



Course Description

Subject: Science 6

Code: SC 16101

3 Periods/Week

3.0 Credits

Class: Primary 6A-B

Semester 1-2/2014

Instructor: Ms. Devine, Mr. Jakkaphan

Unit	Standard	Indicators
1. Nature of Science and Technology 1.1 Scientific Methods	Sc 8.1	<p>P.6/1 Pose questions about the issues, matters or situations to be studied as prescribed and accord with their interests.</p> <p>P.6/2 Plan for observation and propose methods for exploration, verification and study and research and form expectations of what is to be found from the exploration and verification.</p> <p>P.6/3 Select and accurate and appropriate instruments for exploration and verification in order obtain reliable data.</p> <p>P.6/4 Make a record of quantitative and qualitative data, verify results with expectations, and present results and conclusions.</p> <p>P.6/5 Pose a new questions for subsequent exploration and verification.</p> <p>P.6/6 Freely express opinions, explanations, and conclusions about what is being learned.</p> <p>P.6/7 Make a record and explain results of the exploration and verification based on the real situations and references.</p> <p>P.6/8 Present and display their work through verbal and written presentations to explain the processes and results so that others can understand.</p>

Unit	Standard	Indicators
<p>2: Living and Family</p> <p>2.1 Human Growth</p> <p>2.2 Body Systems – Digestive, Respiratory and Circulatory Systems</p> <p>2.3 Nutrition</p>	<p>Sc 1.1</p>	<p>P.6/1 Explain human growth from birth to adulthood.</p> <p>P.6/2 Explain interrelated functioning of digestive, respiratory and circulatory systems of human beings.</p> <p>P.6/3 Analyse nutrients and discuss body requirements for nutrients in proportions suitable to gender and age.</p>
<p>3.Life and the Environment</p> <p>3.1 Living Things in Their Habitats</p> <p>3.2 Food Chain and Food Web</p> <p>3.3 Living Things and the Environment</p> <p>3.4 Natural Resources</p> <p>3.5 Overpopulation and the Natural Resources</p> <p>3.6 Environmental Problems and Issues</p> <p>3.7 Natural Resources Conservation-1</p> <p>3.8 Natural Resources Conservation-2</p>	<p>Sc 2.1</p> <p>Sc 2.2</p>	<p>P.6/1 Explore and discuss relationship of groups of living things in various habitats.</p> <p>P.6/2 Explore relationship of living things in terms of food chain and food web.</p> <p>P.6/3 Search for data and explain relationships between the lives of living things and the environment.</p> <p>P.6/4 Distinguish between flowering and non-flowering plants.</p> <p>P.6/ 1 Search for data and discuss sources of natural resources in each local area beneficial to living.</p> <p>P.6/ 2 Analyse effects of population increase on utilization of natural resources.</p> <p>P.6/3 Discuss effects on living things from environmental change both due to nature and due to human beings.</p> <p>P.6/4 Discuss guidelines for taking care of and preserving natural resources and the environment.</p> <p>P.6/5 Participate in providing care and preservation of natural resources in the local area.</p>

Unit	Standard	Indicators
<p>4.Substances and Properties of Substances</p> <p>4.1 States of Matter</p> <p>4.2 Substances</p> <p>4.3 Separating Mixtures – Sifting, Precipitation, Filtering, Sublimation and Evaporation (FSG)</p> <p>4.4 Substances in Daily Life</p> <p>4.5 Kinds of Substances(FSG)</p> <p>4.6 Changing State of Substances – 1 (FSG)</p> <p>4.7 Changing State of Substances - 2</p> <p>4.8 Substance and the Environment</p>	<p>Sc 3.1</p> <p>Sc 3.2</p>	<p>P.6/1 Experiment and explain properties of solids, liquids and gases.</p> <p>P.6/2 Categorise substances into groups by using their state or other student-prescribed criteria prescribed.</p> <p>P.6/3 Experiment and explain separation of materials through sifting, precipitation, filtering, sublimation and evaporation.</p> <p>P.6/4 Explore and categorise various substances used in daily life by using their properties and utilization for useful purposes as criteria.</p> <p>P.6/5 Discuss selection of correct and safe application of each kind of substance.</p> <p>P.6/1 Experiment and explain properties of substances when they dissolve and change their state.</p> <p>P.6/2 Analyse and explain the changes resulting in transition of substances to new substances with different properties.</p> <p>P.6/3 Explain substance changes affecting living things and the environment.</p>
<p>5.Energy</p> <p>5.1 Simple Electrical Circuit</p> <p>5.2 Electrical Conductors and Insulators</p> <p>5.3 Series Connections</p> <p>5.4 Series and Parallel Circuits</p> <p>5.5 Origin of Magnetic Field and Electric Current</p>	<p>Sc 5.1</p>	<p>P.6/1 Experiment and explain connecting a simple electrical circuit.</p> <p>P.6/2 Experiment and explain electrical conductors and insulator.</p> <p>P.6/3 Experiment and explain a series connection of cells, and apply the knowledge gained for useful purposes</p> <p>P.6/4 Experiment and explain connection of bulbs in both series and parallel circuits, and apply the knowledge gained for useful purposes.</p> <p>P.6/5 Experiment and explain origin of a magnetic field produced when electric current is present in a wire, and apply the knowledge gained for useful purposes.</p>

