

(This content is the outline, they may have some change.)

Learning Content

EP-M.3

EN23101 Foundation English 5

Study fundamental English about requests, advices, directions, explanations. Accurate pronunciation from texts, news, advertisement, short poems in line with reading principles. Specify and write various forms of non-text information. Specify the topic, main idea and supporting details and express opinions about what has been heard and read from various types of media. Converse and write to exchange data about themselves, various matters around them, situations, news and matters of interest to society, and communicate the data continuously and appropriately. Speak and write appropriately to express needs, offer help and agree and refuse to give help in various situations.

Ask for, give information, explain, compare and express opinion from what has been heard or read. Describe their own feelings and opinions about various matters, activities, experiences and news/incidents. Choose the language, tone of voice, gestures and manners appropriately. Compare and explain similarities and differences between pronunciations of various kinds of sentences in accordance with structures of sentences, lifestyles, customs and traditions. Use language for communication in real situations/simulated situations in the classroom, school, community and society. Use foreign languages in conducting research, collecting and summarising knowledge and various data from the media and different learning sources for further education and livelihood. Disseminate/convey to the public data and news about the school, community and the local area in foreign languages.

Use process of establishing conceptualization, thoughtfulness and discretion, awareness, learning and understanding process, analytical process, reading process, work process, language learning process, process for creating practicability and attitude to create communicative ability, thinking ability, problem-solving ability, life-skill ability, and ability to use technology along with possessing disciplines, diligence, endeavor, honesty, self-sufficiency, love of being Thais and nationalism, religiosity, and loyalty.

(This content is the outline, they may have some change.)

Learning Content

EP-M.3

EN20217 Supplemental English 17

Study foundation English about different types of media, directions, requests, advices, explanations, fables, poems, sentences, statements, non-text information, news and information, activity scenarios, needs, help, opinions, routines, experiences, surrounding environment, language and culture, social manners, festivals, special days, traditions, cultures, similarities and differences of sentences, punctuations, word order, sentence structures, knowledge connection, information, facts, role play situations, basic tools, various knowledge and information from media and learning resources. Use language process, process for establishing knowledge and understanding, and attitudes, analytical process, practical process, work process, and process for establishing conceptualization to create communicative ability, thinking ability, problem-solving ability, life-skill ability, and ability to use technology with disciplines, diligence, efforts, love of being Thai, self-sufficiency, love of reading, and positive attitude toward language learning.

(This content is the outline, they may have some change.)

Learning Content

EP-M.3

EN23102 Foundation English 6

Study fundamental English about requests, advices, directions, explanations. Accurate pronunciation from texts, news, advertisement, short poems in line with reading principles.

Specify and write various forms of non-text information. Specify the topic, main idea and supporting details and express opinions about what has been heard and read from various types of media. Converse and write to exchange data about themselves, various matters around them, situations, news and matters of interest to society, and communicate the data continuously and appropriately. Speak and write appropriately to express needs, offer help and agree and refuse to give help in various situations.

Ask for, give information, explain, compare and express opinion from what has been heard or read. Describe their own feelings and opinions about various matters, activities, experiences and news/incidents. Choose the language, tone of voice, gestures and manners appropriately. Compare and explain similarities and differences between pronunciations of various kinds of sentences in accordance with structures of sentences, lifestyles, customs and traditions. Use language for communication in real situations/simulated situations in the classroom, school, community and society. Use foreign languages in conducting research, collecting and summarising knowledge and various data from the media and different learning sources for further education and livelihood. Disseminate/convey to the public data and news about the school, community and the local area in foreign languages.

Use process of establishing conceptualization, thoughtfulness and discretion, awareness, learning and understanding process, analytical process, reading process, work process, language learning process, process for creating practicability and attitude to create communicative ability, thinking ability, problem-solving ability, life-skill ability, and ability to use technology along with possessing disciplines, diligence, endeavor, honesty, self-sufficiency, love of being Thais and nationalism, religiosity, and loyalty.

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Learning Content

EP-M.3

EN20218 Supplemental English 18

Study foundation English about different types of media, directions, requests, advices, explanations, fables, poems, sentences, statements, non-text information, news and information, activity scenarios, needs, help, opinions, routines, experiences, surrounding environment, language and culture, social manners, festivals, special days, traditions, cultures, similarities and differences of sentences, punctuations, word order, sentence structures, knowledge connection, information, facts, role play situations, basic tools, various knowledge and information from media and learning resources. Use language processing, process of establishing knowledge and understanding, process analysis, process skills practice, work process, process of establishing attitudes and conceptualization process to create communicative ability, living skills ability, thinking ability, and problem-solving ability along with creating disciplines, diligence, endeavor, love of being Thai, self-sufficiency, honesty, public mind, nationality, religiosity, loyalty, and positive attitude toward language learning

