Unit 2: Using Databases

Content Area: **English**
Course(s): **Process Research 7**
Time Period: **September**
Length: **Around 2 weeks**
Status: **Published**

Unit Overview:

Students will be able to use our databases as a reliable and credible source for research. This unit focuses on how users determine which databases are valid resources for research.

Essential Questions:

- Which databases are the best choice for your topic?
- How do you know that a database would be a credible source to use?
- What can each database offer to a researcher?
- What is AI bias, and how does it occur?
- How can you reduce AI bias when conducting research?

Enduring Understandings:

Researchers will use the appropriate databases that go along with a specific topic.

Checking through our databases and gathering information on a topic.

AI will significantly change many aspects of our lives. Therefore, it's important for students to develop an understanding of how the various AI technologies work in order to use them responsibly in their learning and careers.

Standards/Indicators/Student Learning Objectives (SLOs):

- Use technology, including the Internet, to produce and publish writing and link to and cite sources.
- Gather relevant information from multiple print and digital sources, using search terms effectively and assess the credibility and accuracy of each source
- Understand how AI is trained and tested and apply that knowledge to reduce AI bias by using detailed, specific prompts.

LA.W.7.7   Conduct short research projects to answer a question, drawing on several sources and

	generating additional related, focused questions for further research and investigation.
LA.W.7.8	Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
LA.SL.7.1.A	Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
LA.SL.7.5	Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.
TECH.8.1.8.D.4	Assess the credibility and accuracy of digital content.
TECH.8.1.8.D.CS1	Advocate and practice safe, legal, and responsible use of information and technology.
TECH.8.1.8.E	Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.
TECH.8.1.8.E.1	Effectively use a variety of search tools and filters in professional public databases to find information to solve a real world problem.
TECH.8.1.8.E.CS1	Plan strategies to guide inquiry.
TECH.8.1.8.E.CS2	Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
TECH.8.1.8.E.CS3	Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.
TECH.8.1.8.E.CS4	Process data and report results.

Lesson Titles:

SWBAT distinguish between essential and nonessential information.

SWBAT identify and use common textual features to comprehend information.

SWBAT research databases and complete information(notes) on a current event.

SWBAT Understand what AI bias is and how it occurs in order to think critically about its potential impacts.

SWBAT employ strategies to reduce AI bias

Career Readiness, Life Literacies, and Key Skills:

Communication and collaboration

Grouping

Media Literacy

Critical Thinking

CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP7	Employ valid and reliable research strategies.
TECH.9.4.8.CI.1	Assess data gathered on varying perspectives on causes of climate change (e.g., cross-cultural, gender-specific, generational), and determine how the data can best be used to design multiple potential solutions (e.g., RI.7.9, 6.SP.B.5, 7.1.NH.IPERS.6, 8.2.8.ETW.4).
TECH.9.4.8.TL.2	Gather data and digitally represent information to communicate a real-world problem (e.g., MS-ESS3-4, 6.1.8.EconET.1, 6.1.8.CivicsPR.4).
TECH.9.4.8.IML.3	Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping (e.g., 6.SP.B.4, 7.SP.B.8b).
TECH.9.4.8.IML.4	Ask insightful questions to organize different types of data and create meaningful visualizations.
TECH.9.4.8.IML.5	Analyze and interpret local or public data sets to summarize and effectively communicate the data.
TECH.9.4.8.IML.6	Identify subtle and overt messages based on the method of communication.
	Digital technology and data can be leveraged by communities to address effects of climate change.
	The mode of information can convey a message to consumers or an audience.
	Gathering and evaluating knowledge and information from a variety of sources, including global perspectives, fosters creativity and innovative thinking.

Inter-Disciplinary Connections:

- History
- Language Arts

LA.RH.6-8.4	Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.
LA.RI.7.1	Cite several pieces of textual evidence and make relevant connections to support analysis of what the text says explicitly as well as inferences drawn from the text.
LA.RI.7.3	Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).
LA.RI.7.4	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.
LA.WHST.6-8.1.A	Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.
LA.WHST.6-8.1.C	Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.
LA.WHST.6-8.1.D	Establish and maintain a formal/academic style, approach, and form.
	Research to Build and Present Knowledge
LA.W.7.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.
SOC.5-8.1.4.1	Select and analyze information from a variety of sources to present a reasoned argument or position in a written and/or oral format.

Asian American Pacific Islander Mandate

Topic: Inclusivity and Representation in Databases

Explore how some databases may underrepresent or omit information about AAPI communities, including specific ethnicities or historical events. Encourage students to consider the inclusivity and diversity of the information presented.

