



Patumwan
Demonstration School
SRINAKHARINWIROT UNIVERSITY

COURSE SYLLABUS

for **MATTAYOM 1**

SEMESTER 1 ACADEMIC YEAR 2023

*CORE SUBJECTS and
ADDITIONAL SUBJECTS*



THE ENGLISH PROGRAM FOR TALENTED STUDENTS

INDEX

		PAGE
BASIC COURSE		
MA21101	Mathematics 1	1
ST21101	Science 1	8
SO21101	Social Studies 1	11
SO21103	History 1	13
HP21101	Health Education 1	15
EN21101	English 1	18
ADDITIONAL COURSE		
MA21201	Additional Mathematics 1	21
ST21201	Scientific Process	24
EN21201	English Language for Life Skill 1	26



Courses Syllabus
The English Program for Talented Students

Course Code MA21101

Subject Mathematics 1

Credit 1.5

4 Periods / Week / Semester

Mattayom 1

Type of Course Basic

Semester 1 **Academic Year** 2023

Subject Teacher Negar Mohammadi

Course Description

Mathematics is a language that makes use of symbols and notations for describing numerical, geometric and graphical relationships. It is a human activity that involves observing, representing and investigating patterns and qualitative relationships in physical and social phenomena and between mathematical objects themselves. It helps to develop mental processes that enhance logical and critical thinking, accuracy and problem-solving that will contribute to decision-making.

In this course students will study mathematics through investigation, discovery, understanding and applications of logical reasoning, polynomial manipulation, number forms and networks. Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. Know that there are numbers that are not rational, and approximate them by rational numbers. Work with radicals and integer exponents. Analyze proportional relationships and use them to solve real-world and mathematical problems. Use properties of operations to generate equivalent expressions. Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Goals/ Expected Learning Outcomes

As a result of studying this course, students will be able to:

- make sense of negative numbers and their application in real life,
- represent positive and negative numbers on a number line,
- perform the four operations on integers,
- identify rational, irrational and real numbers,
- perform the four operations on real numbers, including with the use of calculators,
- investigate the properties of arithmetic, commutative, associative and distributive properties and relationships between operations including inverse operations,
- appreciate the order of operations, including brackets,
- investigate models such as the number line to illustrate the operations of addition, subtraction, multiplication and division in Z ,

- explore some of laws that govern these operations and use mathematical models to reinforce the algorithms they commonly use,
- recognize, understand and apply the relationship between fractions, decimals and percentages. They should also recognize the quantities in numerous situations outside the classroom,
- appreciate that mathematics can be used to solve real world problems,
- recognize and use percentages in both classroom and everyday scenario,
- compare quantities with different denominators,
- convert decimals, percentages and fractions to one another,
- make inferences based on being able to calculate percentages,
- use the equivalence of fractions, decimals and percentages to compare proportions,
- add and subtract fractions with unlike denominators,
- identify an LCM between two fractions to create like denominators,
- solve problems of adding/subtracting fractions,
- translate verbal phrases into algebraic expressions,
- evaluate expressions containing variables,
- identify terms, like/unlike terms, and coefficients,
- identify and use properties of addition and multiplication
- use properties to simplify algebraic expressions,
- use multiple representations to represent relations,
- translate among different verbal, tabular, graphical, and algebraic representations of relations,
- define statistics,
- collect data using different methods,
- select an appropriate data collection method (e.g., conducting experiments, observing outcomes, conducting surveys or searching statistical data),
- construct pictograms and bar graphs and compare their features,
- construct pie charts and line graphs and compare their features,
- compare statistical diagrams and justify their choices,
- conduct a survey to collect, classify and represent data using appropriate graphs and then analyze the data to make some decisions.

Teaching Schedule / Contents/ Learning Activities

Week	Contents/Topics	Learning/Teaching Activities
1	<p><u>Rational Numbers</u></p> <ol style="list-style-type: none"> 1) Integers and comparison of integers 2) Addition, subtraction, multiplication, and division of integers 3) Properties of integers 	<ul style="list-style-type: none"> → Exploring real life contexts (Exp: Owing \$3 is worse than having \$3). What is another way of saying ‘owing money’? Ans: Being in debt → Drawing the symbols $>$ and $<$ on the board (the open side always faces the biggest number) → Demonstrating positive and negative integers using the number line (starting at $+4$ on your number line, go 3 places in the negative direction. What number are you at?) → Drawing a number line on the board and asking students to show examples of taking away debts → Writing down a mathematical sentence to describe $+4-3=1$ → Writing down a mathematical sentence to describe $-5-4=-9$ → Giving examples of a sentence where two negatives make a positive (Reminding students about what happens in the English language when you have two negatives; “I haven’t got no money” means you have money.) Is being ‘in debt’ positive or negative? Is ‘taking away’ positive or negative? → Verbalizing the reasoning (working in pairs) → A positive number multiplied by a positive number gives a positive number. A positive number multiplied by a negative number gives a negative number → Order of Operation (BIMDAS), think of examples in real life where order matters → Working in pairs, investigate division of integers, do you think order matters for division? A negative number divided by a

