

Daily Communication Skills

ASTR 170

"Writing is Nature's way of showing you how sloppy your thinking is."
Richard Guidon (1989, SF Chronical)

Employers want to hire people who can communicate effectively. The following skills will enable you succeed in getting the jobs you want and will also help you be more productive. By mastering these skills during our course, you will be improving your career options.

From this following list a new skill will be assigned for each day of class. (Similarly for the Numerical Skills) You are expected to use them immediately and to continue using each one throughout the remainder of the semester. Your weekly homework grade will be determined in part by your implementing these skills correctly. You are **STRONGLY ENCOURAGED** to seek help from your course instructors when any skill or concept is hard to understand or master!

Dartmouth's Writing Program will also help you improve overall writing skills:
<http://dartmouth.edu/writing-speech/learning/materials/materials-first-year-writers>

#1. Use relevant subject lines in your emails to help grab attention and to help people organize their emails.

Example: "ASTR 170: Question about lecture"

#2. We will use sentences in our course. Every sentence must have a subject and a verb.

Example #1: The following statement is not an acceptable answer to the question "Why did the U.S. government's credit rating drop?"

"Too much spending."

Improved: "Our credit rating dropped because we continue to spend more money than we receive."

Example #2: The second part of the following response is not a sentence.

"A ratio is a comparison of numbers. i.e., 1 is to 2, as 2 is to 4. Which may also be represented as 0.5 or ½."

Improved: "A ratio is a comparison of numbers. i.e., 1 is to 2, as 2 is to 4. These ratios may also be represented as 0.5 or ½."

#3. The subject and verb must match.

Always look for the subject in your sentence and be sure the verb matches.

Incorrect #1: "As I stated in the previous answer there is 2 million light-years between galaxies."

Improved: "As I stated in the previous answer there are 2 million light-years between galaxies"

Incorrect #2: "Talking on cell phones and using other electronic devices when walking, biking, or driving, is a distraction and interferes with your ability to drive safely."

Improved: "*Talking* on cell phones and *using* other electronic devices when walking, biking, or driving, *are* distractions and *interfere* with your ability to drive safely." [Subjects and verbs match and are italicized. In this case there are two subjects so the verbs must be plural.]

#4. Do not use "run on" sentences. They reveal sloppy thinking. Also, they confuse the reader and also make the reader back up and re-read.

Incorrect #1: "Arcturus is larger therefore there is more luminosity."

Improved: "Arcturus is larger. Therefore, there is more luminosity."

or, "Arcturus is larger; therefore, there is more luminosity."

Incorrect #2: “Utilize Safe Walk, this is a free service offered by the Women’s Resource Center.”

Improved: “Utilize Safe Walk. This is a free service offered by the Women’s Resource Center.”

Incorrect #3: “Hello! I’m very excited to start my fall semester in your class you seem like a wonderful professor that really has a passion for what you do!” [How would you improve this run-on sentence?]

#5. Make sure other aspects of your sentences also match such as singular/plural, genders, tenses, and pronouns.

Incorrect #1: “The 1906 earthquake was the world’s first major natural disasters to have its effects by recorded by photography.” (One earthquake does not constitute many disasters.)

Improved: “The 1906 earthquake was the world’s first major natural disaster to have its effects by recorded by photography.”

Make sure other aspects of your sentences also match such as genders in the following example.

Incorrect #2: “Many other brilliant men and women like Frank Drake will create amazing advances in the astronomical world.” (Frank Drake is not the name of a woman.)

Improved: “Many other brilliant men like Frank Drake will create amazing advances in the astronomical world.”

#6. Make sure the tenses of your verbs match within your sentences.

Example: “The equation **takes** all of the main factors and **applied** them to find out the amount of communicating civilizations there are in the Milky Way.” (This sentence mixes present and past tenses.)

Improved: “The equation **takes** all of the main factors and **applies** them to find out the amount of communicating civilizations there are in the Milky Way.”

#7. Match pronouns within your sentences!

Example #1 (incorrect): “As the astronaut left the space station for a space walk, they were hit by a meteorite.”

(corrected): “As the astronaut left the space station for a space walk, she was hit by a meteorite.”

Example #2 (incorrect): “The person on the opposite side of Earth will be able to see a First Quarter Moon when the moon becomes visible to them.”

(corrected): “People on the opposite side of Earth will be able to see a First Quarter Moon when the moon becomes visible to them.”

Example #3 (incorrect): “One of the first philosophical questions that a human asks when they are young is: ‘Why do humans exist?’”

