Questions 6, 7, 8, 9, 10 (1 mark each, 5 marks total)**

Read the paragraph about wolves in Yellowstone National Park below, and try to fill in the blanks by choosing the most suitable transitional word/phrase for each question.

*The reintroduction of wolves to Yellowstone National Park has had a surprisingly positive effect on grizzly bear populations. [****Q6****] many scientists were worried that fewer bears would be supported by the ecosystem, [****Q7****] the wolves were expected to enhance competition for food and living resources, the opposite effect has been documented. Research has shown that the wolves are driving down excessively large populations of grazing mammals, such as elk and deer. [****Q8****], many shrub species that provide berries as a food resource for bears have become much more common, and the bears are supplementing their diets accordingly. However, scientists have warned that this could be a short-term effect; they cannot yet be sure that the presence of the wolves is responsible for increasing bear numbers, [****Q9****] can they be certain that bear populations will remain this high in years to come. [****Q10****], the early signs are very positive that bringing wolves back to Yellowstone has helped to stabilize a delicate, complex food web.*

Fill in the blanks by choosing from:

**Q6:** Unsurprisingly, Although, Though, Contrastingly, Hitherto

**Q7:** because, despite, since, while, nonetheless

**Q8:** In addition, Thus, Of Course, As a result, Naturally

**Q9:** neither, nor, not either, or, instead

**Q10:** Finally, Nevertheless, In contrast, Yet, Thus

**Question 11 (4 marks)**

Read the paragraph about species names below, and pay special attention to the CAPITALIZED transition words/phrases linking the different sentences together. Copy and paste this paragraph and then **bold** the two transitions that are particularly poor (2 marks). Then, below this, copy and paste the same paragraph and change those two transitions so as to make them more suitable (2 marks). Again, **bold** these in the paragraph to make it easier to see what you have changed.

*When new species are first discovered, the person responsible for initially documenting them in scientific literature is allowed to come up with an official name, and this can be more or less what they want it to be. It does not have to be made up of words that appear in a specific language, and it does not have to be science-related. OBVIOUSLY, a species name must be non-confusing and easy to pronounce, though.**CONSEQUENTLY, many plants, animals, fungi, bacteria and viruses have names that can be read aloud without the reader necessarily knowing what they refer to. FREQUENTLY, these names closely link to the interests of their discoverers. FOR EXAMPLE, an ant was named after Indiana Jones actor, Harrison Ford, a marine fossil discovered by a Johnny Depp fan was named in honor of his famous character, “Edward Scissorhands”, BUT a lemur found in Madagascar was named after John Cleese, who had been working to conserve similar animals. IN ADDITION to the rule permitting a discoverer to name a new species, it is also acceptable for conservation charities to refrain from naming organisms and instead reserve this honor for individuals that donate significant money to the cause they represent.*

**Question 12 (6 marks)**

Combine all the skills you have learned to write a very well structured paragraph. To get you in the habit of editing your work to improve it, revisit the paragraph you wrote for the pre-class activities (Question 13) to complete this task. You should have made a copy of this paragraph when you completed the pre-class activities.

**You** **can add more detail and should change some of the wording to improve your paragraph**, but you must ensure the final piece still has **five different sentences that are separated into two paragraphs**.

Your aim is to improve your work by (**1**) writing more effective topic sentences, (**2**) using more effective transitions to make it flow more smoothly from sentence to sentence, and (**3**) improving the cohesion/ordering of information. To show improvement, you will need to copy and paste your original paragraph (make sure you note which one this is) before writing a new, improved version.

**Note: If you did not make a copy of your original paragraph, you should write a new one (about a science subject that interests you) to attempt this question. It should be 100-200 words in length and feature five sentences separated into two paragraphs.  Please note, however, that to obtain maximum possible credit, you must copy and paste your original paragraph before editing it so that you can show how your skills have improved.**