Week	Contents/Topics	Learning/Teaching Activities
		<p>positive number gives a negative number. A negative number divided by a negative number gives a positive number. A positive number divided by a negative number gives a negative number.</p> <p>→ Real life examples (Order of Operations): You charge \$7 per hour for babysitting. If you do 4 hours babysitting and a \$2 tip, how much will you have?</p>
2	<p>1) Fractions and comparison of fractions 2) Addition, subtraction, multiplication, and division of fractions Quiz 1</p>	<p>→ Understanding a fraction $1/b$ as a quantity formed by 1 part when a whole is partitioned into b equal parts (with illustrations); understand a fraction a/b as the quantity formed by a parts of size $1/b$</p> <p>→ recognize and generate simple equivalent fractions, explain why the fractions are equivalent by using a visual fraction model</p> <p>→ Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.</p> <p>→ Give each student a fraction card and ask them to find the student with the equivalent fraction.</p> <p>→ Comparing fractions with different denominators</p> <p>→ Adding and subtracting fractions with unlike denominators</p> <p>→ Multiplying and dividing of fractions</p> <p>→ Distributing the problem to all students and emphasizing to write the results in as many different forms as possible.</p>

Week	Contents/Topics	Learning/Teaching Activities
		<ul style="list-style-type: none"> → Converting a fraction to a percentage and decimal on their notebook. → Quiz
3	<ol style="list-style-type: none"> 1) Decimals and comparison of decimals 2) Addition, subtraction, multiplication and division of decimals 3) Relationship between decimals and fractions 	<ul style="list-style-type: none"> → express rational number a/b as a decimal by dividing its numerator by its denominator → apply the four operations on decimal numbers → place the decimals (and fractions) in ascending/descending order.
4	<ol style="list-style-type: none"> 1) Rational numbers and their properties 2) Application of integers, rational numbers in problem solving 3) Powers with positive integer indices <p>Quiz 2</p>	<ul style="list-style-type: none"> → define the meaning of a rational number as a ratio → express a decimal number with finite decimal places as a fraction → Spotlight: we often take π to be $22/7$ or 3.142. These are just approximations of the actual value of π. → evaluate powers with positive integers → evaluate combined operations on integers including indices → Quiz
5	<p><u>Polynomials</u></p> <ol style="list-style-type: none"> 1) Monomials 2) Addition, subtraction, multiplication and division of monomials 3) Polynomials 4) Addition, subtraction, and multiplication of polynomials 5) Division of polynomials with monomials resulting polynomial quotients 	<ul style="list-style-type: none"> → define the terms (Term, coefficient, degree, like/unlike terms, monomials, polynomials) → identify terms, like terms → identify kinds of polynomials according to the number of terms and according to its degree → add/subtract polynomials by grouping like terms → use previous knowledge about multiplication, distributive property and multiplying powers to model multiplying a monomial by a polynomial (using area method) → divide polynomial by a monomial
6	Review Chapter 1 & 2 Quiz 3	Review Quiz
7	Midterm Examinations (July 17-21)	

Week	Contents/Topics	Learning/Teaching Activities
8	<u>Linear Equation in One Variable</u> 1) Pattern and relation 2) Solutions of equations 3) Linear equations in one variable	→ make sense of the concept of an equation → use variables to represent quantities in a real-world or mathematical problem → construct simple equations and inequalities to solve problems by reasoning about the quantities → use simulation to create an equation in one variable
9	1) Solving linear equations in one variable 2) Word problems of linear equations in one variable	→ solve linear equations in one variable → solve simple fractional equations that can be reduced to linear equations → solve word problems in real-world context
10	1) Application of solving linear equations in one variable in everyday life Review Quiz 4	→ solve more word problems → Revision → Quiz
11	<u>Statistics 1</u> 1) Statistical questioning 2) Data Collection	→ Define statistics (giving examples in everyday life) → introduce different methods for collecting data → identify which data collection method is appropriate for each of the studies given by the teacher
12	1) Data presentation (pictograph, bar chart, line graph, pie chart)	→ represent data using diagrams or graphs
13	1) Data interpretation 2) Statistical application in everyday life	→ analyze data, draw conclusions and make decisions → explain what information you can get from the bar graph and the pie chart
14	1) Reading pie chart 2) Drawing pie chart	→ analyze data, draw conclusions and make decisions → compare statistical diagrams
15	Review Chapters 3 & 4 Quiz 5	Review Chapters 3 and 4 Quiz
16	Final Examinations (September 18-25)	

Assessments (i.e. Assignments, score breakdown, tests)

- Class Activities/Workbook (Every session, in notebook) 30 points
- Topic quizzes (5 quizzes) 15 points
- Homework (weekly, submission on Google Classroom) 15 points
- Midterm (Week 7) 20 points
- Final Exam (Week 16) 20 points
- **Total** **100 points**