(corrected): “One of the first philosophical questions that a human asks when he or she is young is: ‘Why do humans exist?’”

Example #4 (incorrect): Advertisement - “Is your child’s vision interfering with their game?”

(corrected?): This advertisement could actually be correct if the child is watching a team’s sport game!

#8. “Justify” - “Explain” - “Describe” - “React”

Convince us! We want your insightful explanations with specific language that demonstrates your reasoning. We do not want superficial phrases that simply state the obvious.

Example #1 (poor): “Science to me is the attempt to explain the unknown.”

Example #2 (good): “Science is an area of study that uses systematic processes and objective processes to ascertain the facts. Science is ever seeking and searching and improving our knowledge of the universe inside and outside our reality.”

#9. “Did I answer the question?”

“Answer the question, the whole question, and nothing but the question.”

Take time to read a question in its entirety, think about it, and then consider carefully how you would answer. After answering, take a break and then re-read the question and your work to be sure you answered all parts of the original question. It may also be helpful to have a friend proof-read your work.

Example: Does the following response to a question in homework make sense in the context of an astronomy course?

Question: “...include an appropriate definition of ‘morphology’ and how it relates to evidence for a crater.”

Response: “I believe morphology to be the biological study of the structure of organisms, in this case craters and the objects that create them.”

#10. Proof-read your work!

After answering a question, take a break and then re-read the question and your work to be sure you answered all parts of the original question. It may also be helpful to have a friend read your work.

Example #1: “I know you preferred we don't email you our homework's but my printer is out of ink. Sorry and thank you for excepting it.” (I think the student meant ‘accepting’ but she inadvertently told me not to accept it!)

Example #2: An answer to a question in a homework: “It is crowded because light and practices must travel through this small space in comparison to the whole galaxy.” (I think the student meant to use the word “planets: in stead of “practices.”)

Example #3: “The Earth to sun distance can fit about 10 earths in between, that would be about 10,000 earths.” (This sentence contradicts itself.)

Example #4: “I am very excited to be apart of her wedding.” (She meant “a part”.)

Example #5: “The Hubble’s Law says that the velocity equals the distance times humbles constant.”

#11. Plagiarism: Do not submit someone else’s work as your own.

Examples: *Plagiarism* is “the unauthorized use or close imitation of the language and thoughts of another author and the representation of them as one’s own original work.” *Plagiarism* is a serious offense and can have devastating consequences on you, your family, and your friends.

Suggestion: Re-read our syllabus about “Academic Integrity” and be sure you understand our policy about teamwork.

#12. Contractions: “it’s” and “you’re” and “’til”

“It’s” is a contraction meaning “it is” – not the possessive form (“its”).

Incorrect #1: “It’s light carries energy.”

Correct: “It’s hot in Tucson in the summer.”

“You’re” is a contraction meaning “you are” – not the possessive form (“your”).

Incorrect #2: “The field of view is a very necessary aspect because it helps to know what your looking at.”

’til is a contraction meaning “until.”

Incorrect #3: “At first it could only be speculation till Drake created an equation that used Fermi-like thinking to divide up the problem into smaller, more manageable parts.”

#13. A well-organized paragraph develops a single idea and starts with an overview called the ‘topic sentence.’ Multiple ideas should use separate paragraphs.

Example #1: "I had a beautiful organic garden last summer. First, I composted all of the leaves, plants and food wastes over the previous winter. By springtime, I mixed the compost into the soil, and then planted my favorite vegetables. My family enjoyed picking the crop of our efforts."
(http://www.ehow.com/about_4777518_topic-sentence_.html)

Example #2: The paragraph above ends with a nice transitional sentence that tells you the single idea, or focus, of the next paragraph, namely the crop that the family planted and harvested.

#14. "This" is important!

The use of the word "this" is often confusing to a reader. Sometimes that word is left dangling, without a more specific word to connect with, so it is not clear what "this" really is.

Example #1: "This is because"

Improved: "This behavior is caused by"

Example #2: "On June 21st, the summer in St. Paul has longer days with 3x more insolation at noon. This is because of the Earth's tilt."

Improved: "On June 21st, the summer in St. Paul has longer days with 3x more insolation at noon. The 23° tilt of the Earth's axis causes these differences between the two latitudes."

#15. Proper use of words can help you be an "all-star" instead of the target of laughter and jokes.

Example #1: "I would of submitted my homework but ..."

Improved: "I meant to submit" Or "I would have submitted ..."

