



Course Description

Subject: Practical Science 3

Code: SC22202

Periods: 40

Credit: 1.0

Class: Secondary 2A-B

Semester: 1 / 2014

Instructor: Ms. Vanessa Kay Melecio

Unit	Learning Outcomes
1. Integrated Process Skills 1.1 Integrated Science Process Skills	<ol style="list-style-type: none">1. To identify the integrated process skills in Science that can be developed and applied by students as they go through their own scientific investigation.2. To practice the use of the integrated science process skills in an experimental procedure.
2. Investigatory Project 2.1 Investigatory Project	<ol style="list-style-type: none">3. To identify the different parts of a research paper and practice themselves on how to technically write such in preparation to making their own scientific investigation.4. To perform different experiments and be able to apply what they learned from it in life5. To display their work, write reports and/or explain the concepts, processes and results of the project or task so that others can understand

Measurement and Evaluation

Total 100 marks (Assessment 60 marks: Midterm test / Final test 40 marks)

Measurement and Evaluation	Evaluation Method	Assessment tool	Marks	Learning Outcomes
1. Pre-midterm	1. Work sheets, short tests and long tests (other tests) 2. Other topic related activities 3. Seatworks/Boardworks 4. Project 5. Laboratory Activities 6. Oral Participation	1. Question and Answer/Teacher Review 2. Tests Papers (Short Quizzes/Chapter Test/Unit Test) 3. Worksheets 4. Notebooks	25	1. To identify the integrated process skills in Science that can be developed and applied by students as they go through their own scientific investigation. 2. To practice the use of the integrated science process skills in an experimental procedure.
2. Midterm test	Midterm examination	- Test papers	20	1 - 2

Measurement and Evaluation	Evaluation Method	Assessment tool	Marks	Learning Outcomes
3. Pre-final	1. Work sheets, short tests and long tests (other tests) 2. Other topic related activities 3. Seatworks/Boardworks 4. Project 5. Laboratory Activities 6. Oral Participation	1. Question and Answer/Teacher Review 2. Tests Papers (Short Quizzes/Chapter Test/Unit Test) 3. Worksheets 4. Notebooks	25	3. To identify the different parts of a research paper and practice themselves on how to technically write such in preparation to making their own scientific investigation. 4. To perform different experiments and be able to apply what they learned from it in life 5. To display their work, write reports and/or explain the concepts, processes and results of the project or task so that others can understand
4. Final test	Final examination	- Test papers	20	3 - 5

Measurement and Evaluation	Evaluation Method	Assessment tool	Marks	Learning Outcomes
5. Desirable Characteristics	.1 Checking assigned tasks 2. Observation	.1 Observation - Responsibility 4 marks - Honesty 3 marks - Discipline 3 marks	10	Love of nation, religion and king Honesty and integrity Self-discipline Avidity for learning Observance of principles of sufficiency, economy Philosophy in one's way of life Dedication and commitment to work Cherishing Thai- ness Public- mindedness Awareness of drugs and vice Assertive leadership

Measurement and Evaluation	Evaluation Method	Assessment tool	Marks	Learning Outcomes
6. Competencies	Teacher Observation	Students	-	Communication capacity Thinking capacity Problem-solving capacity Capacity for applying life skills Capacity for technological application
7. Analytical reading and writing	1. Test in each topics/units 2. Examining homework 3. Major Examination	1. Unit tests 2. Workbook Major examination	-	-



Course Description

Subject: Practical Science 4

Code: SC22204

Hours: 40

Credit: 1.0

Class: Secondary 2A-B

Semester: 2 / 2014

Instructor: Ms. Vanessa Kay Melecio

Unit	Learning Outcomes
Investigatory Project/Research Paper	<ol style="list-style-type: none">1. Pose questions prescribing the issues or important variables for exploration and verification or conduct comprehensive and reliable study and research on matters of their interest.2. Make verifiable hypotheses and plan several methods for exploration and verification.3. Select techniques and methods for quantitative and qualitative exploration and verification yielding accurate and safe results by using appropriate materials and equipment.