Resources/Websites/Learning Management Tools

- In class lecture/ Links posted on Google Classroom
- Online games and simulations: PhET Colorado, Desmos, Quizizz
- Singapore New Discovering Mathematics Textbooks 1A & 1B; Chow Wai Keung, Huo Da, Dr Ng Kok Min
- Mental Maths Activities
- PowerPoint Presentation
- Inquiry-based learning projects
- Educational Websites and Platforms (Tes, PhET Colorado, GeoGebra, Desmos)



Courses Syllabus
The English Program for Talented Students

Course Code ST21101

Subject Science 1

Credit 1.5

3 Periods / Week / Semester

Mattayom 1

Type of Course Basic

Semester 1 **Academic Year** 2023

Subject Teacher Thomas Kessler

Course Description

In this course, we will examine the fundamental concepts and diverse organisms that make up life on Earth. From the origins of life to the intricacies of cellular structure and function, students will develop a deeper understanding of the characteristics, diversity, and needs of living organisms. We will also delve into the fascinating realm of cell anatomy, focusing on both plant and animal cells. By the end of this course, students will gain a deeper understanding of the building blocks of life and the remarkable adaptations that enable organisms to survive and thrive in their environments.

Goals/ Expected Learning Outcomes

1. Understand the characteristics of life and the basic needs for life.
2. Differentiate between the major types of life forms, including viruses, bacteria, protists, and fungi.
3. Examine the origin of life and the various theories surrounding its emergence.
4. Explore the structure and function of plant and animal cells, including organelles and cellular processes.
5. Investigate the growth, development, and reproduction of plants.
6. Analyze the adaptations and ecological interactions of plants in different environments.
7. Develop scientific inquiry skills by applying the scientific method in studying life.
8. Foster critical thinking and problem-solving abilities through hands-on activities and class discussions.

Teaching Schedule /Contents/ Learning Activities

Week	Contents / Topics	Learning / Teaching Activities
1	Introduction to Biology	- Course overview and expectations - Introduction to life's characteristics - Group discussion: What is life?
2	Origin of Life	- Theories on the origin of life - Early evidence of life - Research project: Investigating early life forms
3	Viruses	- Structure and classification of viruses - Case study analysis: Viral diseases and their impact - Quiz 1
4	Bacteria	- Bacterial structure and reproduction - Role of bacteria in ecosystems - Lab activity: Observing bacteria under a microscope
5	Protists	- Diversity and ecological significance of protists - Virtual exploration: Protist habitats and adaptations
6	Fungi	- Fungal characteristics and ecological roles - Discussion: Human uses of fungi
7	Midterm Examination	
8	Cell Structure and Function	- Overview of plant and animal cells - Organelle structure and function - Lab experiment: Cell membrane transport
9	Cellular Processes	- Cellular respiration and photosynthesis - Energy production in cells - Concept mapping: Cell processes and energy flow
10	Cell Division and Reproduction	- Cell cycle and mitosis - Sexual and asexual reproduction - Video analysis: Investigating cell division - Quiz 2
11	Plant Structure and Tissues	- Plant tissues and systems - Microscope lab: Observing plant cells - Plant dissection: Anatomy exploration
12	Plant Growth and Development	- Hormones and growth regulators - Investigating plant responses to stimuli - Plant growth experiment
13	Plant Reproduction	- Flower structure and pollination - Plant life cycles - Quiz 3

Week	Contents / Topics	Learning / Teaching Activities
14	Plant Adaptations	- Plant adaptations to various environments - Ecological interactions of plants - Group presentation: Unique plant adaptations
15	Review and Exam Preparation	- Review of key concepts - Practice exam questions - Final exam preparation strategies
16	Final Examination	

Assessments

- Quiz 20 points
- Exercise/Activity/Worksheet 20 points
- Critical Reading/Writing 10 points
- Classroom contribution/Behavior 10 points
- Midterm Exam 20 points
- Final exam 20 points

Websites, Learning Management Tools

- Google Classroom

References/ Textbooks/ Other Resources

- Integrated Science Course 1: Student Edition (McGraw Hill)



Courses Syllabus
The English Program for Talented Students

Course Code SO21101

Subject Social Studies 1

Credit 1

2 Periods / Week / Semester

Mattayom 1

Type of Course Basic

Semester 1 **Academic Year** 2023

Subject Teacher Rollin Miller

Course Description

Students will study about Asia, Australia and Oceania and Thailand and its relative location position in Southeast Asia. The processes shaping the earth and their causes and effects on landforms, flora, and fauna will be covered. The course uses the five themes of geography as a framework for teaching and learning about climate, landforms, movement, and human-environment interaction. The relationship between the physical and human geography of Thailand will be explored and analyzed.

Goals/ Expected Learning Outcomes

The students will be able to use geographic tools (globes, maps, graphs and charts) in studying physical characteristics of Asia. Students will understand the physical characteristics of the Earth and the relationship of various Asian regions with one another. Students will understand how to use maps and geographical instruments for research, analysis, synthesis of geo-data and information. Students will understand the interrelationship between humans and the physical environment. Students will gain an awareness of the importance of the conservation of resources and the environment for sustainable development in Asia, Australia and Oceania.