Example #2: "*It was definitely probably the best catch I ever made.*" Carl Crawford

All-Star game MVP for the American League (July 15, 2009)

Example #3: "I, like, have so not even ever heard of this before," said Robert Lutz, new marketing chief and renowned "car guy" at General Motors Co., in an email. [*"The Killer App for Clunkers Breathes Fresh Life Into 'Liquid Glass' "* Wall Street Journal online, August 4, 2009] Do you think an influential professional would want to be quoted this way in a major magazine like the WSJ?

#16. Use numbers to backup your ideas and strengthen your writing. In your sentences spell out numbers less than ten (i.e., three not 3).

Example #1 (poor): "Simply judging from the initial result, I thought the Sun was huge, but after considering that scale in which astronomers work in, the size was not as shocking as I had initially thought."

Example #2 (good): "If 100 Suns would fit between the Earth and Sun, then the Solar System seems empty, especially since the Earth itself is a mere speck, itself about 100 times smaller than the Sun."

#17. Don't trust your spell checker. Think about what you write!

Example #1: "All the plants in the Solar System orbit the Son. Each plant absorbs some energy and then emits its own light with a blackbody spectrum." [plant vs. planet; son vs. Sun]

Example #2: "The Earth rotates on an access." [access vs. axis]

Example #3: "The lack of like produces the New Moon." [like vs. light]

Example #4: "The Moon takes longer to rotate than the Earth doses." [does vs. doses; I guess the student was tired of writing!]

Example #5: "From my perspective this discovery should be supervised." (The student meant 'surprising.')

Example #6: "On a scale of 1 to 5 (1 = strongly disagree, 5 = strongly agree), do you feel that dyeing your hair purple helps your self of steam?"

Example #7: "Beginning in the 20th century, a general consensus has gained momentum which theorizes that our Sun, the Earth, and all of the other planets and moons in our solar system were formed around 5 billion years ago as a result of a nebula which condescended." [Student meant to say "condensed." A bad pun?]

Example #8: “All the planets, with the *expectation* of Venus and Uranus, rotate and revolve in the same direction because they formed in the same rotating gas cloud.” [Student meant to say “exception.”]

#18. Be sure you know what words mean! Use them carefully.

Example #1: You are on trial for a crime and learn that the jury is “disinterested” in your case. Is this good or bad news? The word “disinterested” means “unbiased, and that characteristic of a jury is good if you are ever on trial.

Example #2: What do “rotation” and “revolution” mean? Is it correct to state “Mars has seasons because it rotates around the Sun.”?

Example #3: Headline - “Study finds that coffee drinkers have a lower risk of death.” (Don’t we all have a 100% risk of death?)

Example #4: “*Women voters: They’re just not into it.*” (CNN.com headline; Sunday, Oct 24, 2010) “*Fewer women than me are fired up about this election cycle, according to CNN’s polling director Keating Holland. The dynamic could be bad news for Democrats. CNN’s Samantha Hayes reports.*” If Ms. Holland isn’t interested, then how can you have fewer than zero women interested?

#19. Avoid double negatives!

Incorrect: “Astronomers chose the specific direction in the sky to avoid interference from the Sun and Earth, they didn’t want to look down the plane of our Milky Way galaxy so that the image wouldn’t be “uncluttered” by near by objects.”

Improved: “Astronomers chose the specific direction in the sky to avoid interference from the Sun and Earth. They didn’t want to look down the plane of our Milky Way galaxy where the image would be “cluttered” by near by objects.”

#20. A definition is a sentence that explains the meaning of a term. Avoid defining a word in terms of itself. A definition should use other terms that are already understood. Be sure to include real, thoughtful meaning.

Example (poor): A “definition” is how you define a word.

Examples (good): “Latitude” is an angle measured from the equator either positively to the north or negatively to the south. “Area” is the amount of an object’s surface measured in two-dimensions, such as length times width. A “spectrum” is the distribution of energy emitted by a radiant source, such as an incandescent body, arranged in order of wavelengths.

#21. Make sure “it,” “which,” and “they” refer to the correct item.

Examples:

- (1) “There was an earthquake in China which is bad news.” [Is it China or the earthquake that is bad news?]
- (2) “Half of the Earth and Moon will always be half illuminated because it is a sphere and the Sun can only light one side at a time.” [What does “it” refer to, the Earth, the Moon, both? In addition, half of a half equals one-quarter!]
(2 improved) “Half of the Earth and Moon will always be illuminated because both objects are spheres, and the Sun can only light one side at a time.”
- (3) “The outer planets can never be observed in their New phases by people on Earth because they pass around the opposite side of the Sun (opposite from Earth), so that the Sun is in between the Earth and the outer planets.” [Do the “people” pass around the Sun or does “they” refer to the planets?]
- (4) “The surface of Venus is hotter than Mercury because of its atmosphere.”

