

**K to 12 BASIC EDUCATION CURRICULUM**  
**SENIOR HIGH SCHOOL – SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) SPECIALIZED SUBJECT**

**Grade:** 12

**Subject Title:** Research/Capstone Project

**Quarter:** Second

**No. of Hours/ Semester:** 80 hours

**Prerequisite (if needed):**

**Subject Description:** In this course, students, under the guidance of a research adviser, will identify a scientific, technological, or mathematical problem, design and apply an appropriate methodology, formulate hypothesis, and draw conclusions based on their investigation. At the end of the semester students will prepare a scientific report/paper to be presented/defended in a forum.

Note: The culminating activity may take the form of a schoolwide S&T project exposition.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
The Scientific Problem	The learners demonstrate an understanding of...  1. a scientific problem or question 2. applied and basic research problems	The learners shall be able to...  Present the study conducted both orally and in writing through a public presentation or defense, and submission of a complete technical report or scientific paper	1. identify a scientific problem or question	STEM_RP12-IIa-e-1
			2. differentiate applied and basic research problems	STEM_RP12-IIa-e-2
The Scientific Literature	3. set selection criteria for studies relevant to a chosen scientific problem		STEM_RP12-IIa-e-3	
	4. review, digest, and concisely state the relevance of the studies cited		STEM_RP12-IIa-e-4	
Hypothesis	4. hypothesis formulation		5. formulate possible outcomes of the investigation, or in the case of mathematics research, conjectures about the mathematical problem or topic	STEM_RP12-IIa-e-5
Methodology	5. designing investigatory methodologies		6. design a strategy or sequence of steps that will address the scientific question at hand	STEM_RP12-IIa-e-6

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SENIOR HIGH SCHOOL – SCIENCE/ TECHNOLOGY/ ENGINEERING AND MATHEMATICS (STEM) SPECIALISED SUBJECT				
CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Data Collection	6. establishing appropriate method of data collection		7. select appropriate methods of data collection	STEM_RP12-IIa-e-7
			8. develop the criteria that will address the completeness of the data collection method	STEM_RP12-IIa-e-8
Data Analysis	7. extracting useful information from data sets		9. analyze the data obtained from the investigation	STEM_RP12-IIa-e-9
Conclusions	8. drawing logical conclusions		10. draw logical conclusions supported by processed data	STEM_RP12-IIa-e-10
Recommendations	9. the purpose of making relevant recommendations		11. make recommendations that are relevant to the study	STEM_RP12-IIa-e-11
The Scientific Report/Paper	10. the different components of a scientific report/paper		12.write a complete scientific report/paper	STEM_RP12IIIf-j -12
			13.defend the science project before a panel	STEM_RP12IIIf-j -13

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**Code Book Legend**

**Sample: STEM\_RP12-IIa-e-1**

LEGEND		SAMPLE	
<b>First Entry</b>	Learning Area and Strand/ Subject or Specialization	Science, Technology, Engineering and Mathematics Research/Capstone Project	<b>STEM_RP12</b>
	Grade Level	Grade 12	
<b>Uppercase Letter/s</b>	Domain/Content/ Component/ Topic	Research Project	
			-
<b>Roman Numeral</b> <i>*Zero if no specific quarter</i>	Quarter	Second Quarter	<b>II</b>
<b>Lowercase Letter/s</b> <i>*Put a hyphen (-) in between letters to indicate more than a specific week</i>	Week	Weeks one to five	<b>a-e</b>
			-
<b>Arabic Number</b>	Competency	identify a scientific problem or question	<b>1</b>