Teaching Schedule / Contents/ Learning Activities

Week	Contents / Topics	Learning / Teaching Activities
1	Five Themes of Geography	Basic Rules of Class/Introduction to the 5 Themes
2	Geographers Tools	Map work & logical thinking
3	Geography Skills	Lat & Long calculations/Using Google Maps
4	Map Essentials	Reading maps (scale, key, compass, etc)
5	Map indicators	Using a scale, compass rose, key etc

Week	Contents / Topics	Learning / Teaching Activities
6	The Earth Inside and Out	Group activity/Cause and Effect Presentations
7	Midterm Exam	
8	Internal and External Forces	Using Google Sheets to make graphic organizer
9	Thailand within Asia	Comparing and contrasting two countries
10	Dividing Asia	Jigsaw activity. Student “experts” will support each other
11	5 regions of Asia	Map & search exercise
12	Indian Subcontinent	Reading Assessment from textbook
13	East Asia	Using Venn Diagrams for pre-writing
14	Southwest & Central	Cause and effect part II - Student micro debates
15	Asia & the Pacific	Listening Activity - Google Form Quiz based on audio
16	Final Exam	

Assessments (i.e. Assignments , score breakdown, tests)

Homework	20 Points
Tests/Quizzes	20 Points
Group Activities	10 Points
Participation	10 Points
Assessments	20 points
Final Exam	20 points

Websites, Learning Management Tools

- Google Classroom
- Gapminder

References/ Textbooks/ Other Resources

Geography (Holt McDougal) Online and Textbook



Courses Syllabus
The English Program for Talented Students

Course Code SO21103

Subject History 1

Credit 0.5

1 Periods / Week / Semester

Mattayom 1

Type of Course Basic

Semester 1 **Academic Year** 2023

Subject Teacher Jason Sore

Course Description

In this course students will study about the history of Thailand and its position in Southeast Asia. Furthermore, looking at the historical method and how evidence uncovered today helps us to re-examine the past and give students a better understanding of the sources of civilization in the region. Also, to look at the culture of the region and how it has had an impact on the present.

Goals/ Expected Learning Outcomes

The students will be able to gain an understanding of the application of historical methodology and how it is used to analyze the past. Also to let students study the physical environment, demographics, society, culture and the economy from past civilizations and kingdoms. Furthermore to look at human-environment interaction and development of Southeast Asia in the past and examine its lasting impact. Finally, to bring students up-to-date with current events and articles that give us a better understanding of the past..

Teaching Schedule / Contents/ Learning Activities

Week	Contents/Topics	Learning/Teaching Activities
1	Introductions	Class Rules
2	Basic Timelines	Intro to timelines (title, linear, events)
3	Timeline of SEA	Interpreting & understanding a timeline
4	Recorded	Differences between fact and fiction
5	Bias in History	history through perspectives.
6	Finding History	Critical thinking and modeling
7	NO MIDTERM	

Week	Contents/Topics	Learning/Teaching Activities
8	Science & Discovery	Analytical thought & scientific method
9	Ancient Civilizations	Answering WH questions
10	Dated Periods	Timelines (jorsor, porsor, rorsor, morsor)
11	What's the Age	Critical Reading(stone, bronze, Iron)
12	Pre-Hist Thailand	Reading (ch2)
13	Arch sites Thailand	Producing a table
14	Arch digs	Free activity on site of choice
15	Civilizations of SEA	Matching//smart guessing
16	FINAL EXAM	

Assessments (i.e. Assignments , score breakdown, tests)

During Semester: Final Exam = 80 : 20

Quiz during semester :	June	Topic : timeline	10 points
	July	NO Midterm Test:	
	August	Discovering History	10 points
Class Activities :	August	Reading	10 Points
Project:	July- August	Civilization Board	20 Points
	September	classwork/writing	20 points
Student's expected characteristics for Social studies			10 points
(Attitude/ organized / systematic working/ responsibility/ confidence and effort)			
Final Exam	September	Topic : Prehistory SEA	20 points

Websites, Learning Management Tools

- GOOGLE CLASSROOM

References/ Textbooks/ Other Resources

- GeographyBook / History of Thailand



Courses Syllabus
The English Program for Talented Students

Course Code HP21101

Subject Health Education 1

Credit 0.5

1 Periods / Week / Semester

Mattayom 1

Type of Course Basic

Semester 1 **Academic Year** 2023

Subject Teacher Kimberly Unger

Course Description

Health Education at this level offers students an opportunity to acquire knowledge, practice skills and develop attitudes that can benefit them throughout life. Building a solid foundation of good literacy and decision-making skills can contribute to a variety of healthy choices for self and others. Although the knowledge components are addressed through different content areas, the development of process and life skills and attitudes are incorporated throughout the entire curriculum.