Unit	Learning Outcomes
Investigatory Project/Research Paper	<p>4. Collect data and process it quantitatively and qualitatively.</p> <p>5. Analyse and evaluate conformity of eye-witnesses with the conclusions either supporting or contradicting the hypotheses and data abnormality from exploration and verification.</p> <p>6. Create models or formats explaining or showing results of exploration and verification.</p> <p>7. Pose questions leading to exploration and verification of relevant matters, and apply the knowledge gained in new situations or to explain the concepts, processes and results of the project or task for others to understand.</p> <p>8. Make a record and explain results of additional observation, exploration, verification and research from various sources of knowledge in order to obtain reliable data and accept changes in the knowledge discovered when presented with new and additional data, eye-witnesses or contradictory data.</p> <p>9. Display their work, write reports and/or explain the concepts, processes and results of the project or task so that others can understand.</p>

Measurement and Evaluation

Total 100 marks (Assessment 60 marks: Midterm test / Final test 40 marks)

Measurement and Evaluation	Evaluation Method	Assessment tool	Marks	Learning Outcomes
1. Pre-midterm	1. Question and Answer/Teacher Review 2. Research Paper Drafts (for each chapter) 2. Other topic related activities 3. Experimentation 4. Project/Final Paper 5. Laboratory Activities 6. Oral Participation	1. Question and Answer/Teacher Review 2. Research Paper Drafts (for each chapter) 3. Experimentation 4. Gathering of Tools and Equipment for experimentation 5. Other topic related activities	25	1. Pose questions prescribing the issues or important variables for exploration and verification or conduct comprehensive and reliable study and research on matters of their interest. 2. Make verifiable hypotheses and plan several methods for exploration and verification. 3. Select techniques and methods for quantitative and qualitative exploration and verification yielding accurate and safe results by using appropriate materials and equipment.

Measurement and Evaluation	Evaluation Method	Assessment tool	Marks	Learning Outcomes
2. Midterm test	Final Paper and Final Project/Output	- Research Paper - Product output	20	1 - 3

Measurement and Evaluation	Evaluation Method	Assessment tool	Marks	Learning Outcomes
3. Pre-final	Group works Group experiments Group's paper assessments Research paper drafts	Final Paper Assessment (through paper evaluation for corrections/question and answer regarding the paper) Oral Presentation of the research paper Final Products for validation and assessment	25	4. Collect data and process it quantitatively and qualitatively. 5. Analyse and evaluate conformity of eye-witnesses with the conclusions either supporting or contradicting the hypotheses and data abnormality from exploration and verification. 6. Create models or formats explaining or showing results of exploration and verification. 7. Pose questions leading to exploration and verification of relevant matters, and apply the knowledge gained in new situations or to explain the concepts, processes and results of the project or task for others to understand. 8. Make a record and explain results of additional

Measurement and Evaluation	Evaluation Method	Assessment tool	Marks	Learning Outcomes
4. Final test	- Oral Defense	- Paper Presentation (Oral Defense)	20	4 - 9
5. Desirable Characteristics	.1 Checking assigned tasks 2. Observation	.1 Observation - Responsibility 4 marks - Honesty 3 marks - Discipline 3 marks	10	Love of nation, religion and king Honesty and integrity Self-discipline Avidity for learning Observance of principles of sufficiency, economy Philosophy in one's way of life Dedication and commitment to work Cherishing Thai- ness Public-mindedness Awareness of drugs and vice Assertive leadership

Measurement and Evaluation	Evaluation Method	Assessment tool	Marks	Learning Outcomes
6. Competencies	Teacher Observation	Students	-	Communication capacity Thinking capacity Problem-solving capacity Capacity for applying life skills Capacity for technological application
7. Analytical reading and writing	1. Research Paper Drafts technical writing 2. Research Paper Final Output 3. Research and Presentation	1. Research paper drafts and final copy 2. Oral defense	-	-