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Learning Content

EP-M.3

HP23101 Foundation Health Studies 5

Study foundation health studies, changes in different ages, social influences and expectations, influential media and development of teenagers, maternal and child health and family planning, factors affecting pregnancy, family conflicts. Use discussion, comparison, analysis, news presentations, role playing, group process, pre-test and post-test to create disciplines, diligence, honesty, self-sufficiency, nationalism, religiosity, loyalty, endeavor, love of being Thais, and service mind. Use the process of establishing knowledge and understanding and attitude to create knowledge, understanding, and apply the knowledge to daily-life situations along with possessing honesty and diligence.

Learning Content

EP-M.3

HP23102 Foundation Physical Education 5

Study about playing Thai and international sports, one of each kind by using techniques suitable to themselves and to the teams, principles, knowledge and kinaesthetic skills to physical activities, playing games and sports for health-strengthening on a continuous and systematic basis, good manners in playing and watching sports with sporting spirit, physical exercise, use of principles gained from sports to develop quality of life, observation of rules, regulations and agreements for playing the sports chosen, and application of concepts gained to develop quality of life in society. Integrate in the lessons honesty, public mind for community service, and eagerness to learn. Use various methods to establish knowledge and understanding, analytical skills, and skill mastering as well as for students to apply what learned in daily life.

(This content is the outline, they may have some change.)

Learning Content

EP-M.3

HP23103 Foundation Health Studies 6

Study about menus suitable to various ages, bearing in mind cost-effectiveness and nutritional value, guidelines for preventing diseases that are the main causes of illness and death, guidelines for solving health problems in the community, plan for doing physical exercise, rest and strengthening physical capacity, physical fitness test and development according to individual results, risk factors and risk behaviours affecting health and preventive measures, avoidance of violence and advice to others to avoid violence in solving problems, influence of the media on behaviours related to health or violence, effect of consuming alcoholic drinks on health and causing of accidents and proper resuscitation methods. Values embedded in the lessons include honesty, public-mind, and determination to learn.

Students must apply in their study knowledge and understanding process, practicing skills, problem solving skills, decision-making skills and creating proper social values. Students will gain knowledge and understanding and be able to apply knowledge in real life

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Learning Content

EP-M.3

HP23104 Foundation Physical Education 6

Study about playing Thai and international sports, one of each kind by using techniques suitable to themselves and to the teams, principles, knowledge and kinaesthetic skills to physical activities, playing games and sports for health-strengthening on a continuous and systematic basis, good manners in playing and watching sports with sporting spirit, physical exercise, use of principles gained from sports to develop quality of life, observation of rules, regulations and agreements for playing the sports chosen, and application of concepts gained to develop quality of life in society. Integrate in the lessons honesty, public mind for community service, and eagerness to learn. Use various methods to establish knowledge and understanding, analytical skills, and skill mastering as well as for students to apply what learned in daily life.

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Learning Content

EP-M.3

MA23101 Foundation Mathematics 5

Study the basics of mathematics and practice skills about surface area and volumes; systems of linear quadratic equations, similarity, probability and statistics **by using** mathematical process skills.

The course is **aimed for** students to have the abilities in problem solving, reasoning, communication, mathematical representations and presentation, connection of various mathematical concepts, connection of mathematical knowledge with other fields of study and creating initiatives. The students will **also** be equipped with the following desired characteristics: having responsibility, having discipline, working carefully and systematically, having self-confidence, having good attitude towards mathematics, being honest and demonstrating perseverance.

Students will, in addition, **develop** the 21st century learning skill in arithmetic and Thai wisdoms in natural resources and environmental management and about community business and fund.

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Learning Content

EP-M.3

MA20205 Universal Mathematics 5

Study foundation mathematics on the topics of **Factorisation of Polynomials, Quadratic Equations, Simultaneous Equations, Parabolas**, . Use mathematical skills and processes which are problem-solving, reasoning, mathematical communication and implication, presentation, mathematical knowledge linking, and creativity with responsibility, disciplines, systematic and accurate working, self-confidence, positive attitude towards mathematics, honesty, and effort.

