# **Course Outline**

 Department: Bilingual
 Name of Subject: Science
 Code : 14201

 Teacher's name :
 Mr. Mel C. Panonot
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## 1) Course Description

Science in English is a course expected to cover many basic subjects in Science through English medium. The subjects covered in the course developed for Primary 4 include 7 major topics and 40 minor topics. The course follows an activity-based, graded approach for development of concepts. They aim to develop scientific attitude in children by stimulating the thinking process, laying emphasis on applications of principles learnt and their relevance to daily life, and focusing on developing observational and experimental skills.

□ Others

## 2) Grade-Level Indicators (The Basic Education Core Curriculum)

- 1. Recognize that air is a mixture of gases such as nitrogen, carbon dioxide, oxygen and water vapour.
- 2. Identify the transport system in humans and plants and give their functions.
- 3. Differentiate the three states of matter (solid, liquid and gas) in terms of shape and volume.
- 4. Enumerate the three states of water and show how water changes from one state to another.
- 5. Recognize that the energy we get is derived from the sun in some way or another.
- 6. State that living things need energy to carry out life processes.

# 3) Learning Objectives (1<sup>st</sup> Semester)

Indicators of Semester	In accordance with government curriculum
1. Recognize that air is a mixture of gases such as nitrogen, carbon dioxide, oxygen and	
water vapour.	
2. Identify the transport system in humans and plants and give their functions.	
3. Differentiate the three states of matter (solid, liquid and gas) in terms of shape and	
volume.	

Contents		Units of loorning /	Teaching	How to Ev	valuate	Maximum
(Strand)/ Standards	Indicators	Amounts of Periods	Materials	Evaluations	Tools	marks
	1. Recognize that air is a mixture of gases such as nitrogen, carbon dioxide, oxygen and water vapour.	Unit : 1 . Air and Respiration (15 Periods) - What is air? - Air is everywhere. - Air occupies space - Air can move things - What is air made up of? - Respiration - Human respiratory system	<ol> <li>video clips</li> <li>textbook</li> <li>worksheet</li> <li>board</li> <li>activity</li> <li>quizzes</li> </ol>	<ol> <li>do exercise</li> <li>do the test</li> <li>recitation</li> </ol>	<ol> <li>do</li> <li>exercise</li> <li>do the</li> <li>test</li> <li>recitation</li> </ol>	40
	2. Identify the transport system in humans and plants and give their functions.	<ul> <li>Unit : 2. Transpor System (15 Periods) <ul> <li>Transport in living things</li> <li>Transport system in plants</li> <li>The circulatory system in humans</li> <li>Comparison between trans port system in humans and plants</li> <li>Integration of the different system in carrying out life</li> </ul> </li> </ul>	<ol> <li>video clips</li> <li>textbook</li> <li>worksheet</li> <li>board</li> <li>activity</li> <li>quizzes</li> </ol>	<ol> <li>do exercise</li> <li>do the test</li> <li>recitation</li> </ol>	<ol> <li>do exercise</li> <li>do the test</li> <li>recitation</li> </ol>	30
	3. Differentiate the three states of matter (solid, liquid and gas) in terms of shape and volume.	Unit : 3. Matter (10 Periods) - What is matter? - Matter occupies space - Matter has mass	<ol> <li>video clips</li> <li>textbook</li> <li>worksheet</li> <li>board</li> <li>activity</li> <li>quizzes</li> </ol>	<ol> <li>1. do exercise</li> <li>2. do the test</li> <li>3. recitation</li> </ol>	1. do exercise 2. do the test 3. recitation	30

4) Analyze the course description to be the contents for teaching. (1<sup>st</sup> Semester)

	- The st	ate of matter		
	- Chang	e of state		

5) Contents of subjects

1<sup>st</sup> Semester

Time Duration	Subject Contents
Beginning of the session – Mid-term	Air and Respiration
	- What is air?
	- Air is everywhere.
	- Air occupies space
	- Air can move things
	- What is air made up of?
	- Respiration
	- Human respiratory system
	Transpor System
	- Transport in living things
	- Transport system in plants
	- The circulatory system in humans
	<ul> <li>Comparison between trans port system in humans and plants</li> </ul>
	<ul> <li>Integration of the different system in carrying out life processes</li> </ul>
Post – Midterm – Final	Matter
	- What is matter?
	- Matter occupies space
	Matter has mass
	- The state of matter
	- Change of state

# 6) Evaluation

Average marks for evaluation

Authentic Assessment: Written / Practical Exam = ...60......: ....40......

(Depend on each Subject)

**Evaluation of Learning Objectives** 

Semester	Learning Objectives (Items)
1	1, 2, 3

# 1<sup>st</sup> Semester/2014

#### Pre-test marks: 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
1	<ul> <li>List the gases which constitute air with the quanties in which they present</li> </ul>	15
2	<ul> <li>Identify the transport system in humans and plants and give their functions</li> </ul>	15

## Mid-term marks: 20 Marks (Written/Practical Exam)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
1	- Multiple choice	10
2	- Identification	10

#### Post-Test marks : 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
2, 3	<ul> <li>Identify the organs of the human circulatory system</li> <li>Compare the three sate of matter</li> </ul>	15 15

# Portfolio : ..... Marks

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks

## Final marks : 20 Marks (Written/Practical Exam)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
1, 2, 3, 4	<ul> <li>Identification</li> <li>Fill in the blanks</li> </ul>	20

# 2<sup>nd</sup> Semester/2014

#### **Contents of subjects**

2<sup>nd</sup> Semester

Time Duration	Subject Contents
Beginning of the session – Mid-term	Water
	- Heat and the state of water
	- What happens when water is heated?
	- What happens when water is cooled?
	- The water cycle
	- Importance of water cycle
	- Uses of water
	- Water pollution
	- Water conservation
	Energy
	- Forms of energy
	- Sources of energy
	- How do living things obtain energy?
Dest Midtema Final	- Dhataann thaala and Daaninatian
Post – Midterm – Final	Photosynthesis and Respiration
	- What is photosynthesis?
	<ul> <li>The primary food and energy source of animal</li> </ul>
	- Respiration

## Evaluation

Average marks for evaluation Authentic Assessment: Written / Practical Exam = ...60.....: ...40...... (Depend on each Subject)

#### **Evaluation of Learning Objectives**

Semester	Learning Objectives (Items)
2	4, 5, 6

**Details of Evaluation** 

Pre-test marks: 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
4	- Enumerate the three states of water and show how water changes	15
	from one state to another.	
5	<ul> <li>Identify the sources of energy</li> </ul>	15

#### Mid-term marks : 20 Marks (Written/Practical Exam)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
4	- Multiple choice	10
5	- Fill in the blanks	10

#### Post-Test marks : 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
6	<ul> <li>Identification</li> <li>Draw the process of photosynthesis</li> </ul>	15 15

### Portfolio : ..... Marks

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
	-	

#### Final marks : 20 Marks (Written/Practical Exam)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
6	- Multiple choice	20

### Reference book and worksheets

**Students Science Book** 

Sumitra Siromani My World of Science Primary 4. India Orient Black swan Private Limited