PULSE EXPERIENTIAL TEAM ASSIGNMENT
Team #: 20

1. Title of your PULSE experiential assignment.
Provide a creative and informative title.

The Great CD4 T-Cell Heist

2. Please summarize your PULSE experiential assignment (max 300 words).
Provide a non-technical (lay) summary of your PULSE assignment. Prompts to think about: What is the topic? What is the format? Why did you choose this topic and format? The summary for lay audience is a brief and accessible summary of the assignment that is used to explain complex ideas, technical writing and scientific terms to people who do not have prior knowledge of the subject (e.g., high school science level). This summary should include the importance, impact, and content of your assignment to a broader audience.
[Team 23 is an example of an informative lay summary.]

Human Immunodeficiency Virus (HIV) is a viral disease that compromises a patient's immune function. The virus infiltrates and affects the host's CD4+ T-cells where it performs genome integration. According to data acquired in 2019, over 0.5% of the world's population was infected and about 5000 new infections occurred daily. It is transmitted primarily through sexual contact and at the time of the production of this video, there is no readily available vaccine for this disease.

Genome integration is the process in which the viral genome from the virus places itself within the genome of the host's cell. This would cause viral proteins to be expressed by the integrated cell, allowing for constant production of viral proteins and viral replication. This host genome integration also has potential for normal CD4+ T-cell function impairment, which is detrimental in host immune system functionality.

HIV is considered a quasispecies, which defines a species that has multiple mutated variants existing at the same time. This allows for evolutionary selection of the entire genetically diverse species. In terms of HIV, quasispecies refers to the incredibly extensive genetic diversity, which is made possible because of the lack of viral DNA repair mechanisms. During genomic integration, the lack of repair mechanisms allow for a very high mutation rate of the virus. This allows for a 'cloud' of genetic variants. This unique characteristic of HIV has been why treatment method creation has been so difficult.

Our assignment is a lecture-style presentation supported by AI-generated animations, formats, and images generated with Biorender that explores the intricacies of the pathological mechanism of Human Immunodeficiency Virus. The purpose of this format was to help engage learners in a fun, yet informative way. At the end of the video are AI-generated practice questions that can stimulate active recall and support learning.

3. Provide up to 6 keywords relevant to your PULSE experiential assignment.
3-6 keywords are ideal.

- HIV (Human Immunodeficiency Virus)
- AIDS (Acquired Immune Deficiency)
- CD4 Type 2 Helper T-Cells
- Sexually transmitted
- RNA Virus
- Genome Integration

4. Identify the course topic with which your PULSE assignment most aligns.
Refer to the various topics outlined under 'Course content and Schedule' in the syllabus (e.g. Inflammation).

- Infectious Diseases (Dr. Miguel Quiñones-Mateu)

5. What are the learning outcomes?
There should be a minimum of 2 learning outcomes for your assignments. For further information on learning outcomes, the Centre for Teaching and Learning offers information: https://teaching.uwo.ca/curriculum/coursedesign/learning-outcomes.html

1. Understand the microscopic structure of the HIV viral agent
2. Understand the routes of transmission of the HIV infection
3. Define quasispecies
4. Understand the target of the HIV viral agent
5. Understand the mechanism of viral infiltration into the target cell
6. Understand the proteins involved in viral infiltration into the target cell
7. Understand the mechanism of genome integration
8. Understand the proteins involved in genome integration
9. Understand the mechanism of viral replication within the cell
10. Understand the proteins involved in viral replication within the cell
11. Understand why there is a lack of a cure for this disease and explain what the best way to prevent this disease is
12. Understand the mechanisms of different treatment-based drugs
13. Define the risk factors for HIV
14. Define the complications of HIV
15. Define the complications of AIDs
16. Describe the epidemiology of HIV

6. Why did the team select the chosen topic and the medium? How will the topic and medium of choice help learners?

Our team chose HIV as our topic because of how prevalent it is in our world today. We wanted to spread awareness for this disease due to how incredibly virulent it is. We were also very interested in the concept of quasispecies as it was a novel and fascinating phenomenon that HIV displays.

We believed that a skit incorporated lecture would be an effective choice for learners as it appeals to a wide range of individuals. This advantage was especially appealing to us because of our goal of spreading awareness for this disease. We also considered the fact that an incorporated skit would be able to grasp learners' attention efficiently as well. The knowledge check questions can also allow learners to practice active recall, which helps in retaining information and making it memorable.