#22. Active “voice” is stronger than passive and helps you sound more convincing.

Examples of passive wording:

“Life on other planets should be found most often in the habitable zones around stars.” “Most of the extrasolar discovered so far were detected by the Doppler Effect.”

Examples of active wording:

“The habitable zone around stars provides the right temperature for water-based life as we know it.” “The Doppler Effect provides the most sensitive to date for detecting extrasolar planets.”

#23. “Then and Than.”

“Than” is used for comparison.

“Then” is a description of time or a consequence.

Example: “The Lakers have always been better than most teams in the league. If the Pistons had better shooters, then they might beat the Lakers.”

#24. “There, their, and they’re.” “There” refers to a location.

“Their” is a possessive word that means belong to a group.

“They’re” is a contraction meaning ‘they are.’

Example #1: “The office staff is holding their annual Christmas party over there. They’re very excited about the Holiday season.”

Example #2: “The inverse-square law of light means that there is a proportional relationship between the distance traveled from the source of light and the intensity of light.”

#25. “Farther and further.”

“Farther” refers to a physical distance.

“Further” refers to a metaphorical, or figurative, distance.

Example: “Saturn is farther from the Sun than Earth is. If you think about this concept further, it will make sense.”

#26. “Two, too, and to.”

“Two” is the number ‘2.’

“Too” means ‘also’ or ‘excessive.’

“To” often precedes a noun or verb.

Example: “The two baseball teams traveled to the stadium. Over the weekend they played ten games against each other and tried hard to win each time. After the eighth game the players were too tired to continue.”

#27. Do not use dangling words or phrases. Connect them to a person or a noun.

FOX News essentially called astronaut Neil Armstrong a killer (Aug. 27, 2013) in this news release: *“American icon Neil Armstrong, the first man to walk on the Moon, died Saturday (Aug. 25) due to heartsurgery complications. Coronary artery disease can result from the build-up of plaque in the coronary arteries. Though a common killer, Armstrong was far from a common man being the first to step onto the lunar surface in July 20, 1969.”*

After Dr. McCarthy complained, they revised as follows: *“Though he suffered from a common disease, Armstrong was far from a normal man, ...”*

Incorrect: “By avoiding the Milky Way it allows them to capture the clear image. If they were to look along the Milky Way many clusters and other elements would be in the way.” (Who is doing the ‘avoiding’ in this sentence?)

Improved: “By avoiding the Milky Way, astronomers capture the clear image. If they were to look along the Milky Way many clusters and other elements would be in the way.”

#28. Use creative titles on your essays and papers.

Examples: The title “Homework #24” is not very creative and won’t grab the reader’s attention as much as the following examples.

#1: “*One Giant Leap for San Francisco*” (Wall Street Journal, Nov 1, 2010) on the occasion of the SF Giants winning their first World Series championship in baseball after more than 50 years.

#2: “*Election Day Turned out to be Independents Day for Republications*” (Wall Street Journal, Nov 3, 2010) after the election results that gave the U.S. House leadership back to Republications. The title is a pun on the title of the movie “*Independence Day*.”

#29. Be consistent in your writing, not contradictory!

Examples: How should a teacher grade the following response to a question on our Homework #22? Perhaps the student meant “Venus” at first and never proof-read his/her work to catch the error?

#1: “Mercury has a very dense atmosphere composed almost entirely of carbon dioxide. Mercury, however, has a very thin atmosphere.”

#2: Surprising Discovery? A small moon orbits outside the orbits of other known moons and has several, large volcanoes.

“This discovery should be considered reasonable. Tidal heating is most effective when a moon is close to its planet (in this case Jupiter). This is another reason why it is a possibility that it has active volcanoes. The further away from the planet, the weaker the gravity is that causes the tides.”

#30. Be relevant in your answers and avoid unnecessary information because it may distract the reader and weaken your argument.

Example: A question on homework asked you to explain why Venus is hotter than Mercury even though Venus is farther from the Sun.

Response: “Venus is hotter than Mercury because it is 96 percent carbon dioxide. Although it is visibly farther away from the sun, the sun light it does get filtered down and warms the surface and cannot escape because its atmosphere is opaque to infrared radiation. It’s overwhelming abundance of carbon dioxide make the greenhouse effect more severe on Venus than it is on earth. On the other hand, Mercury is lacking a significant amount of atmosphere. It lost most of its internal heat and energy. This is why it is no longer geologically active.”

