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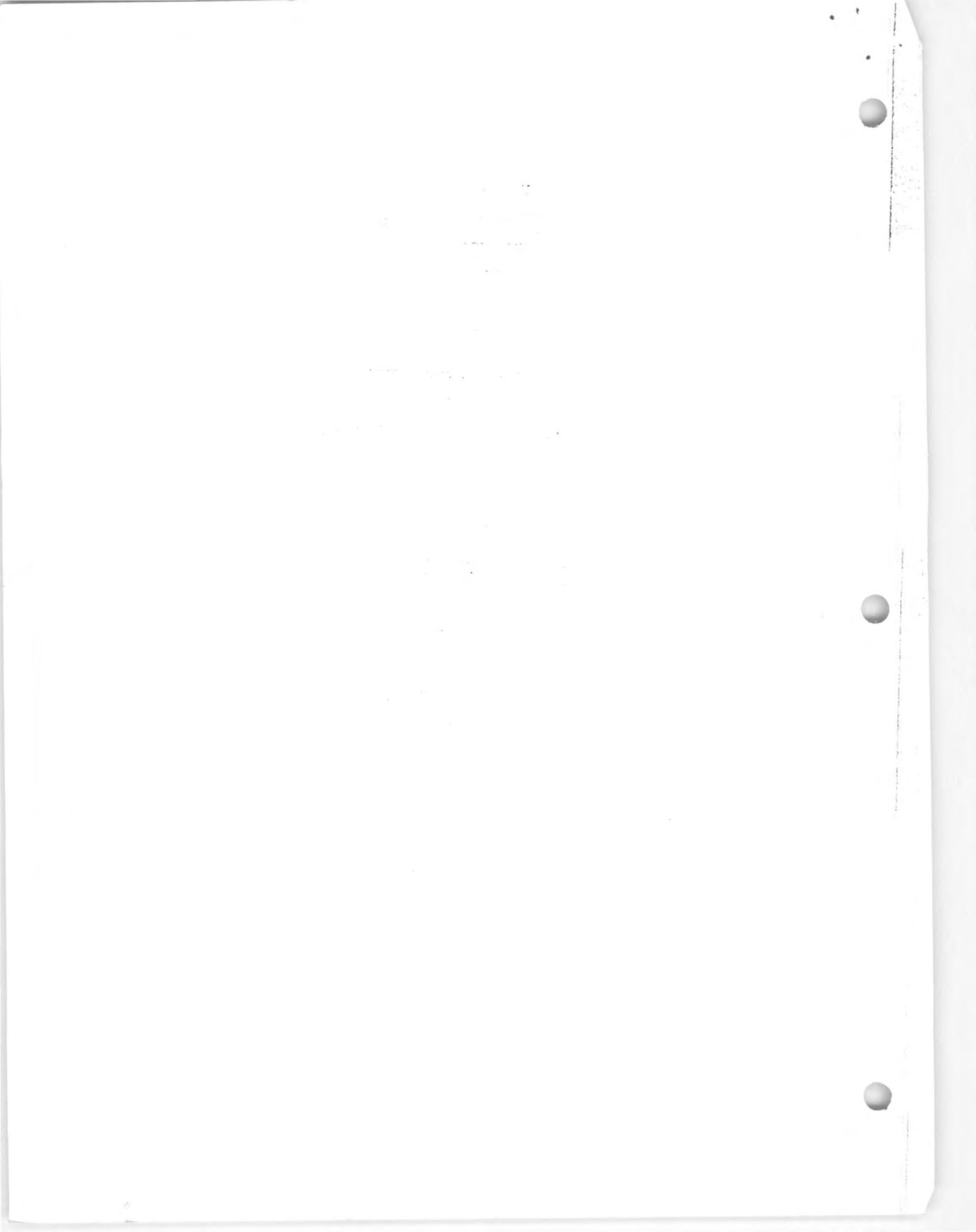
English Section

Ecole Supérieure de Pédagogie

Vientiane

Laos

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BASIC PRINCIPLES OF NATIONAL EDUCATION IN LAOS (Based on the 1962 Educational Reform Act).

- a) Education in Laos must be a Humanistic Education respecting the sacred value of man, regarding man as an end in himself and aiming at the full development of man.
- b) Education in Laos is a National Education respecting the traditional values, assuring the continuity of man with his national environment, such as family, profession, country and safeguarding the nation, its prosperity and collective advancement of the people.
- c) Education in Laos must be open-minded, respecting the scientific spirit, aiming at the development of the social and democratic spirit, and welcoming the true social values in the community.