7. Did the team use an artificial intelligence (AI) technology tool? If so, which AI technology tool(s) did the team use? What other technology tools did the team use? Is the technology tool novel? Is the team using this technology tool in a novel fashion? If the team did not use technology tool, why did the team decide against using the technology tool(s)?

Please include details (e.g., for what purpose was the tool used for? Why was the tool the best tool to use for your assignment? Are there alternative tools that were considered?)

Our team used the AI tool ChatGPT.

ChatGPT was used to produce the knowledge check questions at the end of the video. It was also used as a tool for research regarding the topic. Specifically, it was used to find articles regarding the topic to further our knowledge and provide a source for the content of our video. It was also used as a convenient form of information confirmation, as well as providing creative ideas towards the title of our project.

8. How is your PULSE experiential assignment innovative and/or novel?

Describe what about the PULSE assignment is innovative/novel. Is there a particular component or content that is innovative/novel? How is it different from other content that already exists?

Our team recognizes that lectures are a widely used medium for educating learners, especially for those attending university. Although there are clear advantages towards the lecture format, like familiarity and effective information transfer, it is evident that student attention is easily lost. We wanted to apply a unique take on the generic lecture format by incorporating a skit into the lecture. This will help grasp and maintain the attention of viewers while simultaneously providing detailed explanations and descriptions of the content taught. The addition of AI-generated knowledge check questions can also provide another pathway for learners to engage with, allowing for a better variety of methods to learn.

9. If you used an AI tool, please copy and paste the prompt(s)/question(s) used along with the output(s)/answer(s) from the AI tool.

The response here is to allow others to replicate the team's work. If the prompts/outputs are lengthy (over 1 page), please attach it as a separate document and note below [Please see attached document].

[Please see attached document]

10. If you did not use an AI tool, please attach a copy of the team's notes to the assignment.

The response here is to allow others to observe the 'behind the scenes' team's work.

[Please see attached document]

11. How did the team ensure the veracity of the information presented in the PULSE assignment?

The response should highlight how the team has ensured that the information presented in the assignment is evidence-based and not spreading misinformation. You should specifically mention which databases (if any) or textbook materials you used, and how you kept track of the sources/references for each claim. If AI provided you with false information, please describe how the team has fact-checked the AI response and the legitimate (scientific) sources you used. A reference document should be provided in the reference section (15. References) below. Please ensure to include in-text citations in your assignment where applicable.

To ensure the veracity of the information that was presented in the assignment, our team comprehensively fact-checked the information found using ChatGPT. We made sure that the AI tool was pulling information from peer-reviewed scientific articles as well as making sure that each scientific article matched the claims the AI tool made regarding them. We noted that the AI tool was pulling information from reputable journals and publication sites like PubMed, Nature, etc. We also noted that the articles found cited other publications and were cited by other publications as well. Using this method, our group confirmed that AI did not provide false information.

12. Write a meaningful team reflection about the PULSE session (max 250 words).

Prompts to help your team write the reflection: Were there any team/individual biases that surfaced when creating content for the assignment? Did the team implement any practices to ensure the content was equitable, diverse, and/or inclusive? How has the PULSE assignment helped with the team's learning? If the team had to estimate, how long did the assignment take? What worked well for your team? What would the team do differently next time? What were the opportunities and challenges with creating the PULSE assignment to help others' learning? Were there any barriers or limitations?

This project has further enhanced our knowledge of HIV. This topic has been discussed in this course as well as other courses our group members took, so this was not a new topic for us. However, this assignment gave us the opportunity to further develop our understanding of our pre-existing knowledge of this topic. It also helped enhance our research skills, especially regarding the capabilities of AI tools.

Our team was composed of friends who already knew each other, so issues regarding communication and work ethic were already accounted for when starting this assignment. An issue we did run into while doing this assignment was allocating time to meet and work on this assignment. Although we share this course, each of us had

responsibilities outside of this course that caused conflict with each of our schedules. This made it difficult for us to coordinate and find time to work on this project together.

We found that splitting our group into two smaller groups composed of people with similar schedules and assigning different parts of the assignment to each group was the most efficient. This allowed us to accommodate each other's schedules, but also to make sure that each part of the assignment wasn't done individually.

