

Budget of Work

Science Research 8

Quarter 1

WEEK 1: Nature and Purpose of Research

Day #	Focused Topic	Activity (DepEd Competency as-is)
1	Nature and Characteristics of Research	Identify the characteristics of research; explain the importance of research.
2	Types and Forms of Research	Differentiate basic research from applied research. Accomplish the appropriate institutional research forms needed for a given scientific investigation.

WEEK 2: Ethics and IP in Research

Day #	Focused Topic	Activity (DepEd Competency as-is)
3	Ethics in Research	Determine the necessary measures needed to address the ethical issues of a given scientific investigation.
4	Intellectual Property Rights	Explain the importance of protecting intellectual property.

Summative Assessment 1

Covers Days 1–4: Nature, Types, Forms, Ethics, and IP

WEEK 3: Understanding and Designing Research

Day #	Focused Topic	Activity (DepEd Competency as-is)
5	The Research Process	Describe the nature of the research process.
6	Research Gap Identification	Determine the research gaps of a given topic.

WEEK 4: Title and Problem Statement

Day #	Focused Topic	Activity (DepEd Competency as-is)
7	Title Formulation	Formulate a research title based on the identified research gaps.
8	Developing Testable Questions	Develop testable problem statements.

Summative Assessment 2

Covers Days 5–8: Process, Gap, Title, Problem Statement

WEEK 5: Application and Review

Day #	Focused Topic	Activity
9	Drafting Research Plan Components	Students draft research titles and questions based on chosen community problems.
10	Peer Review and Concept Integration	Peer feedback and reflection on what makes a good research problem.

WEEK 6: Preparation for Performance Task

Day #	Focused Topic	Activity
11	Task Orientation and Planning	Prepare for media-based presentation: outline, visuals, ethics, concepts.
12	Proposal and Submission	Submit written components: gap, title, question, rationale, ethical forms.

Summative Assessment 3

Covers Days 9–12: Final synthesis of research understanding and task prep

WEEKS 7–8: PERFORMANCE TASK

DepEd Performance Standard: Present a community-based research problem focusing on the research gap using any form of media, supported by science concepts and related literature.

Day #	Focused Topic	Activity
13	Performance Task Production	Layout script/visuals for presentation; apply prior research plan.
14	Midpoint Review & Refinement	Consult and revise final content and media.
15	Final Rehearsal & Output	Practice and polish final submission.
16	Presentation & Reflection	Deliver final output and submit reflection on research experience.

Quarter 2

WEEK 1: Hypothesis Writing

Day #	Focused Topic	Activity (DepEd Competency as-is)
1	Null and Alternative Hypotheses	Formulate null and alternative hypotheses from the developed testable problem statement.
2	Hypothesis Application	Write hypotheses for sample problems across different science topics.

WEEK 2: Review of Related Literature – Basics

Day #	Focused Topic	Activity (DepEd Competency as-is)
3	Gathering Literature	Gather related literature from reliable sources.
4	Scientific Databases & Note-taking	Practice note-taking using printed and online research resources.

Summative Assessment 1

Covers Days 1–4: Hypothesis and Literature Gathering

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WEEK 3: Synthesizing and Citing Literature

Day #	Focused Topic	Activity (DepEd Competency as-is)
5	Literature Synthesis	Synthesize a set of collected related literature excerpts with proper citation.
6	Drafting Literature Review	Write 1–2 paragraphs of review with integrated citations.

WEEK 4: Avoiding Plagiarism

Day #	Focused Topic	Activity (DepEd Competency as-is)
7	Understanding Plagiarism	Identify ways to avoid plagiarism. Evaluate examples of plagiarism vs. proper paraphrasing.
8	Paraphrasing and Quoting	Practice paraphrasing, quoting, and summarizing scientific texts.

Summative Assessment 2

Covers Days 5–8: Synthesis, Citation, and Plagiarism Avoidance

WEEK 5: Citation Styles and Reference Formatting

Day #	Focused Topic	Activity (DepEd Competency as-is)
9	Citation Styles Overview	Learn APA, MLA, and Chicago Manual of Style formats.
10	Creating Bibliographic Entries	Create bibliographic entries/reference lists based on the standard styles.

WEEK 6: Integration and Practice

Day #	Focused Topic	Activity
11	Review of Quarter 2 Concepts	Group quiz on hypothesis writing, literature review, citations.
12	Peer Review and Rewriting	Peer assessment of draft review of related literature section.

Summative Assessment 3

Covers Days 9–12: Citation Formats and Integration

WEEKS 7–8: PERFORMANCE TASK

DepEd Performance Standard: Write a coherent review of related literature from reliable sources with proper citations.

Day #	Focused Topic	Activity
13	Literature Review Drafting	Refine synthesized RRL with proper paraphrasing, formatting, and structure.
14	Feedback and Revision	Receive teacher/peer comments and rewrite based on feedback.
15	Final Submission Preparation	Finalize review of related literature with citations and reference list.
16	Submission and Reflection	Submit performance task; reflect on the process of academic honesty and scientific writing.

Quarter 3

WEEK 1: Research Design Fundamentals

Day #	Focused Topic	Activity (DepEd Competency as-is)
1	Types and Purpose of Research Design	Determine the appropriate research design for a scientific investigation.
2	Variables and Parameters	Identify the independent and dependent variables, and define measurable parameters.

WEEK 2: Sampling and Grouping

Day #	Focused Topic	Activity (DepEd Competency as-is)
3	Sampling Techniques	Perform the environmental sampling techniques appropriately.
4	Experimental and Control Groups	Understand positive/negative controls, trials, and replicates.

Summative Assessment 1

Covers Days 1–4: Research design, variables, sampling, and groups

WEEK 3: Biological Lab Techniques

Day #	Focused Topic	Activity (DepEd Competency as-is)
5	Biological Techniques Overview	Determine the appropriate biological techniques/methods needed in a particular test subject or scientific investigation.
6	Lab Procedures Practice	Perform selected laboratory procedures/techniques (biological) appropriately and safely.

WEEK 4: Chemical Techniques and Water Testing

Day #	Focused Topic	Activity (DepEd Competency as-is)
7	Chemical Techniques Overview	Determine the appropriate chemical techniques/methods needed in a particular test subject or scientific investigation.
8	Lab Procedures Practice	Perform selected laboratory procedures/techniques (chemical) appropriately and safely.

Summative Assessment 2

Covers Days 5–8: Lab techniques (biological and chemical)

WEEK 5: Safety Protocols in the Lab

Day #	Focused Topic	Activity
9	Risk Assessment in Lab Activities	Identify lab hazards and design a sample safety checklist for an experiment.
10	Troubleshooting and Error Handling	Roleplay: What to do when things go wrong in a lab experiment?

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WEEK 6: Planning a Mini-Investigation

Day #	Focused Topic	Activity
11	Mini-Project Design	Groups design a mini-experiment based on topics of interest, applying design and lab techniques.
12	Peer Feedback and Refinement	Present experiment plan to class; receive feedback and improve design.

Summative Assessment 3

Covers Days 9–12: Risk handling, safety, and investigation planning

WEEKS 7–8: PERFORMANCE TASK

DepEd Performance Standard: Present a research design for a planned community-based scientific investigation.

Day #	Focused Task	Activity
13	Final Research Design Write-up	Complete and format the research design: problem, hypothesis, sampling, design, risk, and methods.
14	Visuals and Documentation	Prepare visuals (flowcharts, diagrams, forms) to accompany the written plan.
15	Rehearsal and Peer Critique	Run through the presentation and simulate panel Q&A.
16	Final Presentation and Reflection	Present complete research design and reflect on the research planning process.

Quarter 4

WEEK 1: Physical and Engineering Techniques

Day #	Focused Topic	Activity (DepEd Competency as-is)
1	Physical Techniques Overview	Determine the appropriate physical techniques/methods needed in a particular test subject or scientific investigation.
2	Engineering Techniques and Safety	Determine the appropriate engineering techniques/methods needed in a particular test subject or scientific investigation. Perform selected laboratory procedures/techniques (physical and engineering) following safety protocols.

WEEK 2: Data Collection and Organization

Day #	Focused Topic	Activity (DepEd Competency as-is)
3	Data Collection Methods	Collect and organize data using appropriate methods and tools.
4	Organizing Data	Apply different ways (textual, tabular, graphical) to present data from actual observations.

Summative Assessment 1

Covers Days 1–4: Physical/Engineering methods, data gathering and organization

WEEK 3: Data Presentation Techniques

Day #	Focused Topic	Activity (DepEd Competency as-is)
5	Graphing and Visual Tools	Use graphs, charts, and tables to present data from lab activities.
6	Selecting the Right Format	Match presentation type (textual, tabular, graphical) to data type.

WEEK 4: Data Analysis with Statistics

Day #	Focused Topic	Activity (DepEd Competency as-is)
7	Statistical Tools: Central Tendency	Use an appropriate statistical tool to treat, analyze, and interpret data (mean, median, mode).
8	Statistical Tools: Variation	Compute and interpret range, variance, and standard deviation of data.

Summative Assessment 2

Covers Days 5–8: Data presentation and basic statistics

WEEK 5: Drawing Evidence-Based Conclusions

Day #	Focused Topic	Activity
9	Interpreting Results	Interpret data to support or reject hypothesis based on evidence.
10	Limitations and Recommendations	Identify data limitations; suggest improvements for future investigation.

WEEK 6: Integration and Research Planning

Day #	Focused Topic	Activity
11	Research Summary Drafting	Write summary section (Results + Discussion) for a previous or mock investigation.
12	Task Orientation and Rubric Checking	Review performance task requirements; set milestones for design, data, and conclusions.

Summative Assessment 3

Covers Days 9–12: Data interpretation and research conclusion integration

✔ WEEKS 7–8: PERFORMANCE TASK

DepEd Performance Standard: Collect, organize, present, and interpret data from the conducted laboratory activity.

Day #	Focused Task	Activity
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13	Final Data Processing & Presentation Format	Prepare charts, graphs, and summaries using actual or simulated data.
14	Visual Output Completion	Finalize posters, slides, or data reports with complete statistical treatment.
15	Presentation Rehearsal	Run-through and critique for accuracy, clarity, and scientific validity.
16	Final Output Presentation	Present and submit full documentation of lab data, treatment, and analysis.