Goals/ Expected Learning Outcomes

The students will be able to

- A. Practices basic personal hygiene.
- B. Understand the three sides of the health triangle, physical, mental and social
- C. Understand first aid and safety at home and at school.
- D. Understand social and emotional health and how it affects our health triangle
- E. Understands communicable and noncommunicable diseases
- F. Describe nutrition skills and how to maintain proper weight
- G. Understand the accident chain and what to do to avoid accidents.
- H. Demonstrate ways to avoid communicable diseases
- I. Understand the 7 stages of life and what happens in each stage
- J. Relate how puberty and the endocrine system control the body
- K. Recognize the stages of birth

Teaching Schedule /Contents/ Learning Activities

Week	Contents/Topics	Learning/Teaching Activities
1	Health Triangle/Goal Setting	Sign into the Online textbook, Practice Goal setting and PowerPoint
2	Total Health / Learning Skills	Exercises/ PowerPoint
3	What affects your Health	Skills Practice/ PowerPoint/Quiz
4	Growth & Development	PowerPoint and Exercises/quiz
5	Growth & Development	PowerPoint/quiz
6	Growth & Development	Video with questions
7	Midterm	
8	Growth & Development	PowerPoint/quiz
9	Diseases	Online textbook/ videos/PowerPoint
10	Diseases	Online textbook/videos/PowerPoint/quiz
11	Diseases	Online textbook/videos/PowerPoint/quiz
12	Diseases	Online textbook/videos/PowerPoint/quiz
13	Nutrition	PowerPoint/ quiz
14	Nutrition	PowerPoint / Quiz
15	Nutrition	PowerPoint/ Quiz
16	Final Exams	

Assessments (i.e. Assignments, score breakdown, tests)

During Semester: Final Exam = 80 : 20

- Students participate in group and pair work
- Students prepare research work, reports, presentations Health
- Education videos with worksheets
- Extra curriculum activities – field trip

Lesson quizzes, re teaching activities, cross curriculum activities:

Quiz 1 or homework 1:	20 points
Quiz 2 or homework 2:	20 points
Quiz 3 or homework 3:	10 points
Quiz 4 or homework 4:	10 points
Midterm:	20 points
Final exam:	20 points

Not included in the grades above:

Reading activities: (10 pts, not included in the above)

Student's expected characteristics 10pts

(Attitude / organization / systematic working / responsibility / effort)

Websites, Learning Management Tools

Glencoe Health textbook website

Google classrooms

National Geographic

Discovery Health

American Heart Association

WebMD & WHO & CDC

References/ Textbooks/ Other Resources

Glencoe Teen Health Online textbook

Glencore Online worksheets

Health skills activities Health

Education videos

Health fast file



Courses Syllabus
The English Program for Talented Students

Course Code EN21101

Subject English 1

Credit 1.5

3 Periods / Week / Semester

Mattayom 1

Type of Course Basic

Semester 1 **Academic Year** 2023

Subject Teacher Kevin Raw

Course Description

Mathayom 1 Basic English uses Pearson Longman's Keystone Level A to help address each student's language needs. We will work through Units 1-2 (eight readings) during semester one and Units 3-4 (8 readings) during semester two. The goal is to maximize academic language proficiency.

1. Listening

- a. Short extracts and mini-dialogues to introduce and practice new language
- b. Words and sentences for close listening and to model pronunciation
- c. Listen and read sections to further develop students' confidence

2. Speaking

- a. Tasks that provide a regular opportunity for extended and prepared speaking based around realistic topics and situations
- b. Practice of grammar through class exercises and activities
- c. Topics and reading texts in each unit provide opportunities for follow-up discussion
- d. Regular integrated work on pronunciation

3. Reading

- a. Wide range of reading material in the Student Book, including factual/scientific texts, stories, quizzes, forms, notes and emails
- b. Extended texts which lead to grammar work and language analysis
- c. Texts which provide a model or stimulus for tasks and a model for writing activities

4. Writing

- a. Writing sections which focus on writing e-mails and letters, composing narratives and reviews, drafting and redrafting.

Additional Skills:

In addition to the four areas of language proficiency highlighted above, the students will also be given encouragement and introduction to utilize critical thinking, collaboration and group work,

leadership and responsibility with their use of language. Along with the core text materials students will receive periodically, additionally compiled sheets and activities to supplement these needs.

Goals/ Expected Learning Outcomes

The students will be able to read, understand, discuss, and write about the informational texts and classic and contemporary literature covered in class. Students will learn new academic vocabulary and demonstrate mastery of skills.