GENERAL PRINCIPLES FOR THE PREPARATION OF A TEACHER EDUCATION CURRICULUM

Based upon the three fundamental principles of National Education, Teacher Education in Laos aims at the following objectives:

- to form the spirit and the character;
- to develop general knowledge;
- to train the students' ways of thinking and of deportment in order that they will be well prepared to face life or to continue higher education;
- to develop an understanding of the way and the methods whereby information can be transmitted and inculcated into the lives of the youth of the country.

Therefore, the Teacher Education Curriculum:

- should emphasize the formation of a well balanced man as an individual and as a social being;
- should be appropriate to the practical situation for the present time and for the future;
- should be simplified, giving the students a clear and accurate presentation of each subject;
- should incorporate the academic and practical learnings involved so that the student will have a clear understanding of principles as well as the application of principles to the pedagogical developments in Laos.

The English Section, ESP, is concerned with the professional and general education of all young people entrusted to its care - those who will continue into advanced areas of education and those who will not. This reorganized program for the English Section is within the objective of continually attempting to formulate its program to meet the needs of the youth who attend it. The nature and method of school experience, as well as its evaluation, are evolving in the ESP English Section in such a way that all may benefit.

~~Broadly stated, the goals of the English Section, ESP, are the dedication to the proposition that every youth - regardless of sex, economic status, geographic location, or ethnic background - should experience a broad and balanced education which will 1) equip him to enter an occupation suited to his abilities and offering reasonable opportunity for personal growth and social usefulness; 2) prepare him to assume the full responsibilities of Lao citizenship; 3) give him a fair chance to exercise his right to the pursuit of happiness; 4) stimulate intellectual curiosity, engender satisfaction in intellectual achievement, and cultivate the ability to think rationally, and 5) help him to develop an appreciation of the ethical values which should undergrid all life in a developing society.~~

Through the present seven year teacher training program in the English Section, ESP, and the future nine year program the aspirations of the developing nation can be achieved. At present, due to scarcity of teachers for the schools in Laos and especially the secondary schools, the student completing the seven year program of studies will be eligible to conduct instruction in the first cycle of the secondary schools. With nine plus two more years of teacher education abroad he is eligible to teach in the second cycle of the secondary schools. Through the progression of time and as the supply of teachers becomes more balanced in relationship to the needs, the national aspirations demand a longer preparatory period in order to more nearly meet the objectives of Education in Laos.

Although everyone recognizes that academic training alone will never be the sole process for gaining national objectives, all recognize that it is one of the predominant processes whereby those goals can be achieved. Through a gradual increase in human and physical processes the society can be developed to engender the principles of a modern viable society. The content of learning then assumes an equal status with the methods of learning in the development of knowledge and attitudinal changes.

#### SPECIFIC OBJECTIVES OF THE ENGLISH SECTION, ESP

1. The acquisition of skills; the tools of learning, such as reading, writing, speaking, planning, problem solving, research, and mathematical concepts.
2. The acquisition of factual knowledge in content fields such as science, history, geography.
3. The understandings of and appreciation for the contributions of others; interdependence of people, differences in cultures and ways of life.
4. Attitudes of fair play, tolerance, integrity, cooperation among individuals and peoples.

5. Civic and political responsibility; understanding of the ideals and procedures of democratic action in every day living:
  - a. Respect for the worth and dignity of individuals, at all social levels and in all modes of work;
  - b. Faith in people to solve their own problems;
  - c. Confidence in group action toward common goals as the best means to solve society's problems.
6. Ability to analyze critically and constructively; to think creatively.
7. Understanding the importance of good mental and physical health.
8. The building of values; ethical, moral, spiritual.
9. The development of professional techniques:
  - a. Understanding children and youth;
  - b. Understanding the learning process;
  - c. Understanding the proper use of teaching materials;
  - d. Understanding the techniques and procedures of teaching;
  - e. Understanding the guidance of learning and the evaluation of pupil progress with a framework of the recognition of a wide-variability among children in all aspects of their-growth.

In order to reach the objective of developing the competencies in students that they will need as teachers, experience generally are provided through a sequence of organized courses and through informal activities. Although informal activities may arise within an organized class, the term as here used means those co-curriculum (out-of-class) activities important to the development of youth. These activities include such endeavors as club work, plays and games, assistance in community enterprises, student class organization, and social activities. These experiences are just as strongly goal directed as are those class organized ones, because learning of any kind, informally or formally organized, must be goal directed.

#### THE PROCESS OF TEACHING

The outline of sequence of courses presented here, together with the course outlines attached, serve as a framework to guide teachers in their daily planning and teaching procedures. The subject contents

proposed, although useful in their own right, are vehicles through which the developmental goals of the students are attained. How the student handles these bodies of content and develops inter-relationships among them as they apply to the need to learn is the key as to whether he emerges in possession of the desirable behavioral patterns satisfying to himself and of worth to the society he serves and assists to build.