Unit	Standard	Indicators
<p>6. Change Processes of the Earth</p> <p>6.1 Classification of Rocks(Local and ASEAN rocks)</p> <p>6.2 Rock Cycle</p> <p>6.3 Geological Disasters</p> <p>6.4 Formation of Seasons</p> <ul style="list-style-type: none"> - Waxing and Waning of the Moon - Solar and Lunar Eclipses <p>6.5 Space Technology</p>	<p>Sc 6.1</p> <p>Sc 7.1</p> <p>Sc 7.2</p>	<p>P.6/1 Explain and classify rocks by using their characteristics and properties as criteria, and apply the knowledge gained for useful purposes.</p> <p>P.6/2 Explore and explain changes of rocks.</p> <p>P.6/3 Search for data and explain geological disasters affecting human beings and the environment in the local area.</p> <p>P.6/1 Make a model and explain formation of seasons, waxing and waning of the moon, solar eclipses and lunar eclipses, and apply the knowledge gained for useful purposes.</p> <p>P.6/1 Search for data and discuss progress and benefits of space technology.</p>

Measurement and Evaluation 1/2014

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

Measurement and Evaluation	Evaluation Method	Assessment Tool	Marks	Indicators /
1. Pre-midterm	1.Observation, 2.Asking and answering questions 3.Workbook	1.Assessment tool for Observation Asking and answering questions Workbook	25	Sc1.1:P. 6/1, P.6/2 , P.6/3
2. Midterm	Midterm Examination	Midterm Exam	20	Sc 2.1:P. 6/1, P.6/2 , P.6/3, P.6/4 ,
3. Post-midterm	1.Observation, 2.Asking and answering questions 3.Workbook,	1.Assessment tool for Observation Asking and answering questions Workbook,	25	Sc 2.2 : P. 6/1, P.6/2
4. Final	Final Examination	Test paper	20	Sc 2.1:P.6/3, P.6/4, P.6/5
5. Desirable Characteristics	Participation, Behavior	Assessment tool for Behavior observation	10	
6. Competencies	1.Observation	1.Assessment tool for Observation Asking and answering questions	-	
7. Analytical reading and writing	Examination	Exercises book	-	-

Measurement and Evaluation 2/2014

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

Measurement and Evaluation	Evaluation Method	Assessment Tool	Marks	Indicators /
1. Pre-midterm	1.Observation, 2.Asking and answering questions 3.Workbook	1.Assessment tool for Observation Asking and answering questions Workbook	25	Sc3.1:P. 6/2, P.6/3,P.6/4
2. Midterm	Examination	Test paper	20	Sc 3.2: P. 6/2,
3. Post-midterm	1.Observation, Asking and answering questions Workbook,	1.Assessment tool for Observation Asking and answering questions Workbook,	25	Sc 5.1:P. 6/2, P.6/3,P.6/4
4. Final	Final Examination	Test paper	20	Sc 6.1:P.6/2 , P.6/3
5. Desirable Characteristics	Participation, Behavior	Assessment tool for Behavior observation	10	
6. Competencies	Observation	Assessment tool for Observation Asking and answering questions	-	
7. Read , analysis and write	Science Project	Assessment tool for science project	-	-

คุณลักษณะอันพึงประสงค์ 10 ข้อ

1. รักษาดี ศาสน์ กษัตริย์
2. ซื่อสัตย์สุจริต
3. มีวินัย
4. ใฝ่เรียนรู้
5. อยู่อย่างพอเพียง
6. มุ่งมั่นในการทำงาน
7. รักความเป็นไทย
8. มีจิตสาธารณะ
9. ปลอดภัยเสพติดและอบายมุข
10. มีความเป็นผู้นำและกล้าแสดงออก

สมรรถนะ 5 ข้อ

1. ความสามารถในการสื่อสาร
2. ความสามารถในการคิด
3. ความสามารถในการแก้ปัญหา
4. ความสามารถในการใช้ทักษะชีวิต
5. ความสามารถในการใช้เทคโนโลยี