Teaching Schedule /Contents/ Learning Activities

Week	*Contents / Topics (*Subject to Change)	*Learning / Teaching Activities (*Subject to Change)
1	Introductions / Preparations for study	Profiles, seating charts, spelling test, reading, writing, and introduction to core materials.
2	Unit 1 - Reading 1	Textbook (pp. 4-19) - Discussions, reading, writing, vocabulary, additional themed activity
3	Unit 1 - Reading 2	Textbook (pp. 20-35) - Discussions, reading, writing, vocabulary, additional themed activity
4	Unit 1 - Reading 3	Textbook (pp. 36-49) - Discussions, reading, writing, vocabulary, additional themed activity-1
5	Unit 1 - Reading 3	Textbook (pp. 36-49) - Discussions, reading, writing, vocabulary, additional themed activity - 2
6	Unit 1 - Reading 4 (additional)	Discussions, reading, writing, vocabulary, additional themed activity (Subject to available time) Project Work and Exercises / Exam Review
7	Midterm Examination	Midterm Examination
8	Unit 2 – Reading 1	Unit 2 - Introduction to Unit - Textbook (pp. 64-75) - Discussions, reading, writing, vocabulary, additional themed activity -1
9	Unit 2 – Reading 1	Textbook (pp. 64-75) - Discussions, reading, writing, vocabulary, additional themed activity -2 / Selected grammar
10	Unit 2 – Themed Activities	Textbook (pp. 76-81) - Discussions, reading, writing, vocabulary, additional themed activity
11	Unit 2 - Reading 2	Textbook (pp. 84 -93) - Discussions, reading, writing, vocabulary, additional themed activity
12	Unit 2 - Reading (additional)	Textbook (pp. 94-95) - Discussions, reading, writing, vocabulary, additional themed activity
13	Unit 2 - Reading 3	Textbook (pp. 96 -109) - Discussions, reading, grammar, writing, vocabulary, additional themed activity

Week	*Contents / Topics (*Subject to Change)	*Learning / Teaching Activities (*Subject to Change)
14	Unit 3 - Reading 1	Textbook (pp. 122 -139) - Discussions, reading, writing, grammar, vocabulary, additional themed activity
15	Unit 3 - Reading 2	Textbook (pp. 140-149) - Discussions, reading, writing, vocabulary, additional themed activity Selected grammar / Project Work
15	Unit 3 – Reading 3	Textbook (p. 154 - 165) - Discussions, reading, writing, grammar, vocabulary, additional themed activity – and/or Additional Activity / Project Work
16	Final Examination	Final Examination

Assessments (i.e. Assignments, score breakdown, tests)

- Final Exam (20)
- Midterm Exam (20)

- Classroom Activities and Quizzes / Listening and Speaking (20)
(Google Classroom management / participation)

- Project / Extension – (20)
(Group / Pair / Individual work additional / external to class)

- Critical Reading and Writing (Individual work) (10)

- Behavior, Effort and Attitude to Learning / Submission of Homework) (10)

Websites, Learning Management Tools

- Google Classroom / Google Suite Applications / Microsoft Office applications

References/ Textbooks/ Other Resources

- Pearson Longman Keystone (Level A) Textbook, Workbook, CD-ROM, Video
- Program, and Teacher's Resource Book
- Teacher constructed / adapted resources
- Collections online



Courses Syllabus
The English Program for Talented Students

Course Code MA21201

Subject Additional Mathematics 1

Credit 0.5

1 Periods / Week / Semester

Mattayom 1

Type of Course Additional

Semester 1 **Academic Year** 2023

Subject Teacher Negar Mohammadi

Course Description

This course introduces mathematical concepts by providing real-world context, focusing on the relevance of mathematics in our daily lives. Students can explore the subject further, fostering interest in mathematics. In this course students will study mathematics through investigation, discovery, understanding and applications of logical reasoning, polynomial manipulation, number forms and networks. The project includes non-routine problems to develop students' problem solving skills with prompts to guide students. using Polya's 4-step approach.

Goals/ Expected Learning Outcomes

As a result of studying this course, students will be able to:

- use Polya's 4-step problem-solving process to help you solve problems,
- approximate values by rounding off numbers to specified place values, decimal places and significant figures,
- express ratios involving rational numbers in the simplest form,
- compare two different quantities of using rate,
- recognising the relationship between distance, time and speed,
- express one quantity as a percentage of another,
- compare two quantities by percentage,
- recognise percentages greater than 100%,
- calculate percentage increase or decrease in quantities,
- make sense of problems and persevere in solving them,
- reason abstractly and quantitatively,
- construct viable arguments and critique the reasoning of others,
- model with mathematics,
- use appropriate tools strategically,
- attend to precision,
- look for and make use of structure,
- look for and express regularity in repeated reasoning.