Of major importance in this process is the guidance of the teacher in organizing sequences of learning which are not just sequences in the curriculum but sequences in the student.

Teachers in any subject field will organize instruction in such ways so as to:

1. Encourage students to practice the behavior sought.
2. Encourage simultaneous practice of several behaviors.
3. Support learnings in other instructional fields.
4. Provide for the highest and lowest levels of accomplishment in the group.
5. Provide for a wide range of differences in students' interests and learning styles.
6. Provide for independent enquiry as well as group participation.

Teachers, then, will use a variety of methods and materials, geared to the fact that learning is a process of exploring and discovering. Instruction will not be organized exclusively around textbooks nor will grouping practices be organized exclusively around achievement. Although the lecture method will be employed when necessary, it will be minimized in favor of activity approaches in which all students may make contributions commensurate with their abilities and backgrounds of understanding.

#### ENGLISH SECTION SCHEDULE (courses of study)

The following chart presents the courses offered each year in the seven year program, the number of hours each week, and hence the credit offered for the course. Laboratory courses require one hour per week in the laboratory in addition to the hours shown on the schedule (example: Physical Science would meet six hours per week for five hours of scheduled credit, thus giving two hours of lecture-demonstration and four hours of laboratory work).

ENGLISH SECTION (courses and weekly hours)

First year	Second Year	Third Year	Fourth Year	Fifth Year	Sixth Year	Seventh Year
English 28	English 10	English 6	English 6	English 5		
History and Beginning of Laos 3	Soc. Sci. (Asia) 5	Soc. Sci. (N.&S. Amer.) 5	Europe, Med. Africa 5	Child and Adolescent Study 5	Methods and Materials 10	Practice Teaching (one trimester) (32)
Lao Language 2	Lao Language 3	Lao Language 3	Lao Language 3	Lao Language 3	Lao Language 3	Lao Language 3
	Gen. Sci. Hygiene 5	Nat. Sci. 4	Physical Sci. 5	French 3	French 3	French 3
	Arithmetic 3	French 3	Algebra 5	<u>Boys</u> 15	*Elected Major 15	*Elected Major 25
	Arts and Crafts 4	<u>Practical Arts Boys</u>	French 3	*Elected Major		
		Woodworking 18 weeks 4	<u>Practical Arts Boys</u>	*Elected Major 11		
		Electricity 6 weeks 4	Agriculture 4	<u>Girls</u>		
		Metal Work 6 weeks 4	Home Econ. 4	Home Econ. 4		
		Auto Mech. 6 weeks 4				
		<u>Girls</u>				
		Home Econ. 4				
33	30	30	31	31	31	31

In the fifth, sixth and seventh years electives are provided for specialization. The student is expected to elect one area of specialization from 1) Social Studies, 2) Science and Mathematics, 3) Language Arts, 4) Practical Arts. He must elect a special course in each of the areas not elected as "specialization" during these three years to extend his general education background. Twenty-five hours would be required in his area of specialization and twenty hours allowed for general education electives.

The seventh year would be developed around a three trimester program where one trimester would be used for supervised practice teaching and the other two for pursuing academic subjects.

## THE OBJECTIVES OF MATHEMATICS

### A. The meaning of mathematics:

Mathematics plays an important role in the daily lives of people, and there is hardly a trade or profession that is not dependent upon it. It is a basic part of the training of engineers, scientists, architects and draftsmen, and it is important to those who work in trades such as carpenters, tinsmiths, stone-cutters, artists, designers, plumbers, foresters and lumbermen.

Mathematics deals with the science of numbers, with measurement, and with the expression of mathematical relationships, without which economic progress would be greatly retarded.

### B. Objectives:

The purpose, therefore, in teaching mathematics is to develop in students -

1. Computational skills, with understanding as to when as well as how.
2. Mathematical understanding such as the fundamental laws and operations and the specialized language.
3. Abilities such as logical and critical thinking - to analyze a new situation or problem into its basic parts and utilize originality and logical reasoning in solving the problem.

### MATHEMATICS: Second Year

1. Fundamental operations on whole numbers: Rationale for algorithms. Practice. Relationships between operations. Checks, particularly, casting out nines and estimation to see whether answer is reasonable (later extended to fractions).
2. Number line: plotting numbers on number line. Fundamental operations on number line. Infinite extension of number line in both directions. Units of length.
3. Some notation: powers. Use of parentheses.
4. Time: Fundamental operations with hours, minutes, seconds.
5. Common fractions: Idea of fractions. Rationale for fundamental operations. Practice. Powers. Exact quotient.