Introduce students to specialized databases like the Asian American Studies Network Information Center (AASNIC), the Library of Congress Asian/Pacific Islander Resources, or the National Consortium for Asian Pacific Islander Healthcare.

Challenge students to analyze databases using criteria like language availability, representation of diverse AAPI sub-communities, and inclusion of accurate and up-to-date information on AAPI history, culture, and contemporary issues.

Addresses the Following Component of the Mandate: The political, economic, and social contributions of Asian American Pacific Islander people, as part of the district's implementation of the New Jersey Student Learning Standards.

Materials Used and Resources:

Asian American Studies Association (AASA): https://www.aasa.org/: https://www.aasa.org/

National Council for Asian Pacific Americans (NCAPA): https://ncapa.org/: https://ncapa.org/

National Asian Pacific Islander American Bar Association (NAPABA): https://www.napaba.org/: https://www.napaba.org/

LGBTQ & Disabilities Mandate

Topic: Inclusivity and Representation in Databases

Explore how some databases may underrepresent or omit information about LGBTQ+ individuals and individuals with disabilities. Encourage students to consider the inclusivity and diversity of the information presented in a database.

Introduce students to specialized databases like the Lesbian/Gay/Bisexual/Transgender (LGBT) Documentation Project, the American Institute for Research (AIR) Disability Statistics Database, or the National Disability Rights Network (NDRN) Resource Library.

Challenge students to analyze databases using criteria like accessibility, representation of diverse identities and perspectives, and inclusion of accurate and up-to-date information on LGBTQ+ and disability issues.

Addresses the Following Component of the Mandate: The political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, as part of the district's implementation of the New Jersey Student Learning Standards.

Materials Used and Resources:

Government Databases -

USA.gov: https://www.usa.gov/ - Provides access to various government databases with information on LGBTQ+ and disability issues, including legislation, healthcare resources, and statistics.

National Institutes of Health (NIH): https://www.nih.gov/ - Offers databases on health topics relevant to both communities, including HIV/AIDS research, mental health,

LGBTQ+ Specific Resources -

The Lesbian/Gay/Bisexual/Transgender (LGBT) Documentation
Project: https://www.mtsu.edu/gorecenter/digital-collections.php - Houses a vast collection of primary source materials and scholarly research on LGBTQ+ history and culture.

The Trevor Project: https://www.thetrevorproject.org/ - Provides a searchable database of resources and statistics on LGBTQ+ youth health and well-being.

Human Rights Campaign: https://www.hrc.org/ - Offers a searchable database of state-by-state LGBTQ+ equality laws and policies.

Disability Specific Resources -

American Institute for Research (AIR) Disability Statistics
Database: https://www.air.org/news/announcement/american-institutes-research-among-top-ranking-disability-inclusion-benchmark - Provides comprehensive data on disability
prevalence, employment, education, and health outcomes.

National Disability Rights Network (NDRN) Resource Library: https://www.ndrn.org/ - Offers a searchable database of resources on disability rights, policy, and advocacy.

World Health Organization (WHO) Disability and Rehabilitation: https://www.who.int/news-room/fact-sheets/detail/disability-and-health - Provides global data, reports, and resources on disability, including access to healthcare and social services.

Climate Change

Topic: Evaluating Climate Change Information in Databases

Discuss bias and misinformation; Highlight credible climate change database; Evaluate databases for climate change research

Topic: Researching Specific Climate Change Issues

Climate data and trends; climate change impacts and solutions

Addresses the Following Component of the Mandate: The political, economic, and social contributions of impact of climate change, as part of the district's implementation of the New Jersey Student Learning Standards.

Materials used and resources:

NJ Climate Change Data and Tools: https://dep.nj.gov/climatechange/ - This website provides access to real-time and historical climate data for New Jersey, including temperature, precipitation, sea level rise, and greenhouse gas emissions.

NASA Climate Change: https://climate.nasa.gov/ - NASA's website offers a comprehensive overview of climate change, including its causes, impacts, and potential solutions. It provides educational resources, simulations, and interactive tools suitable for students of all ages.

National Oceanic and Atmospheric Administration (NOAA) Climate.gov: https://www.noaa.gov/ - NOAA's Climate.gov website provides reliable and up-to-date information on climate change, including climate indicators, scientific reports, and educational resources.

United Nations Framework Convention on Climate Change (UNFCCC): https://unfccc.int/ - The UNFCCC website provides information on the international response to climate change, including climate agreements, conferences, and resources for educators.