Teaching Schedule / Contents/ Learning Activities

Week	Contents/Topics	Learning/Teaching Activities
1	Lesson 1	Lecture: Polya's 4-step approach
2	Activity 1	Investigation: Which lockers are open? Poly's 4-step method classwork
3	Lesson 2	Lecture: Rounding off numbers to specified decimal places, Rounding off numbers to specified significant figures
4	Activity 2	Investigation: Science lab inquiry
5	Lesson 3	Lecture: Ratio, Rate and Speed
6	Activity 3	Investigation: Science lab inquiry/Math Journal
7	Midterm Examination Week (July 17-21)	No Midterm Exam for This Course
8	Lesson 4	Lecture: Percentage/classwork
9	Activity 4	Activity: PhET Colorado Games
10	Quiz 1 (Lessons 1 to 3)	Quizizz
11	Activity 5	Exercise: Real-life application of percentage
12	Activity 5	Exercise: Real-life application of percentage
13	Lesson 6	Lecture: Percentage Change, Original Value
14	Activity 6	Exercise: Real-life application
15	Quiz 2 (Lesson 4)	Quizizz
16	Final Examination Week (September 18-25)	No Final Exam for This Course

Assessments (i.e. Assignments , score breakdown)

- Activities 1, 2 & 3 and Quiz 1 (10 points each) 40 points
- Activities 4, 5 & 6 and Quiz 2 (10 points each) 40 points
- Class Participation/Homework 20 points
- **Total** **100 points**

Websites, Learning Management Tools

- In class lectures
- PowerPoint and internet based presentations
- Group and individual inquiry labs
- PhET Colorado Simulation Website/GeoGebra

References/ Textbooks/ Other Resources

- Math Accelerated Pre-algebra Program Common Core Edition, McGraw Hill
- Singapore New Discovering Mathematics Textbooks 1A & 1B; Chow Wai Keung, Huo Da, Dr Ng Kok Min



Courses Syllabus
The English Program for Talented Students

Course Code ST21201

Subject Scientific Process

Credit 1

2 Periods / Week / Semester

Mattayom 1

Type of Course Additional

Semester 1 Academic Year 2023

Subject Teacher Eduard Van Walchren

Course Description

This course will develop students' interest in science by introducing them to biology, chemistry, physics, and Earth science. This course provides the foundation students need to study at a more advanced level in later years. The first semester consists of a general introduction to science, careers in science, measurements and graphing. In the first half of the semester, this course will introduce students to proper scientific methods of problem solving and critical thinking. Students will work in small groups to conduct their own experiments to help strengthen the principles discussed in class. In the second half of the semester, students will start to learn about different measurements, dimensional analysis (unit conversions) and graphing.

Goals/ Expected Learning Outcomes

1. Students will be able to understand the skills that scientists use.
2. Students will be able to describe the scientific method.
3. Students will be able to identify the different variables in an experiment.
4. Students will be able to discuss different careers in science.
5. Students will be able to describe different measurement and SI units.
6. Students will be able to convert between units using dimensional analysis.
7. Students will be able to convert numbers from scientific notation to standard notation and standard notation to scientific notation.
8. Students will be able to create and understand graphs from data given to them.
9. Students will be able to draw a line of best fit.
10. Students will be able to determine the slope of the line of best fit using the standard form for the equation of a line.

Teaching Schedule /Content /Learning Activities

Week	Contents/Topics	Learning/Teaching Activities
1	What is Science?	Chapter 1.1- Thinking Like a Scientist
2	What is Science?	Chapter 1.1- Thinking Like a Scientist
3	What is Science?	Chapter 1.2- Scientific Inquiry
4	What is Science?	Chapter 1.3 Why Study Science
5	What is Science?	Chapter 1.3- Why Study Science Chapter 1.4- Careers in Science
6	What is Science?	Chapter 1.4- Careers in Science
7	Midterm Exam	
8	The Work of Scientists	Chapter 2.1- Measurement—A Common Language
9	The Work of Scientists	Chapter 2.1- Measurement—A Common Language SI Units,
10	Dimensional Analysis (Conversion Factors), Scientific Notation and Metric Prefixes	Chapter 2.1- Measurement—A Common Language, Supplemental Content
11	The Work of Scientists	Chapter 2.2- Mathematics and Science
12	The Work of Scientists	Chapter 2.2- Mathematics and Science
13	The Work of Scientists	Chapter 2.3- Graphs in Science
14	The Work of Scientists	Chapter 2.3- Graphs in Science
15	The Work of Scientists	Chapters 2.1, 2.2 and 2.3 Content Review
16	Final Exam	

Evaluation & Assessment:

- Tests and Quizzes 30 points
- Lab/ Attendance/ Homework/ Online Learning 30 points
- Project/ Presentations 10 points
- Score from Regular Program 10 points
- Final exam 20 points

Textbooks, Websites and Learning Management Tools:

Google Classroom

McGraw Hill: iScience Course 2 and 3

Supplemental Internet Content



Courses Syllabus
The English Program for Talented Students

Course Code EN21201

Subject English Language for Life Skill 1

Credit 1

2 Periods / Week / Semester

Mattayom 1

Type of Course Additional

Semester 1 Academic Year 2023

Subject Teacher Eric Young

Course Description

This course is focused on developing the students' reading and writing skills. Two books will primarily be used throughout the semester: Focus 1: reading and vocabulary and James and the Giant Peach by Roald Dahl. There also will be some additional reading to help the students read text in an authentic context and supplement the topics learned in the course. Through the reading and assignments in the course, the students will practice basic reading skills that will serve as a beginning to the foundation to reviewing and analyzing literature and articles. The students will also learn the basics of writing paragraphs, essays, and articles. Students will be instructed in writing both factual and opinion compositions, as well as fiction and poetry.