Next time, we hope to finish this assignment at an earlier timepoint and avoid working on this assignment so close to the due date.

13. Write the contributions of individual team members using unique initials.
Example: All team members contributed to the design of the prompts used in the technology tool, ChatGPT (GPT-3.5). T.K and T.K2 fact checked the information presented by ChatGPT using published literature on PubMed (PMID 29211319, 32477271). Y.Z finalized and formatted the final infographic and compiled the prompts and outputs. P.E was involved in…

All team members contributed to designing the prompts used in the AI tool Chatgpt
All team members contributed to providing their voice in the voice over of the script in the AI-generated cartoon video

- AK
    - Used Chatgpt to research articles regarding the topic
    - Fact-checked the articles found
    - Produced the citations/references
    - Edited the script
    - Completed the write-up portion
- HL
    - Produced the script for the video
    - Fact-checked the articles found
    - AI generated multiple-choice questions based on the content covered
- GL
    - Used Chatgpt to research articles regarding the topic
    - Fact-checked the articles found
    - Produced the AI generated cartoon video
- VL
    - Fact-checked the articles found
    - Found the AI cartoon video tool
    - Produced the AI generated cartoon video

14. Other comments (Optional)
Any comments the team would like to let the coordinator and/or TAs know.

15. References

Please provide a numbered reference list with Nature citation style. [Please feel free to use citation management software (i.e., free citation manager, e.g., Zotero and Mendeley)]

1. Fleming SP, Kamat S, Prajapati G, Lee KM, Chirikov V, LeMasters T, et al. Comorbidity and comedication burden in people living with HIV in the United States: Updated findings from a contemporary cohort (2020-2024). Current Medical Research and Opinion. 2025 Dec 2;41(12):2263–75. doi:10.1080/03007995.2025.2610782

This retrospective cohort study examined the comorbidity and comorbid burden among 26,078 people living with HIV (PLWH) in the United States between 2020 and 2024, comparing them to 52,156 matched HIV-negative individuals using administrative claims data from Optum's Clinformatics Data Mart Database. The study found that PLWH carried a significantly greater burden of comorbid conditions, particularly hypertension (46.9%), hyperlipidemia (46.0%), and type 2 diabetes (21.8%) The source is credible because it is published in a peer-reviewed clinical journal, uses a large, well-matched dataset spanning nearly a decade, and applies validated tools such as the Quan-Charlson Comorbidity Index. A key limitation is that, as an administrative claims study, it relies on diagnostic and billing codes rather than direct clinical measurements, which may introduce misclassification. For this educational video on HIV pathology, this source directly supports the section discussing long-term consequences of HIV infection, specifically the comorbidities associated with chronic HIV, including hypertension, hyperlipidemia, and type 2 diabetes, providing up-to-date, quantitative evidence to substantiate those claims.

2. Hütter G, Nowak D, Mossner M, Ganepola S, Müßig A, Allers K, et al. Long-term control of HIV by *ccr5* Delta32/Delta32 stem-cell transplantation. New England Journal of Medicine. 2009 Feb 12;360(7):692–8. doi:10.1056/nejmoa0802905

This landmark case report describes the first documented instance of long-term HIV-1 remission achieved through allogeneic stem cell transplantation. The patient, who had both HIV-1 infection and acute myeloid leukemia, received a transplant from a donor homozygous for the CCR5 deletion which is a naturally occurring genetic variant that renders the CCR5 co-receptor non-functional and confers strong resistance to HIV-1 entry. Remarkably, the patient remained free of viral rebound 20 months after transplantation and full discontinuation of antiretroviral therapy. This source is highly credible: it is published in the New England Journal of Medicine, and the case has since been corroborated by

extended follow-up studies confirming durable remission. Its primary limitation is that it represents a single patient case and involves a high-risk procedure not broadly applicable as a general treatment strategy. For this video, this source is directly relevant to the cellular infection section, reinforcing the critical role of CCR5 as a co-receptor for HIV-1 entry, and to the treatment discussion, illustrating a proof-of-concept that targeting CCR5 can functionally eliminate HIV infection.