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Learning Content

EP-M.3

MA23102 Foundation Mathematics 6

Study foundation mathematics on the topics of inequality, possibility, statistics, promotion of mathematical skills and processes, and mathematical projects. Use mathematical skills and process which are problem-solving, reasoning, communications, mathematical implication and presentation, mathematical connections, and creative thinking along with possessing the desired characteristics including 1) Love for their country, their King, and faith in their religion, 2) Be honest and upright 3) Possess discipline 4) Eager to learn 5) Be self-sufficient 6) Dedicated to work 7) Proud to be Thai 8) Have a sense of public consciousness

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Learning Content

EP-M.3

MA20206 Universal Mathematics 6

Study foundation mathematics on the topics of **Algebraic Manipulation and Formulae, Trigonometry Height and distance, Geometrical properties of Circles,**. Use mathematical skills and processes which are problem-solving, reasoning, mathematical communication and implication, presentation, mathematical knowledge linking, and creativity with responsibility, disciplines, systematic and accurate working, self-confidence, positive attitude towards mathematics, honesty, and effort.

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Learning Content

EP-M.3

OT23101 Foundation Occupational Works 5

Study about meaning, benefits and importance of living and family. Learn the working process for housework, set menu meals, clothes, agricultural work, handmade work, business, home maintenance, and package made from natural material. Discuss and analyze about career path, career choices that suit students' knowledge, aptitude and interest.

Use the learning process to create knowledge and understanding, managerial skills, and team working skill that is significant for success in work. Use technology properly to support work.

Integrated in learning the desired characteristics 1) Love for their country, their King, and faith in their religion, 2) Be honest and upright 3) Possess discipline 4) Eager to learn 5) Be self-sufficient 6) Dedicated to work 7) Proud to be Thai, and 8) Have a sense of public Consciousness

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Learning Content

EP-M.3

OT23103 Foundation Occupational Works 6

Students will study the following topics: stages of work, meaning, benefits and importance of housework, agricultural work, maintenance and repair work, craft work, and business work. Students will be able to discuss ways to search for jobs, analyze guidelines for entering employment, and assess alternatives for taking up occupations in keeping with students' knowledge, aptitudes and interests.

Students will apply knowledge and understanding development process, managerial skill, working system and people skills in order to accomplish work successfully. (process skills)

The objectives of the course are for students to gain knowledge and understanding about housework, agricultural work, maintenance and repair work, craft work, and business work and to be able to use technology in work properly. (competencies)

The following set of characteristics will be formed in students: love for nation, religion and the king; honesty and integrity; self-discipline; avidity for learning; philosophy for self-sufficiency; commitment to work, pride to be Thai and public-mindedness. (characteristics)

Not yet added - 21st Century Learning Skills/Local Wisdoms/Thai Wisdoms, Self-sufficiency Philosophy, School Focus

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Learning Content

EP-M.3

SC20255 Computer Project 1

Students will **study** about use of computer network; principles to search for information from computer network; use of information found on computer network in work; printed media production program; basic knowledge about printed media production program; text management, image management; designing printed media in different formats; creating e-book, creating hyperlinks, presentation, posting or publicizing work and e-book.

Students will **apply** a variety of learning process to develop their knowledge and understanding, to build practice skills and to gain technological ability.

The objective is for students to **develop** their knowledge and understanding about information technology as well as having opportunity to practice using information technology appropriately. Students will be able to select information technology which is fit for purpose of the project. Also, when working on the project, students should demonstrate social consciousness and responsibility.

The following set of characteristics will **also** be formed: honesty and integrity, self-discipline, avidity for learning, and dedication to work. In the process of learning, students will, in addition, be cultivated **the following 21st century learning skills: critical thinking skill, problem solving skills, and computer, information technology and communication skill.**

(This content is the outline, they may have some change.)

Learning Content

EP-M.3

SC20256 Computer Project 2

Students will **study** about use of information technology to present 2D and 3D work fit for purpose, use of the right program to present 2D and 3D work, basic knowledge about program used to create 2D and 3D work, and using work with 3D printer.

Students will **apply** a variety of learning process to develop their knowledge and understanding, to build practice skills and to gain technological ability.

The objective is for students to **develop** their knowledge and understanding about information technology as well as having opportunity to practice using information technology appropriately. Students will be able to select information technology which is fit for purpose of the project. Also, when working on the project, students should demonstrate social consciousness and responsibility.

The following set of characteristics will **also** be formed: honesty and integrity, self-discipline, avidity for learning, and dedication to work. In the process of learning, students will, in addition, be cultivated **the following 21st century learning skills: critical thinking skill, problem solving skills, and computer, information technology and communication skill.**

(This content is the outline, they may have some change.)

Learning Content

EP-M.3

SC23103 Technology and Computational Science 3

Students will **study** the following topics: meaning of technology; analysis of causes or factors affecting technological change; functions of technological system; using knowledge, skills and resources to analyze and compare information; select key information to design a solution to problem found in daily life about agriculture and food; creating work or developing method by using engineering design process; using materials, equipment and tools to solve problems correctly, appropriately and safely; studying steps to develop an application, Internet of Things; writing a program to create an application; primary and secondary data, data processing, creating alternatives and assessing software or online services that provide data management; assessing reliability of data, searching for source of information, impact of disinformation, being wise on using media, computer laws, using other people's copyright with fairness.