Learning Aims and Objectives:

The students will be able to do the following:

- Apply grammar structures taught in the core course (EN21101) in writing and speaking.
- Identify and apply vocabulary learned in the course through reading, writing and speaking.
- Construct complex compound sentences in structured paragraphs.
- Discuss and analyze literary themes, elements, and devices.
- Improve the ability to guess the meaning of new vocabulary through context.

Teaching schedule and Topics: (Subject to change)

Week	Topic	Activities
1	Course Intro; FOCUS Unit 1	Class discussion; Speaking and listening partners; Quiz; Writing exercises; Personal writing; Silent reading / Reading aloud / Listening to an audio text; Instructional video; Supplemental material; group work

Week	Topic	Activities
2	FOCUS Unit 1 + Introduction to reading	Class discussion; Speaking and listening partners; Quiz; Writing exercises; Personal writing; Silent reading / Reading aloud / Listening to an audio text; Instructional video; Supplemental material; group work
3	James and the Giant Peach chapters 1-4	Class discussion; Speaking and listening partners; Quiz; Writing exercises; Personal writing; Silent reading / Reading aloud / Listening to an audio text; Instructional video; Supplemental material; group work "Peach" reading – chapters 1-4; characters; setting; conflict
4	James and the Giant Peach chapters 5-8	Class discussion; Speaking and listening partners; Quiz; Writing exercises; Personal writing; Silent reading / Reading aloud / Listening to an audio text; Instructional video; Supplemental material; group work "Peach" reading – chapters 5-8; character; plot; humor
5	James and the Giant Peach chapters 9-12	Class discussion; Speaking and listening partners; Quiz; Writing exercises; Personal writing; Silent reading / Reading aloud / Listening to an audio text; Instructional video; Supplemental material; group work "Peach" reading – chapters 9-12; character; plot; humor
6	Review for Exam	Review for the Midterm exam. Review Focus Unit 1 and "Peach" reading chapters 1-17
7	Midterm-Exam (FOCUS U.1; JGP ch.1-12)	Midterm Examination
8	James and the Giant Peach chapters 13-17	Class discussion; Speaking and listening partners; Quiz; Writing exercises; Personal writing; Silent reading / Reading aloud / Listening to an audio text; Instructional video; Supplemental material; group work "Peach" reading – chapters 13-17; character; plot; humor
9	FOCUS Unit 2	Class discussion; Speaking and listening partners; Quiz; Writing exercises; Personal writing; Silent reading / Reading aloud / Listening to an audio text; Instructional video; Supplemental material; group work
10	James and the Giant Peach chapters 18-23	Class discussion; Speaking and listening partners; Quiz; Writing exercises; Personal writing; Silent reading / Reading aloud / Listening to an audio text; Instructional video; Supplemental material; group work "Peach" reading – chapters 18-23; character; plot; humor
11	James and the Giant Peach chapters 24-31	Class discussion; Speaking and listening partners; Quiz; Writing exercises; Personal writing; Silent reading / Reading

Week	Topic	Activities
		aloud / Listening to an audio text; Instructional video; Supplemental material; group work "Peach" reading – chapters 24-36; character; plot; humor
12	James and the Giant Peach chapters 32-39	Class discussion; Speaking and listening partners; Quiz; Writing exercises; Personal writing; Silent reading / Reading aloud / Listening to an audio text; Instructional video; Supplemental material; group work "Peach" reading – chapters 37-39; character; plot; humor; moral
13	FOCUS Unit 3	Class discussion; Speaking and listening partners; Quiz; Writing exercises; Personal writing; Silent reading / Reading aloud / Listening to an audio text; Instructional video; Supplemental material; group work Writing assignment based on James and the Giant Peach novel
14	James and the Giant Peach writing/project	Writing assignment based on James and the Giant Peach novel
15	Review for Exam	Final Examination Review Focus Unit 2-3 and "Peach" reading
16	Final Exam	Final examination

Assessments (i.e. Assignments , score breakdown, tests)

During Semester: Final Exam = 80: 20

Assignments:	25 points
Behavior (Effort and Attitude):	5 points
Individual and Group Work/Exercises/Quizzes:	20 points
Extra Reading:	10 points
Midterm Examination:	20 points
Final Examination:	20 points

Websites, Learning Management Tools

- Google Classroom
- An array of educational Websites
- Google Meet video conferencing (if necessary)

References/ Textbooks/ Other Resources

- Textbook: Cengage / National Geographic - Focus: Reading and Vocabulary 1
- Extra Reading Novel: Dahl, Roald - James and the Giant Peach
- A range of additional supplementary materials

ENTS

THE ENGLISH PROGRAM FOR TALENTED STUDENTS