The last two sentences are not relevant to the question and only distract the reader. In addition, there are numerous errors in grammar and spelling which are also distracting!

#31. Using “s” inappropriately. Normally, “s” is used to indicate a possessive form, not the plural version of a word like volcanoes.

Example: “The gravitational force of Jupiter will be flexing the moon resulting in friction which heats the interior of the moon creating active volcano’s.”

Improved: “The gravitational force of Jupiter will be flexing the moon resulting in friction which heats the interior of the moon creating active volcanoes.”

#32. Begin your sentences strongly, not indirectly or weakly.

Example #1: “The reason being is because most people under that age don’t drive.”

Improved: “We only include ages 17 years and above in our analysis because people under age 17 don’t drive.”

Example#2: “The parallax method can only be measured in distances to the nearest stars is because the distances of stars are inconveniently large numbers.”

Improved: “The parallax method can only measure distances to the nearest stars because the angle becomes too small to measure.”

#33. Get to the point quickly!

Example: “Why can astronomers only use the parallax technique to measure distances to the nearest stars?”

The underlined portion of the answer below should be relocated to the beginning of the paragraph so the reader doesn't have to wade through non-essential material. Many people get bored and quit reading before reaching the end.

"Astronomers use triangles to find the parallax of stars and the distance of stars. The parallax of a star is seen when earths moves around its orbit in 6 months from its initial position. The shift of the observer's positions allows the observer to se an "apparent change" in the position of the star in the sky from 6 months earlier. In order to find distance, astronomers use a baseline equal to 2 AU or the distance between the initial position and the earth's position in orbit 6 months later. The Earth is 1 AU from the sun. So in 6 months, the Earth travels half way across its revolution meaning it is still 1 AU from the sun but on opposite side of the sun. From the baseline, astronomers measure angles along the ends of the baselines to the star in arc seconds. Parallax technique is somewhat limited to measuring distances to nearer stars because astronomers are dependent on the baseline of 2 AU of the Earth's orbit. Stars at farther distances would require a larger baseline. The measurements would be less accurate from an observer's position on Earth because of parallax or change in the observer's position due to Earth's orbit. The measurement of stars distances is already challenged by the small angles that astronomers have to use with the baseline. Smaller angles possible less than arc second angles would have to be used to find the distance to distant stars. Our observation of stars is also blurred from Earth's atmosphere without the use of satellites. This blur causes inaccuracy in the parallax measurements with about a 10% accuracy."

#34. "The best way to learn to write is to rewrite."

... real revision is more than making a few changes here and there. Real revision requires that you open yourself up to the possibility that parts of your paper - and even your entire paper - might need to be rethought, and re-written.

... revising your papers teaches you to be a better writer. Studies have shown again and again that the best way to learn to write is to rewrite. In the revision process, you improve your reading skills and your analytical skills. You learn to challenge your own ideas, thus deepening and strengthening your argument. You learn to find the weaknesses in your writing. You may even discover patterns of error or habits of organization that are undermining your papers.

http://www.dartmouth.edu/~writing/materials/student/ac_paper/revise.shtml

#35. Twenty different mistakes comprise 91.5 percent of all errors in student texts.

Grammar is an understanding of how language works, of how meaning is made, and of how it is broken. Learn from each of these twenty common errors, and your writing will become much better:

http://www.dartmouth.edu/~writing/materials/student/ac_paper/grammar.shtml

#36. What is fact and what is interpretation?

Always try to discern fact from opinion. In each example below, a sentence starts with a fact but ends with an opinion.

Example: "Today is Saturday and Mark always sleeps in on Saturdays, so that is why he is late for the game."

Example: "The house was painted recently on November 18, 1999, so it looks as good as new."

#37. Ask yourself: "What is missing in the question? What aren't they telling you?" Read between the lines and ask what is left out.

Example: "She said she was happy to go to the party but didn't seem concerned when it was cancelled. Reading between the lines, I don't think she wanted to go in the first place".

Example: In recent advertisements, car manufacturers have proclaimed their new vehicles' 40 mpg highway gas mileage. Not only do these numbers just reflect highway mileage, they may only apply to certain versions of the cars. Also, the cars may require additional equipment such as air spoilers, shutters in

the grille to improve aerodynamics at high speeds, and low-rolling-resistance tires, which might reduce braking and handling grip.