In this course, students will **use skills** and process to develop knowledge and understanding with the use of problem-based learning. Students are expected to gain knowledge, understanding and ability to design, think, solve problems and use technology.

The course is also **aimed** for students to have knowledge and understanding about key principles of technology for living in the society. Students will have a chance to develop creative work by using engineering design process with the use of appropriate information technology. Students will be able to work, and solve problems effectively, use information wisely and have social responsibility.

The following characteristics will also be developed in students: honesty, self-discipline, avidity for learning and commitment to work. Students will additionally practice 21st century learning skills: computational thinking, critical thinking, organized and systematic approach to solving problems and collaboration.

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Learning Content

EP-M.3

SC23101 Foundation Science 5

Students will **study** the following topics of science: the relationship between electrical potential difference and resistance; drawing a relationship graph between electric current and electrical potential difference; use of equipment to measure the amount of electricity; connecting resistors in series and in parallel circuit; simple electronics and functions of each electronic part; calculating electric power and electricity cost of home equipment; gene, DNA, chromosome and genetic change; the blending inheritance by examining one characteristic when a dominant allele is completely dominant; production of the child's genotype and phenotype; calculating the production ratio of the children's genotype and phenotype the differences of mitosis and meiosis cell division genetic diseases; importance of knowing about genetic diseases; genetics and the pros of genetically modified organisms; ecosystem, components of ecosystem, importance of an association among the living things living in the same habitat; food web, energy flow, the relationship of producer, consumer and decomposer; the buildup of toxin in food chain; biodiversity and its importance.

Students will **use** the scientific process which includes inquiry, observation, investigation, information search, experiment, discussion, creation of concepts, practice, management, group collaboration, value development, conveying the message and posing questions.

Students will **gain** knowledge, understanding and the abilities to think, solve problems, and apply knowledge learned in everyday situations.

The following characteristics will be **enhanced**: love of nation, religion and the king, honesty, self-discipline, avidity for learning, self-sufficiency, commitment to work, pride of Thai-ness, public-mindedness and qualifications of AC gentleman.

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Learning Content

EP-M.3

SC20205 Universal Science 5

Study foundation science on the following topics: quantity in physics, measurement unit (SI), measurement of length, time, area, and volume. Relation among displacement, time, velocity and acceleration. Calculation of velocity, speed and velocity. Types of force and effects of force. Differences between static and kinesthetic frictional force. Mass, weight, density of objects, calculation to find out weight, density of objects. Pressure, forms of energy, energy law, kinetic energy, gravitational potential energy, law of conservation of energy, and energy resources.

Use the process of establishing knowledge and understanding, scientific process, and skills which are knowledge seeking, exploration, data investigation, and discussion to create knowledge, ideas, ability to communicate, learning methods that enabling students to relate the knowledge to the process, important skills for searching and creating the knowledge, ability to make decision, and applications in daily life with honesty, diligence, effort, and proper disciplines.

(This content is the outline, they may have some change.)

Learning Content

EP-M.3

SC23102 Foundation Science 6

Study foundation science on the topics of potential difference, electrical current, resistance, calculation of electrical energy of electric appliances, application of knowledge gained for useful purposes. Correct, safe and economical connection of electrical circuits at home. Resistors, diodes and transistors and experiment in connecting basic electronic circuits with transistors. Solar system, influence of planets on living things and environment, constellations, and use of constellations. Space technology used for exploration of space, natural resources, and for communication.

Use the process of establishing knowledge and understanding, scientific process, and skills which are knowledge seeking, exploration, data investigation, and discussion to create knowledge, ideas, ability to communicate the knowledge, decision-making ability, and problem-solving ability, and get students involved in learning process by participating in various activities suitable for their learning levels, and apply the knowledge to real-life situations with responsibility, honesty, disciplines, creativity, efforts, and scientific mind.

(This content is the outline, they may have some change.)

Learning Content

EP-M.3

SC20206 Universal Science 6

Study foundation science on the topics of moment of a force, the position of center of gravity, types of simple mechanicals, static electricity, current electricity, potential difference,

resistance, Ohm's law, components of electricity circuit, and electromagnets.

Use the process of establishing knowledge and understanding, scientific process, and skills which are knowledge seeking, exploration, data investigation, and discussion to create knowledge, ideas, ability to communicate, learning methods that enabling students to relate the knowledge to the process, important skills for searching and creating the knowledge, ability to make decision, and applications in daily life with honesty, diligence, effort, and proper disciplines