3. Hütter G. Stem cell transplantation in strategies for curing HIV/AIDS. AIDS Research and Therapy. 2016 Sept 13;13(1). doi:10.1186/s12981-016-0114-y

This review article provides a comprehensive 30-year retrospective of stem cell transplantation as a therapeutic strategy for HIV/AIDS, written by the same lead author behind the landmark Berlin Patient case report. The article examines why antiretroviral therapy alone cannot eradicate HIV, as the virus persists in stable latent reservoirs within resting memory CD4+ T cells and macrophages. It then surveys the evolution of stem cell-based approaches, including the use of naturally resistant donor cells, such as those carrying the CCR5 deletion, gene-editing techniques to artificially engineer resistance, and the development of cytotoxic anti-HIV effector cells. This source is credible because it is published in a peer-reviewed open-access journal. As a review article rather than an original study, it synthesizes existing evidence rather than generating new primary data, which is both a strength and a limitation. For this video, this source reinforces the treatment section, particularly the concept of HIV as a quasispecies with stable genomic reservoirs, and contextualizes why a cure remains elusive despite decades of research.

4. Keith Alcorn Gus Cairns. Cases of HIV cure [Internet]. 2024 [cited 2026 Apr 8]. Available from: https://www.aidsmap.com/about-hiv/cases-hiv-cure

This web-based resource, produced by the HIV information charity aidsmap, compiles and summarizes documented cases of HIV cure or long-term viral control without antiretroviral therapy (ART), as reported in peer-reviewed medical journals and at scientific conferences. The page covers three broad categories including HIV cure or control following CCR5 stem cell transplants, post-treatment controllers who achieved viral suppression after early ART discontinuation, and rare elite controllers who suppress HIV without ever having received treatment. The source is credible for an educational context since it is a peer-reviewed health information organization, and the cases described are all grounded in published scientific literature. As a lay-oriented summary rather than a primary research article, it does not provide raw data or methodology, which limits its use as a standalone academic reference. Nevertheless, it is highly relevant to this video as it provides accessible, up-to-date context for the treatment section, specifically illustrating real-world examples of how CCR5 co-receptor disruption, early

intervention, and immune-mediated control each represent distinct avenues in the ongoing search for an HIV cure.

5. Landovitz RJ, Scott H, Deeks SG. Prevention, treatment and cure of HIV infection. Nature Reviews Microbiology. 2023 Jun 21;21(10):657–70. doi:10.1038/s41579-023-00914-1

This comprehensive review article, published in *Nature Reviews Microbiology*, surveys the current state and future directions of HIV prevention, treatment, and cure research. The authors examine progress across four major domains: pre-exposure prophylaxis (PrEP), vaccine development, antiretroviral therapy (ART), and emerging cure strategies. The review candidly acknowledges that while ART has dramatically improved patient outcomes, vaccine development has largely fallen short, and curative approaches are only beginning to gain scientific traction. It also highlights the growing importance of cross-disciplinary collaboration in HIV research, as well as the limitations of ART in truly ending the global epidemic. This source is highly credible because *Nature Reviews Microbiology* is one of the most authoritative journals, and the authors are leading HIV researchers with extensive publication records. As a review article, it synthesizes rather than generates primary data, but its breadth and recency make it especially valuable. For this video, it directly supports the prevention and treatment sections, encompassing entry inhibitors, reverse transcriptase inhibitors, integrase inhibitors, and protease inhibitors, while also reinforcing why a vaccine and scalable cure remain formidable challenges despite decades of research.

6. Richman DD, Margolis DM, Delaney M, Greene WC, Hazuda D, Pomerantz RJ. The challenge of finding a cure for HIV infection. Science. 2009 Mar 6;323(5919):1304–7. doi:10.1126/science.1165706

This review article, published in *Science*, examines the fundamental obstacles to curing HIV infection despite the success of combination antiretroviral therapy (ART). The authors focus on the concept of the latent viral reservoir, primarily latently infected CD4+ lymphocytes and macrophage-monocyte lineage cells, which allows HIV to persist indefinitely even when plasma viral loads are suppressed below detectable levels by ART. The review discusses the practical limitations of chronic suppressive therapy, including its cost, the necessity of lifelong adherence, and the unknown consequences of decades-long drug exposure, and outlines the scientific challenges involved in targeting the latent reservoir to achieve a true cure. This source is highly credible, published in one of the world's leading multidisciplinary scientific journals and authored by a team of prominent HIV researchers. Its foundational discussion of the latent reservoir problem remains scientifically accurate and widely cited. In this video, it reinforces the genomic integration section, specifically why proviral DNA integrated into the

host genome creates a permanent, treatment-resistant reservoir, and contextualizes the broader challenge of cure development discussed in the treatment section.

7. Zhou L, Rua R, Ng T, Vongrad V, Ho YS, Geczy C, et al. Evidence for predilection of macrophage infiltration patterns in the deeper midline and mesial temporal structures of the brain uniquely in patients with HIV-associated dementia. BMC Infectious Diseases. 2009 Dec 2;9(1). doi:10.1186/1471-2334-9-192

This original research article investigates the neuropathological mechanisms underlying HIV-associated dementia (HAD) by examining macrophage and CD8+ T cell infiltration patterns across 46 to 53 brain regions from HIV-positive patients with and without dementia. Using immunohistochemical analysis, the authors found that while overall patterns of immune cell infiltration were similar between both groups, a distinctive co-localization of infected macrophages, CD8+ T cells, and HIV P24 antigen in the deeper midline and mesial temporal brain structures was uniquely present in HAD patients. These regions are associated with cognition and memory, suggesting a mechanistic link between this infiltration pattern and neurocognitive impairment. The source is credible, published in the peer-reviewed open-access journal *BMC Infectious Diseases*. Though its relatively small sample size, only two HAD patients and four HIV-positive non-dementia patients, limits the generalizability of its findings. For this video, this source expands on the long-term consequences of HIV infection described in the script, offering neuropathological evidence that HIV-infected macrophages, not only CD4+ T cells, serve as viral reservoirs capable of penetrating the central nervous system and contributing to serious neurological complications.

8. Pilkinton MA, McDonnell WJ, Barnett L, Chopra A, Gangula R, White KD, et al. In chronic infection, HIV gag-specific CD4 + T cell receptor diversity is higher than CD8 + T cell receptor diversity and is associated with less HIV quasispecies diversity. Journal of Virology. 2021 Mar 25;95(8). doi:10.1128/jvi.02380-20

This original research article investigates the T cell receptor (TCR) repertoire diversity of both CD4+ and CD8+ T cells responding to the HIV-1 Gag protein in 21 chronically infected individuals, using overnight peptide stimulation, activated T cell sorting, and deep TCR sequencing. The study found that Gag-reactive CD8+ T cells were oligoclonal, dominated by a few highly prevalent TCR clonotypes, whereas Gag-reactive CD4+ T cells displayed a far more diverse TCR repertoire. Crucially, greater CD4+ TCR diversity was strongly associated with reduced HIV Gag genetic diversity in the same donors, suggesting that a broader CD4+ T helper cell response may constrain viral evolution during chronic infection. This source is credible because it is published in the peer-reviewed *Journal of Virology*

and employing rigorous deep sequencing methodology, though the sample size of 21 participants limits statistical power. For this video, this source is directly relevant to the quasispecies section as it provides immunological evidence for how the host's CD4+ T cell response interacts with HIV's capacity to mutate and diversify, reinforcing the concept that HIV's high mutation rate enables immune evasion and makes both treatment and immune control exceptionally difficult to sustain.

9. Shattock RJ, Rosenberg Z. Microbicides: Topical prevention against HIV. Cold Spring Harbor Perspectives in Medicine. 2011 Sept 14;2(2). doi:10.1101/cshperspect.a007385

This article examines the development and potential of topical microbicides as a strategy to prevent HIV transmission. It argues that microbicides, particularly those containing antiretroviral agents like tenofovir, offer a promising method of prevention, especially for populations at high risk. The paper highlights both biological mechanisms and clinical trial findings, emphasizing that effectiveness depends on adherence, formulation, and drug potency. This source is highly credible as it is a peer-reviewed article from PubMed and supported by references to clinical trials and established research. A key strength is its comprehensive overview of both scientific mechanisms and real-world trial outcomes. However, a limitation is that, as a review, it may rely on data available at the time and may not reflect the most recent advancements in HIV prevention technologies. This source is useful for my assignment because it provides foundational knowledge on HIV prevention strategies and highlights the role of pharmacological interventions. It was used to support discussions on drug delivery systems, public health implications, and the importance of adherence in therapeutic effectiveness.

10. Govender RD, Hashim MJ, Khan MA, Mustafa H, Khan G. Global Epidemiology of HIV/AIDS: A Resurgence in North America and Europe. Journal of Epidemiology and Global Health. 2021;11(3):296–301.

This epidemiological study analyzes global trends in HIV/AIDS prevalence, incidence, mortality, and disability-adjusted life years across 204 countries from 1990 to 2019, drawing on data from the Global Burden of Disease 2019 update and UNAIDS Data 2019, with forecasting extended to 2040. Key findings include that while global mortality rates are declining, currently at 11 deaths per 100,000 and projected to fall to 8.5 by 2040, overall prevalence continues to rise, as people are living longer with HIV due to ART. Concerningly, new infection rates have been increasing since 2010 in regions such as North America, Europe, South America, and Russia, even after age-standardization. The study also reports approximately 5,000 new infections daily, including 500 in children, and highlights persistently high maternal-to-child transmission rates. This source is credible, utilizing large validated international datasets and peer-reviewed methodology, though its data only extends to 2019 and may not capture the most recent trends. For this video, it directly supports the epidemiology section, providing quantitative evidence for both

the disproportionate burden in sub-Saharan Africa and the concerning resurgence of new HIV cases in higher-income regions since 2010.

11. Fanjul F, Gavalda M, Campins A, Ferré A, Martín L, Peñaranda M, et al. HIV therapy: The latest developments in Antiviral Drugs—a scoping review. Biomedicines. 2025 Oct 27;13(11):2629. doi:10.3390/biomedicines13112629

This scoping review, conducted in alignment with the PRISMA-ScR framework, systematically maps recent developments in anti-HIV drug development and delivery platforms by interrogating four major databases, PubMed, Embase, Web of Science, and Scopus, supplemented by conference abstracts from major HIV meetings. The review highlights several cutting-edge advances, including capsid inhibition via lenacapavir for multidrug-resistant HIV, long-acting intramuscular regimens combining cabotegravir and rilpivirine, maturation inhibitors such as zabofiravir, attachment inhibitors like fostemsavir, and broadly neutralizing antibodies (bNAbs) capable of sustaining ART-free viral suppression in select patients. The authors also address ultra-long-acting delivery systems and the ethical imperative of equitable global access. This source is highly credible because it follows a rigorous scoping review methodology and is published in the peer-reviewed journal *Biomedicines*. For this video, it directly supports the treatment section by illustrating how the four drug classes mentioned, entry, reverse transcriptase, integrase, and protease inhibitors, are being supplemented by entirely new mechanisms of action, underscoring just how actively the field is evolving.

12. Nowak MA. What is a quasispecies? Trends in Ecology & Evolution. 1992 Apr;7(4):118–21. doi:10.1016/0169-5347(92)90145-2

This foundational theoretical article explains the quasispecies concept, a stable distribution of mutant variants generated through a continuous mutation-selection process, and explores its implications for evolutionary biology and virology. The paper distinguishes the quasispecies framework from classical single-sequence models of evolution, emphasizing that selection operates on the mutant distribution as a whole rather than on individual sequences. The paper applies this framework to RNA virus populations, identifying HIV-1 and HIV-2 as among the most prominent biological examples, and discusses how the quasispecies nature of HIV may provide a mechanistic basis for AIDS pathogenesis. Despite being published in 1992, this source remains a landmark reference in virology and evolutionary biology and is foundational to understanding why HIV behaves as a quasispecies. Its age is actually a strength in this context, as it represents the original theoretical grounding for a concept that remains central to HIV research today. For this video, this source directly underpins the quasispecies section, explaining why the lack of proofreading by reverse transcriptase produces a swarm of coexisting viral variants that collectively complicate treatment and immune evasion.

16. Annotated Bibliography

An annotated bibliography is a list of sources (books, articles, websites, etc.) that you used for your project. Each entry has two parts:

1. *Citation – written in the required citation style (same formatting and order as the Nature citation style in your list of references).*
2. *Annotation – a short paragraph that summarizes, evaluates, and explains how the source is useful for your assignment.*

Why do this?

- *Helps you keep track of your research.*
- *Shows your instructor you read and understood your sources.*
- *Develops critical thinking by requiring you to evaluate the quality and relevance of each source.*

Write the annotation (about 150–200 words each)

- *Summary: Briefly describe the main argument or purpose of the source.*
- *Evaluation: Comment on the credibility, strengths, or weaknesses of the source.*
- *Relevance: Explain how you will use this source in your assignment.*