(<http://news.consumerreports.org/cars/2011/06/is-40-mpg-the-new-30-reading-between-the-ad-lines-cruzeffocus-fiesta-civic-fuel-economy.html>)

#38. Dangling, misplaced modifier.

Modifiers are any adjectives, adverbs, phrases, or clauses that a writer uses to elaborate on something. Modifiers, when used wisely, enhance your writing. However, if they are put in the wrong places, the results can be devastating.

Example #1: "The professor wrote a paper on sexual harassment in his office."

Analysis: Is the sexual harassment going on in the professor's office? Or, is his office the place where the professor is writing? One hopes that the latter is true. Always put your modifiers next to the nouns they modify.

Correction: "In his office, the professor wrote a paper on sexual harassment."

Example #2: "Walking through the woods, my heart ached."

Analysis: Is it your heart that is walking through the woods? Avoid such dangling modifiers.

Correction: "Walking through the woods, I felt an ache in my heart."

(http://www.dartmouth.edu/~writing/materials/student/ac_paper/grammar.shtml)

#39. Try not to mix different tenses.

Be careful to stay in a consistent tense. Too often students move from past to present tense without good reason.

Example: "Fred told me that he found out that Ethel helps at her father's store, but I think that Fred knows that since they started going together."

Correction: "Fred told me that he found out that Ethel helps at her father's store, but I think that Fred knew that since they started going together."

#40. What do you expect? Don't undermine your reader!

In the following example, the author begins by telling the reader that more than one example is coming. However, the author only describes one example, leaving the reader unsatisfied and confused.

Example: "Some planets in the solar system break these patterns. These oddities are most likely caused by catastrophic events. For example, Uranus's axis is almost completely on its side. This could be explained by some sort of collision. Uranus most likely inherited the motion of the nebula, like the rest of the planets. But Uranus was hit but something massive, causing its tilt to change."

Improved: "Some planets in the solar system break these patterns. These oddities are most likely caused by catastrophic events. For example, Uranus's axis is almost completely on its side, and Venus's axis is tilted upside down."

#41. Avoid redundancy!

In the following example, the words "now" and "today" have the same meaning. You do not need them both.

Example: "The Nebula theory has been very accurate in describing how the solar system was formed and why it is as we know it *now today*."

#42. Avoid unnecessary words – be more direct and strong.

Example #1: "*In the book it shows* many young stars in the Orion Nebula that are surrounded by disks of gas and dust."

Revised: "The book shows that many young stars in the Orion Nebula are surrounded by disks of gas and dust."

Example #2: "*In the outer disc it contains* ices and gases within the Jovian planets."

Revised: "The outer disc contains ices and gases within the Jovian planets."

Example #3: “Meteorites have been found and dated back as far as 4.56 billion years old, so we know *around that time* is when our solar system was created.”

Revised: “Meteorites have been found and dated back as far as 4.56 billions years old, so we know our solar system was created at least 4.56 billion years ago.”

#43. Anyone can be sloppy. Be the exception!

Example #1: “Once the sun had matured enough to gain a certain brightness, the rest of the gas was blown away into space and outside of our solar system. This *left* just our sun and the planets that orbit it *left* in the solar system.”

Revised: “Once the sun had matured enough to gain a certain brightness, the rest of the gas was blown away into space and outside of our solar system. This left just our sun and its eight planets.”

Example #2: “The solar tides produced by the Sun *could of* forced Venus’s thick atmosphere to rotate backwards causing the planet to rotate backwards over time.”

Revised: “The solar tides produced by the Sun could force Venus’s thick atmosphere to rotate backwards causing the planet to rotate backwards over time.”

#44. Avoid incomplete sentences. Your reader can be left hanging in the middle of a great thought.

Example #1: “In finding habitable planets in the solar neighborhood, factors such as distance from stars they are orbiting, the temperature of the stars they are orbiting, and the mass of the planet.”

Revised: “To find habitable planets in the solar neighborhood, one should consider factors such as distance from stars they are orbiting, the temperature of the stars they are orbiting, and the mass of the planet.”

Example #2: “If I wanted to find a collection of stars that were capable of developing life by using Fermi type thinking.”

Revised: “If I wanted to find a collection of stars that was capable of developing life by using Fermi type thinking, I would first consider the spectral types of the stars.”

Example #3: “Knowing just based off my knowledge of this class so far, that a good portion of the stars are unlivable based off on their size.”

Revised: “Based off my knowledge of this class so far, a good portion of the stars are unlivable because of their sizes.”