Holocaust Mandate

Amistad Mandate

Instructional Strategies, Learning Activities, and Levels of Blooms/DOK:

- Understand what AI bias, Training Data and Testing Data are: (Understand)
- Current Event using a database: (Application)
- Effective Questioning: (Comprehension)
- Analyze results of an AI generated response to a prompt in order to check for AI bias (Analyze)
- Evaluate if AI bias is present and why: (Evaluate)
- Modify prompt to reduce chance of AI bias occurring: (Create)
- Learning Stations: variety of subjects and using appropriate databases (Application)

Modifications

ELL Modifications:

- Provide ELL students with multiple literacy strategies
- Front load information
- Focus on domain specific vocabulary and keywords
- Group students
- Use manipulatives where possible
- Use visuals
- Use graphic organizer

IEP & 504 Modifications:

- Rewording questions so that there are not higher level vocabulary within the question (you are testing for understanding of the content not the ability to understand the question)
- Less questions per page (so not visually overwhelming)
- Less questions overall if the student takes so much extra time that they are going into future days (then missing instruction) to take the test
- Allowing student to correct mistakes or answer wrong questions correctly for additional credit if failed the first test (another way to re-teach material)
- speaking to students privately when redirecting behaviors
- Allow student to edit with teacher comments the first attempt at a graded written assignment
- Break larger assignments/projects into shorter tasks with clear deadlines for each section

G&T Modifications:

- Encourage students to explore concepts in depth and encourage independent studies or investigations.
- Determine where students' interests lie and capitalize on their inquisitiveness.
- Invite students to explore different points of view on a topic of study and compare the two.
- Refrain from having them complete more work in the same manner.
- Employ differentiated curriculum to keep interest high.
- Avoid drill and practice activities.
- Ask students' higher level questions that require students to look into causes, experiences, and facts to draw a conclusion or make connections to other areas of learning.
- Encourage students to make transformations- use a common task or item in a different way.
- Different test items.

At Risk Modifications

- Reduce the variety of tasks
- Continue to repeat and rephrase the major point(s) of the unit or lesson.
- Demonstrate how to use graphic organizers and then provide them so students learn how to categorize and organize information.
- Provide study guides for tests well in advance of the test
- Offer copies of lecture notes to students who cannot copy accurately or quickly, have poor penmanship, or note-taking skills.
- Throughout the year help students fix their own notes using yours as a guide.

Formative Assessment:

Warm Up:

- Define domain specific vocabulary: databases, credible, valid, sources, citation, etc.
- Review domain specific vocabulary aligned to unit.
- Review domain specific, inter-disciplinary vocabulary.
- Review vocabulary: essential, nonessential, etc.
- "What I remember most from yesterday's lesson was . . ."

Anticipatory Set:

- Give example topics and search which database is the best for different subjects.
- Provide students with topics and let them choose the database from a list of credible sites.
- Discuss what made the databases credible sources.

Classwork:

- Imagine that you are asked to create a character for a story (narrative) you are writing in Language Arts class. Your teacher gives you feedback on your rough draft and says your character needs to be

more detailed. Use Canva's Magic Media feature or MagicSchool Ai's Image Generator feature to use your text description of your character to create an image of that character. Was the image exactly how you visualized your character? If not, AI bias may be at play. Add details to the description of your character until your image matches what you visualize your character to look like. Submit your prompt and the image.

Closure:

- White boards with examples guessing which database.
- 1 minute written summary of the lesson.
- What do you think caused the image of your character to not match your visualization? Did it give you a male character instead of a female? Was the nationality not correct? How about hair color? AI makes generalizations about things based on the information it has, so being very specific in your prompts is important whether for a task like character creation or research.
- Round Robin conducted by students

Summative Assessment:

The final research project will have a section where the students will be required to use 1 of the databases available for his/her topic and be able to cite it in the bibliography.

Alternate Assessments

Performance tasks

Project-based assignments

Problem-based assignments

Presentations

Reflective pieces

Concept maps

Case-based scenarios

Portfolios

Benchmarks

Skill Based Assessments

Writing Prompt

Reading Response

Lab Practical

Resources & Materials:

- Databases for students at Delsea
- Chromebooks
- Promethean Boards
- Google classroom
- Google documents
- MagicSchool AI
- Canva MagicMedia AI Image Creator

Technology:

World Book Online: worldbook.com

Ebscohost.com

Delsea Citation Station

Delsea Current News to Use

DMS Databases

Canva AI

TECH.8.1.8.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.8.A.CS1	Understand and use technology systems.
TECH.8.1.8.A.CS2	Select and use applications effectively and productively.
TECH.8.1.8.E.CS2	Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.

TECH.8.1.8.E.CS3   Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.