

Astrobites Article Assignment

Purpose: This assignment is meant to get you some hands-on experience with one of the most fundamental forms of science writing: the “translation” article. These types of articles are found all the time in the news, and they are essentially summarizing and explaining new research—what happened and why it’s important. You want this to be interesting and engaging to your reader, and make sure that they can understand the big ideas you’re trying to get across.

Task: This assignment is broken up into two parts. First, in Part I, you’ll choose a scientific paper from the available options and complete a worksheet to help you analyze and summarize the research within. Next, in Part II, you’ll write an article—intended for [Astrobites](#)—summarizing the science from the research paper and giving context for why it’s important.

Criteria for Success: To successfully complete Part I, sign up for an article using the spreadsheet below, then read the article according to the guidelines and complete the worksheet. To successfully complete Part II, you will need to write a 600-900 word article, written for an audience of undergraduates who are interested in astronomy, but may not have taken courses about science yet—imagine yourself prior to taking Cluster 70. See the below guidelines for more information, and I recommend reading a few Astrobites as well to get a sense of their style.

You will also have the option to submit your article for publication on Astrobites, and work with one of their editors to revise your piece. I will send out a Google form for reflection and interest (due by class Week 4) after your articles are submitted to me! :)

Part I: Analyzing a Scientific Paper

Due in class Week 2

First: sign up for an article on this spreadsheet by writing your name next to the article you’ve chosen to read and write about.

Reading guidelines:

- Please read your selected article *twice*.

- On your first read through, read only the abstract, introduction, and conclusion. This should help you get a sense of what's going on in the paper / what the big idea is.
- Your second read through is the details read. Read the paper from start to finish, **highlighting** things that seem important and underlining things you want to look up in a dictionary or Google more about. You may have had some questions pop up in your first read, and now is a good time to go digging for answers!
- Complete the worksheet (see last page of this document), referring back to the paper and your annotations as needed.

Please upload your worksheet to the Assignment under Week 2 on BruinLearn.

Part II: Writing a Translation Article

Due by 5pm PT Friday of Week 3

Write a translation/summary of your selected research paper following the guidelines below.

Length: 600-900 words

Audience: undergraduates who are interested in astronomy, but may not have taken courses about science yet—imagine yourself prior to taking Cluster 70. This means that you should generally avoid technical terms, and explain concepts in an accessible and fun way.

Reference Citations: Please cite your sources in a bibliography at the end of your piece in MLA format and in text as (Author Year)—*not* hyperlinks. I know Astrobites uses hyperlinks in their style, but I need to be able to find your references – plus, it's good practice to have them documented all in one place!

Formatting should match Astrobites style, but with sources cited as described here (NOT in hyperlinks like they do). It may be helpful to read some more Astrobites to get a sense of style/tone. Also, remember the fundamental *structure of scientific writing* we learned about in class—the hourglass! This is a really useful structure for translation articles. Start broad to connect to what your audience knows, get more into the specifics, then broaden back out to make your big idea conclusions at the end.

Please upload your worksheet to the Assignment under Week 3 on BruinLearn.

See below for a rubric I will be using to give you feedback on your writing. It may be helpful for guiding you on what is expected of you as you write in this new genre/style. Remember, though, that I will **not** be assigning any grades based on this rubric, in line with our un-grading policy (see Syllabus).

Article Rubric:

	Excellent	Good	Fair	Needs Work
Jargon and Language Choices	Language is appropriate for audience and any technical terms used are necessary & well-explained	Language is mostly appropriate for audience and technical terms are explained	Language is often not appropriate for audience, technical terms are at times used without explanation	Language is not appropriate for audience, directly parrots technical terms from original article without understanding
Explanations of Scientific Concepts	Scientific concepts are accurately explained at the level of the audience, and are engaging / interesting	Scientific concepts are mostly accurately explained at the level of the audience	Scientific concepts are at times inaccurate, and/or explanations are inadequate	Scientific concepts are blatantly inaccurate, and/or taken from original paper without understanding
Overall Structure/ Story	Article flows well and features an engaging, logical narrative that adds to reader's enjoyment and understanding.	Article flows well and features a logical narrative structure.	Article feels choppy at points and/or is lacking in structure, impeding a reader's understanding.	Narrative is not cohesive and is difficult to follow.
Grammar, References, etc.	Few or no proofreading errors or improper source citations.	Some proofreading errors or improper source citations.	Multiple proofreading errors, which may impede legibility.	Hard to read due to errors and/or lacking citations.

Relevant readings / coursework that may be helpful:

- Past Cluster 70 work on how to read a scientific paper
- Week 1 In-Class Activity on Genre (Scientific article & Astrobite comparison)
- *Writing Science in Plain English* by Anne Greene
- Week 3 Reading: Astrobites — Filling (Dust) Gaps in our Knowledge of Planet Formation
- Week 3 In-Class Activity on Knowing Your Audience

Remember — if you are having trouble completing this assignment, reach out earlier rather than later so I can help!

Analyzing a Scientific Paper Worksheet

(1) Let's get started by gathering the administrative info we need here. Find the following components of the paper and write them below:

Article Title:

Article Authors (only list first 2-3 by name if multiple):

Article Journal:

Publication Date:

Link to paper (for easy reference!):

(2) Next, let's narrow in on the big ideas of the paper. Try to answer the following questions. The answers will likely not be straightforwardly written in the text for you to copy over—and even if they are, try to write this in your own words to start building your understanding. I've included [hints] in brackets to help guide you on where to find this information in the paper.

What research are these authors building off of? [Look at the introduction. This is where they'll give lots of good context.]

What new questions are they trying to answer? What are they doing that is different? [This information is often available in the abstract and towards the end of the introduction]

What did they do to investigate these questions? [Look in the methods or “observations” or “data” sections!]

- Did they gather new data, and if so, from where? Did they create new models—of what, and from what information? Did they use existing data—where did it come from?

- What did they do with any data or models they gathered? How did they analyze things?

What conclusions did they come to? [The details of this are often hidden in the Discussion, and then the bigger points are reinforced / re-stated in the Conclusion!]

What future work is there to be done? Do the authors provide any suggestions or connections to other upcoming events/missions? [This is often the last few paragraphs / sentences of the Conclusion]

(3) Now that we've really looked into the details and jotted down the content of the paper, let's try to synthesize and reflect on it a bit.

What's the big takeaway from this paper? Why is it important?

What did you find interesting about this paper?

What questions do you still have about this paper?

(4) Part of writing a good article is looking for sources beyond the primary research article. Search for the following and write down what you find:

Look for another article about this research (this may be a press release or other news coverage—not all papers have this, so it's ok if you can't find it!):

Search for an article that helps answer one of your outstanding questions from above:

Search for an article that explains one of the terms / concepts you underlined as confusing or unknown: