

Quarter 1

WEEK 1: Contemporary Research in Context

Day #	Focused Topic	Activity (DepEd Competency as-is)
1	Global and National Issues in Research	Discuss local/national/international scientific research and innovation issues, trends, and research gaps aligned with the learner’s interest.
2	SDGs and Philippine Development Plan	Examine Sustainable Development Goals and the Philippine Development Plan through science inquiry.

WEEK 2: Community and Innovation Thinking

Day #	Focused Topic	Activity (DepEd Competency as-is)
3	Proposing Scientific Solutions	Propose novel and potential solutions to local/national/international problems/issues and/or research gaps through scientific investigation.
4	Introduction to Design Thinking	Explore innovation through community observations using science concepts and potential solutions.

Summative Assessment 1

Covers Days 1–4: Issues, Trends, Innovation, and Proposals

WEEK 3: Engineering Design Process – Part 1

Day #	Focused Topic	Activity (DepEd Competency as-is)
5	Steps of the Engineering Design Process	Explain the steps involved in the engineering design process.
6	Empathy Mapping	Create an empathy map to understand community needs.

WEEK 4: Engineering Design Process – Part 2

Day #	Focused Topic	Activity (DepEd Competency as-is)
7	Defining the Problem	Determine a community issue/problem to be solved based on the gathered information from the community.
8	Background Research & Requirements	Conduct background research and specify project requirements.

Summative Assessment 2

Covers Days 5–8: Engineering Design Process and Community Relevance

WEEK 5: Generating and Selecting Solutions

Day #	Focused Topic	Activity (DepEd Competency as-is)
9	SCAMPER Technique	Review existing designs, solutions, and project ideas to the identified community problem.
10	Prototype Ideas	Design a simple prototype of a potential solution to a community problem using the SCAMPER technique.

WEEK 6: Developing and Testing Solutions

Day #	Focused Topic	Activity (DepEd Competency as-is)
11	Prototype Design and Types	Explore definitions and types of prototypes using community-based materials.
12	Prototype Testing Criteria	Test solutions using community feedback or peer assessment based on design goals.

Summative Assessment 3

Covers Days 9–12: Ideation, Prototyping, and Testing

WEEKS 7–8: PERFORMANCE TASK

DepEd Performance Standard: *Develop a model of a potential solution to a given scenario using locally available materials through a “Simple Design Challenge.”*

Day #	Focused Task	Activity
13	Final Prototype Design	Redesign and build a functional prototype using feedback and project requirements.
14	Model Completion and Documentation	Complete testing logs, photo documentation, and prepare a short oral presentation.
15	Presentation Rehearsal	Rehearse and critique the prototype pitch and demonstration.
16	Final Presentation and Reflection	Deliver final prototype showcase and submit reflective journal on the research process.

Quarter 2

WEEK 1: Idea Development through SCAMPER

Day #	Focused Topic	Activity (DepEd Competency as-is)
1	SCAMPER Technique (Part 1)	Review existing designs, solutions, and project ideas to the identified community problem.
2	SCAMPER Technique (Part 2)	Design a simple prototype of a potential solution to a community problem using the SCAMPER technique.

WEEK 2: Solution Evaluation and Selection

Day #	Focused Topic	Activity (DepEd Competency as-is)
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Budget of Work

3	SWOT Analysis	Evaluate ideas and prototypes using SWOT analysis.
4	Final Prototype Selection	Choose the most feasible solution based on criteria and justify the decision.

Summative Assessment 1

Covers Days 1–4: SCAMPER ideation and SWOT evaluation

WEEK 3: Prototype Development

Day #	Focused Topic	Activity (DepEd Competency as-is)
5	Design and Sketching	Design a simple prototype of a potential solution to a community problem.
6	Gathering Materials	Begin collecting or identifying locally available materials for the prototype.

WEEK 4: Prototype Fabrication

Day #	Focused Topic	Activity (DepEd Competency as-is)
7	Building the Prototype	Construct the prototype based on the finalized plan.
8	Troubleshooting and Refinement	Refine design based on early testing and feedback.

Summative Assessment 2

Covers Days 5–8: Prototype design, materials, and fabrication

WEEK 5: Testing and Evaluation

Day #	Focused Topic	Activity (DepEd Competency as-is)
9	Prototype Testing	Test the functionality of the prototype and document results.
10	Data Collection and Feedback	Gather user or peer feedback; document strengths and points for improvement.

WEEK 6: Documentation and Reflection

Day #	Focused Topic	Activity
11	Reflection on Testing	Reflect on the results of the testing phase, analyze changes needed.
12	Final Reporting Prep	Prepare a project write-up including SCAMPER map, SWOT matrix, test results, and conclusions.

Summative Assessment 3

Covers Days 9–12: Prototype testing, feedback, and report writing

WEEKS 7–8: PERFORMANCE TASK

DepEd Performance Standard: Present and/or test a simple prototype of a potential solution to a community problem.

Day #	Focused Task	Activity
13	Final Assembly and Dry Run	Refine and rehearse the final prototype presentation.
14	Visual Aids and Documentation	Finalize technical drawings, photos, and write-up.
15	Prototype Presentation	Demonstrate prototype and explain scientific thinking and feedback cycle.
16	Reflection and Submission	Submit all documentation and reflect on innovation, challenges, and impact.

Quarter 3

WEEK 1: Concept Paper Foundations

Day #	Focused Topic	Activity (DepEd Competency as-is)
1	Introduction to Concept Paper	Develop a concept paper using a prescribed format with a working research title for a potential research topic/problem.
2	Parts of a Concept Paper	Identify and discuss rationale, objectives, methodology, and references.

WEEK 2: Evaluating a Concept Paper

Day #	Focused Topic	Activity (DepEd Competency as-is)
3	SMART Criteria Evaluation	Evaluate a sample concept paper using SMART (Specific, Measurable, Attainable, Relevant, Time-bound) guidelines.
4	Peer Review Workshop	Revise concept paper drafts using peer feedback and SMART indicators.

Summative Assessment 1

Covers Days 1–4: Concept paper writing and evaluation

WEEK 3: Introduction Section

Day #	Focused Topic	Activity (DepEd Competency as-is)
5	Elements of the Introduction	Distinguish the different sections of the research introduction.
6	Writing the Introduction	Write the introduction of the research plan using the prescribed format.

WEEK 4: Materials and Methods – Part 1

Day #	Focused Topic	Activity (DepEd Competency as-is)
7	Research Design and Flowchart	Distinguish the different sections of the research materials and methods. Write the research design and flowchart.
8	Materials and Data Collection	Write materials, procedures, and data collection plan.

Summative Assessment 2

Covers Days 5–8: Introduction and Materials & Methods – Part 1

Budget of Work
WEEK 5: Materials and Methods – Part 2

Day #	Focused Topic	Activity (DepEd Competency as-is)
9	Risk, Safety, and Waste Disposal	Write risk assessment and disposal plan for investigation.
10	Statistical Tools & Data Analysis	Describe statistical tests: t-test, ANOVA, correlation, regression.

WEEK 6: References and Formatting

Day #	Focused Topic	Activity (DepEd Competency as-is)
11	Writing References	Write proper citation and bibliography entries using the appropriate format.
12	Final Integration and Review	Review all components of the research plan for cohesion and completeness.

Summative Assessment 3
Covers Days 9–12: Risk, statistics, and references

WEEKS 7–8: PERFORMANCE TASK

DepEd Performance Standard:
Submit a draft research plan using the prescribed format.

Day #	Focused Task	Activity
13	Final Research Plan Compilation	Finalize rationale, objectives, design, methods, and safety protocols.
14	Formatting and Bibliography	Ensure all sections follow format and citation rules.
15	Peer Review and Revisions	Exchange drafts, apply corrections based on feedback.
16	Submission and Reflection	Submit final research plan; write reflection on learning experience.

Quarter 4
WEEK 1: Revising the Research Plan

Day #	Focused Topic	Activity (DepEd Competency as-is)
1	SMART Revisions and Ethics	Revise the research plan by incorporating the suggestions/recommendations. Apply ethical and safety considerations.
2	Institutional Guidelines	Align research procedures with institutional rules and ethical standards.

WEEK 2: Budget Planning and Feasibility

Day #	Focused Topic	Activity (DepEd Competency as-is)
3	Line-Item Budgeting	Assess the financial feasibility of the scientific investigation using a line-item budget.
4	Material Resources Review	Review actual needs for materials, tools, and labor costs.

Summative Assessment 1
Covers Days 1–4: Revisions, ethics, feasibility

WEEK 3: Timeline and Task Scheduling

Day #	Focused Topic	Activity (DepEd Competency as-is)
5	Creating a Gantt Chart	Create a Gantt chart to plan and monitor activities in conducting the scientific investigation.
6	Time-Bound Planning	Refine Gantt chart for real-time adjustments and project pacing.

WEEK 4: Visual Aids for Presentation

Day #	Focused Topic	Activity (DepEd Competency as-is)
7	Slide Decks and Posters	Create appropriate visual aids, such as slide decks or posters for the presentation.
8	Design Principles & Layouts	Apply effective layout, contrast, and information organization.

Summative Assessment 2
Covers Days 5–8: Timeline and visuals

WEEK 5: Presentation Skills and Guidelines

Day #	Focused Topic	Activity (DepEd Competency as-is)
9	Traits of Effective Presenters	Identify the qualities of an effective presenter and evaluate self-performance.
10	Research Colloquium Preparation	Discuss the structure and expectations of a formal research colloquium.

WEEK 6: Mock Oral Presentations

Day #	Focused Topic	Activity (DepEd Competency as-is)
11	Presentation Practice	Perform mock oral presentations.
12	Feedback and Reflection	Receive peer and teacher feedback; revise delivery accordingly.

Summative Assessment 3
Covers Days 9–12: Presentation skills and rehearsal

WEEKS 7–8: PERFORMANCE TASK

DepEd Performance Standard: Present the research plan through an oral presentation with visual aids, following proper formatting and structure.

Day #	Focused Task	Activity
13	Final Presentation Run-through	Prepare script and finalize slide/poster content.

Budget of Work

14	Technical Check and Refinement	Ensure visual aids are complete; refine speech.
15	Formal Research Presentation	Deliver research plan in a formal colloquium setting.
16	Post-Presentation Reflection	Submit reflection and updated research documentation.