Course Outline

Department: Bilingual **Name of Subject :** Science **Code :** ว 23201

Teacher's name : M. Prinya Prinyaphol

Level ;

☐ Primary …/….. ☑ Secondary 3 **1st Semester / 2014**

Subject :

☐ Main Subject ☑ Optional Subject ☐ Development Activities for Students ☐ Others

1) Course Description (1st Semester)

This course begins with the physical quantities , unit and measurements. It discusses the kinematic speed velocity and acceleration . This provides students calculate about dynamics, mass, weight and density and also turning effects of forces. The student are able to pressure, liquid pressure , energy, work , power , static electricity and electricity.

This lesson will help them understand electric current through illustrations and making their own electrical circuits. Lastly, the lesson on machines will enhance their appreciation on the work of machines in our daily life situations.

2) Learning Objectives (1st Semester)

Indicators of Semester	In accordance with government curriculuma
1. Understand SI unit and use various prefixes.	SC 4.2 /1

2. Measure length using different instrument.	SC 4.2 /1
3. Meaning of speed and velocity.	SC 4.2 /2
4. Calculate speed and average speed using formula.	SC 4.2 /2
5. How balanced and unbalance forces affect a body.	SC 4.2 /2
6. Understand the effect of friction on the motion of a body.	SC 4.1 / 1
7. Calculate density using formula.	SC 4.1 / 2
8. Calculate moment of force using formula.	SC 4.1 / 1

3) Contents of subjects

1st Semester

Time Duration	Subject Contents
Beginning of the session – Mid-term	unit 1 Physical quantities and Units and Measurement - Physical quantities - Scalar and Vectors - Measurement of length , Area and Volume unit 2 Kinematic - Speed, Velocity and Acceleration

	- Acceleration due to Gravity
Post – Midterm – Final	Unit 3 Dynamics - Force - Free-body force diagram - Friction Unit 4 Mass, Weight and density - Mass and Weight - Density - Floating and Sinking

4) Evaluation

Average marks for evaluation

Authentic Assessment: Written / Practical Exam = 60 : 40

Evaluation of Learning Objectives

Semester	Learning Objectives (Items)
1	Item 1 - 8

5) Details of Evaluation

1st Semester/2014

Pre-test marks: 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
1	Homework, Spelling, and Quiz	10
2	Presentation, Homework, Spelling, and Quiz	10
3	Homework, Spelling, and Quiz	10

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

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
4	- Multiple Choice, Fill in the Blanks, Classification, and Essay, Illustration	20

Post-Test marks : 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
5	Homework, Spelling, and Quiz	10

6	Presentation, Homework, Spelling, and Quiz	10
7	Homework, Spelling, and Quiz	10

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
8	Multiple Choice, Fill in the Blanks, Classification, and Essay, Illustration	20

Course Outline

Department: Bilingual Name of Subject : Science Code : ว 23202

Teacher's name : M. Prinya Prinyaphol

Level ;

☐ Primary …/….. ☑ Secondary 3 2nd Semester / 2014

Subject :

☐ Main Subject ☑ Optional Subject ☐ Development Activities for Students ☐ Others

1) Course Description (2nd Semester)

This course begins with the physical quantities , unit and measurements. It discusses the kinematic speed velocity and acceleration . This provides students calculate about dynamics, mass, weight and density and also turning effects of forces. The student are able to pressure, liquid pressure , energy, work , power , static electricity and electricity. This lesson will help them understand electric current through illustrations and making their own electrical circuits. Lastly, the lesson on machines will enhance their appreciation on the work of machines in our daily life situations.

2) Learning Objectives (2nd Semester)

Indicators of Semester	Accordance with governmental Curriculums
1. Understand that pressure depends on force and area over which the force acts.	SC 4.1/1

2. Calculate liquid pressure by using formula.	SC 5.1/1
3. Use the formula for kinetic and gravitational potential energy to solve problems.	SC 5.1/5
4. Use the formula for work to calculate work done in different situations.	SC 5.1/5
5. Use the formula for power to solve problems.	SC 5.1/5
6. To understand that flow of negatively charged electrons constitutes an electric current	SC 5.1/4
7. Understand the meaning of teams associated with electricity , current , potential difference , resistance.	SC 5.1/4
8. Draw and understand circuit diagrams and differentiate between series and parallel	SC 5.1/4

3) Contents of subjects

2nd Semester

Time Duration	Subject Contents
Beginning of the session – Mid-term	Unit 5 Pressure - Pressure - Liquid Pressure Unit 6 Energy , Work and Power - Form of Energy - Conversion and Conservation of Energy

	- Alternative Sources of Energy - Work - Power
Post – Midterm – Final	7 Turning Effects of Forces - Turning Force - Levers - Centre of Gravity Unit 8 Electricity - Electric Current - Electric Circuit - Voltage - Resistance, Current and Voltage

4) Evaluation

Average marks for evaluation

Authentic Assessment: Written / Practical Exam = 60 : 40

Evaluation of Learning Objectives

Semester	Learning Objectives (Items)
2	Item 1- 8

5) Details of Evaluation

2nd Semester/2014

Pre-test marks: 30 Marks (Authentic Assessment)

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
1	Homework, Spelling, and Quiz	10
2	Presentation, Homework, Spelling, and Quiz	10
3	Homework, Spelling, and Quiz	10

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

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
4	- Multiple Choice, Fill in the Blanks, Classification, and Essay, Illustration..	20

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

Learning Objectives (Items)	Criteria Followed for Assessment	Maximum marks
5	Homework, Spelling, and Quiz	10
6	Presentation, Homework, Spelling, and Quiz	10
7	Homework, Spelling, and Quiz	10

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
8	- Multiple Choice, Fill in the Blanks, Classification, and Essay, Illustration..	20