

Unit 03: The Research Enterprise in Psychology, Research Methods

Content Area: **Social Studies**
Course(s):
Time Period: **Semester**
Length: **4 weeks- taught 2nd with semester benchmarks**
Status: **Published**

General Overview, Course Description or Course Philosophy

OBJECTIVES, ESSENTIAL QUESTIONS, ENDURING UNDERSTANDINGS

Objective:

Students will understand proper research methods and measurements used to study behavior and mental processes including the ethical and data analysis expectations.

Essential Question:

How do psychologists use research to explore behavior and mental processes?

CONTENT AREA STANDARDS

CS.K-12.7.a	Select, organize, and interpret large data sets from multiple sources to support a claim.
CS.K-12.7.c	Articulate ideas responsibly by observing intellectual property rights and giving appropriate attribution.
SCI.9-12.SI.2.1.1	Describe the scientific method and its role in psychology
SCI.9-12.SI.2.1.2	Describe and compare a variety of quantitative (e.g., surveys, correlations, experiments) and qualitative (e.g., interviews, narratives, focus groups) research methods
SCI.9-12.SI.2.1.3	Define systematic procedures used to improve the validity of research findings, such as external validity
SCI.9-12.SI.2.1.4	Discuss how and why psychologists use non-human animals in research
SCI.9-12.SI.2.2	Ethical issues in research with human and non-human animals

SCI.9-12.SI.2.2.1	Identify ethical standards psychologists must address regarding research with human participants
SCI.9-12.SI.2.2.2	Identify ethical guidelines psychologists must address regarding research with non-human animals
SCI.9-12.SI.2.3	Basic concepts of data analysis
SCI.9-12.SI.2.3.1	Define descriptive statistics and explain how they are used by psychological scientists
SCI.9-12.SI.2.3.2	Define forms of qualitative data and explain how they are used by psychological scientists
SCI.9-12.SI.2.3.3	Define correlation coefficients and explain their appropriate interpretation
SCI.9-12.SI.2.3.4	Interpret graphical representations of data as used in both quantitative and qualitative methods
SCI.9-12.SI.2.3.5	Explain other statistical concepts, such as statistical significance and effect size
SCI.9-12.SI.2.3.6	Explain how validity and reliability of observations and measurements relate to data analysis
TECH.K-12.P.5	Utilize critical thinking to make sense of problems and persevere in solving them.
TECH.K-12.P.8	Use technology to enhance productivity increase collaboration and communicate effectively.

RELATED STANDARDS (Technology, 21st Century Life & Careers, ELA Companion Standards are Required)

LA.RH.11-12.1	Accurately cite strong and thorough textual evidence, (e.g., via discussion, written response, etc.), to support analysis of primary and secondary sources, connecting insights gained from specific details to develop an understanding of the text as a whole.
LA.RH.11-12.2	Determine the theme, central ideas, information and/or perspective(s) presented in a primary or secondary source; provide an accurate summary of how key events, ideas and/or author's perspective(s) develop over the course of the text.
LA.RH.11-12.3	Evaluate various perspectives for actions or events; determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.
LA.RH.11-12.4	Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines faction in Federalist No. 10).
LA.RST.11-12.1	Accurately cite strong and thorough evidence from the text to support analysis of science and technical texts, attending to precise details for explanations or descriptions.
LA.RST.11-12.2	Determine the central ideas, themes, or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
LA.RST.11-12.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
LA.RST.11-12.7	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
LA.RST.11-12.8	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.
LA.RST.11-12.9	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting

information when possible.

- LA.RST.11-12.10 By the end of grade 12, read and comprehend science/technical texts in the grades 11-CCR text complexity band independently and proficiently.
- LA.WHST.11-12.1.A Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.
- LA.WHST.11-12.1.B Develop claim(s) and counterclaims using sound reasoning and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases.
- LA.WHST.11-12.1.C Use transitions (e.g., words, phrases, clauses) to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
- LA.WHST.11-12.1.D Establish and maintain a style and tone appropriate to the audience and purpose (e.g., formal and objective for academic writing) while attending to the norms and conventions of the discipline in which they are writing.
- LA.WHST.11-12.1.E Provide a concluding paragraph or section that supports the argument presented.
- LA.WHST.11-12.2.A Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
- LA.WHST.11-12.2.B Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
- LA.WHST.11-12.2.C Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
- LA.WHST.11-12.2.D Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.
- LA.WHST.11-12.2.E Provide a concluding paragraph or section that supports the argument presented.
- LA.WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- LA.WHST.11-12.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
- LA.WHST.11-12.6 Use technology, including the Internet, to produce, share, and update writing products in response to ongoing feedback, including new arguments or information.
- LA.WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
- LA.WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
- LA.WHST.11-12.9 Draw evidence from informational texts to support analysis, reflection, and research.
- LA.WHST.11-12.10 Write routinely over extended time frames (time for reflection and revision) and shorter

time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

STUDENT LEARNING TARGETS

Declarative Knowledge

Students will understand that

- Psychological knowledge, like all scientific knowledge, evolves rapidly as new discoveries are made
- That psychology explores behavior and mental processes of both human and non-human animals
- Ethical standards regulate scientific research and professional practice
- Psychological knowledge relates to everyday life
- Psychological science and knowledge can be useful in addressing a wide array of issues, from individual to global levels
- Drawing evidence-based conclusions about psychological phenomena is essential

Procedural Knowledge

Students will be able to:

- Describe the scientific method and its role in psychology
- Describe and compare a variety of quantitative (e.g., surveys, correlations, experiments) and qualitative (e.g., interviews, narratives, focus groups) research methods
- Define systematic procedures used to improve the validity of research findings, such as external validity
- Discuss how and why psychologists use non-human animals in research
- Identify ethical standards psychologists must address regarding research with human participants
- Identify ethical guidelines psychologists must address regarding research with non-human animals
- Define descriptive statistics and explain how they are used by psychological scientists
- Define forms of qualitative data and explain how they are used by psychological scientists
- Define correlation coefficients and explain their appropriate interpretation
- Interpret graphical representations of data as used in both quantitative and qualitative methods
- Explain other statistical concepts, such as statistical significance and effect size
- Explain how validity and reliability of observations and measurements relate to data analysis

EVIDENCE OF LEARNING

Alternative:

- Portfolios
- Verbal Assessment (instead of written)
- Multiple choice
- Modified Rubrics
- Performance Based Assessments

Benchmark:

Standards based through Pear Assessment

Formative Assessments

- Chapter 2 Study Guide https://docs.google.com/document/d/1tQi8l8gYiJF7Qcaw05HuzaPU_WxAgAbs1EociNMSDns/edit?usp=sharing
- Questioning:
 - How do different types of psychologists attempt to define, explain, predict, and control human behavior?
 - Why is it important to take different perspectives when attempting to explain complex behaviors?
 - How do psychologists use research to explore behavior and mental processes?
 - How do psychologists apply descriptive statistics to organize and analyze information?
- Lab activity- Drinking the soda or water https://docs.google.com/document/d/1bjxGpG92tU_H1ulnYcducy7veMij7Nmq-LQiFm0i6pw/edit?usp=sharing
- Each cooperative group will get a case study and will have to evaluate the bias, ethics, and process. Each group will have to deduce what is wrong with the study. <https://drive.google.com/file/d/1dbD2tFlr4fV06vfVnEnZ4gl-rjXVPmR3/view?usp=sharing>
- Comparing and contrasting independent and dependent variables

Summative Assessments

- 3 Article Reviews- The first one is any psychology topic and the other two should be related to the research project. <https://docs.google.com/document/d/12pa4yl-B7QsnBzC7vK3m9pvo5O2RTng0yC9pywpcAgY/copy?usp=sharing>
- Test- multiple choice and true/false questions
- Research Paper
Outline https://docs.google.com/document/d/1vXStP__7c7UbFLTzDsZwCq33aK0xxgMajJ-E_4_q_ow/copy?usp=sharing
- BENCHMARKS:
- Proposal https://docs.google.com/document/d/1WvE0HrS7mJiDCNIGdhym-VxCagwgDDfLZh_YC91OvWE/copy?usp=sharing
- 2 articles reviews (listed above)
- Methods and
Design https://docs.google.com/document/d/1mhgebEkz1YSEGPSseHOcEdHqNN19_FE_W9D15x9asGbg/copy
- Data, Results, &
Discussion <https://docs.google.com/document/d/1VGaaxLqjCUfbpLyxa7w1yvceU2hw1IGSPaOyLQR0A-c/copy?usp=sharing>
- Rough Draft
- Final Draft

Resources

- Formatting
guidelines: https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html
- Rubric: <https://docs.google.com/document/d/12tC0VS0-mBbS1W7ls9dZ0hQXZPXJJ2VA5lMgWXuqmd4/copy>
- APA
Template: <https://docs.google.com/document/d/12qzRr1b7pXOYOMyLhDy15FyQNl16oXNxmY CcbPSqGb8/copy>
- Revision Check: <https://drive.google.com/file/d/1t3mQWf16zWdjSVsUNbFt-pmh-wf6GDLR/copy>

RESOURCES (Instructional, Supplemental, Intervention Materials)

Slides notes- <https://drive.google.com/file/d/1bunfDIopiPW8AXOqOXDIHffZ5xSAFDvU/view?usp=sharing>

Ethical Principles of Psychologists and Code of

Conduct https://web.kamihq.com/web/viewer.html?state=%7B%22ids%22%3A%5B%2216VYwgLUzcSiZXJPX4DLmjPyFy3YMyaho%22%5D%2C%22action%22%3A%22open%22%2C%22userId%22%3A%22113696541152334422540%22%2C%22resourceKeys%22%3A%7B%7D%7D&kami_user_id=8488129

INTERDISCIPLINARY CONNECTIONS

MA.S-IC.A	Understand and evaluate random processes underlying statistical experiments
MA.S-IC.B	Make inferences and justify conclusions from sample surveys, experiments, and observational studies
MA.S-ID.A	Summarize, represent, and interpret data on a single count or measurement variable
MA.S-ID.B	Summarize, represent, and interpret data on two categorical and quantitative variables
SJ.DI.9-12.6	I interact comfortably and respectfully with all people, whether they are similar to or different from me.
SJ.DI.9-12.7	I have the language and knowledge to accurately and respectfully describe how people (including myself) are both similar to and different from each other and others in their identity groups.
SOC.6.2.12.CivicsHR.4.a	Analyze the motivations, causes, and consequences of the genocides of Armenians, Ukrainians, Jews in the Holocaust and assess the responses by individuals, groups, and governments and analyze large-scale atrocities including 20th century massacres in China.
SOC.K-12.3	Seeking Diverse Perspectives

ACCOMMODATIONS & MODIFICATIONS FOR SUBGROUPS

- Provide enrichment activities that include more advanced material
- Use of Higher Level Questioning Techniques
- Extended time to complete assignments
- Extended time on classroom tests and quizzes
- Restate, reread, and clarify directions/questions
- Establish procedures for accommodations /modifications for assessments
- Provide oral reminders and check student work during independent work time
- Assist student with long and short term planning of assignments
- Design surveys to generate and analyze data to be used in a discussion.
- Focus on recognition work (listening, reading), rather than productive work (speaking and writing)
- Extended time to complete assignments: Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases

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additional strategies beyond accommodations that may be helpful to the student's success.