6. Equal and unequal numbers: Plotting integers and common fractions on the number line to demonstrate relative size of numbers (later extended to decimal fractions and per cents). Symbols for greater than and less than.
7. Divisibility by 2, 3, 4, 5, 9, 25.
8. Prime factorization: Application in finding smallest common denominator and in reducing fractions.
9. Decimal fractions: Methods of operations. Quotient to any given approximation.
10. Per cent: Simple interest. Changing a common fraction to a per cent and vice versa. Use of formulas in solving per cent problems. Practice with other simple formulas, such as  $E = I/R$ .
11. Plane figures: Angles, degrees. Area, perimeter (circumference). Triangle, right triangle, rectangle, square, parallelogram, trapezoid, circle (parts of circle). Square centimeter, square meter.
12. Pythagorean theorem: Square root, square root to any given approximation.
13. Solid figures: Area, volume. Right rectangular prism, right prism, prism, right circular cylinder, circular cylinder, pyramid, cone, sphere.

The goal in each topic is to get the students to the place where they can handle concrete applications, so that their study of arithmetic is something other than intellectual gymnastics.

GENERAL MATHEMATICS: Third Year

1. Practice in decomposing a whole number into prime factors and in finding the greatest common divisor and least common multiple.
2. Relative numbers (positive, zero, negative). Orientation of line segments-vectors; orientation of a straight line, axis, algebraic length of a segment oriented on an axis; designation of a point on an axis (abscissa).
3. Fundamental operations of signed numbers. Extension to signed numbers of the properties concerning sums, differences, products, powers, quotients, inverse of a non-zero number. Condition for a product to be "0". Definition of negative exponents and the exponent zero. Comparison of signed numbers: inequalities and concerning the absolute value of a sum or difference. Formula of Charles for three points on an axis. Line segment defined by the abscissas of the two points which bound it: algebraic length of

- this oriented segment, the length of the segment, the abscissa of its mid-point.
4. Square root of a product, of a quotient, to the nearest unit, to any given approximation; use of a table of squares; calculation by use of a straight rule. Arithmetical square root of  $x^2$ ,  $x$  being a relative number.
  5. Solving of concrete problems with numerical data in which the unknown is represented by a letter.
  6. Measure of quantities. Ratio of two quantities of the same kind, which is equal to the quotient of the numbers which measure them. Direct or inverse proportional quantities.
  7. Addition, subtraction, multiplication of decimal numbers, finding of a quotient at a given decimal approximation. Approximated decimal values by excess or by default of a given number: absolute error, relative error.
  8. Square of an integral or rational number. The square of a fraction not reducible to an integral number can never be an integral number. Definition and extraction of the arithmetic square root of an integral or of a fraction at a given decimal approximation.

ALGEBRA: Fourth Year

1. Practice with simple examples, the process of decomposition of an integral number into elementary factors. Algebraic numbers: positive, negative, zero; inequalities; equations of the first order with one unknown; problems leading to an equation of the first order (numerical equation) with one unknown.
2. Properties of sums and of products; exponents; product and quotient of two powers of a number - use of negative and zero exponent. Problems of science formulas using algebraic numbers and letters.
3. Fundamental properties of the operations: integral powers and positive; ratios and proportions. Monomes and polynomes: reduction, multiplication, remarkable identities. Algebraic measures of a vector on an axis. Resolution and discussion of the equation and of the inequation of the first order with one unknown, two unknowns.
4. Definition and significance of the derivative of a function. Derivative of a constant: derivative in its relation to a sum, a product, a power, a quotient; sign of the derivative and direction

of increase or decrease of the derivative. Uniform straight motion: algebraic value of speed; uniformly accelerated motion: algebraic value of speed at each instant.

### OBJECTIVES OF THE SCIENCES

#### A. The meaning of science:

1. Science is a study of the environment. It includes the physical (earth, sky, energy, matter) and the biological (plants, animals, life, growth) aspects of the natural environment. It concerns itself with trying to understand the natural environment and helping man adjust to it and with trying to control it for man's advantage.
2. Science is a method of solving problems. This involves ways of identifying and defining problems, projecting hypotheses as to their explanation, gathering data to support or reject these explanations, and analyzing and describing the findings.
3. Science is an attitude. It demands objectivity and has no place for personal prejudice. It calls for open-mindedness and a willingness to change one's mind in light of evidence.

#### B. Objectives:

Instruction in the sciences, therefore, has two related purposes:

1. To give a background of facts and interpretations for understanding in the development of the country.
2. To demonstrate and give practice in the use of the scientific method of investigation and thinking important to the individual and the national growth.

### SCIENCE: Second Year

#### General Description:

Elementary general science for Lao students, emphasizing an experimental approach. The course begins with a subject of immediate interest to everyone - our bodies. This leads to a study of the air and the food needed by our bodies. The atmosphere is next studied from several points of view, leading among other things to a consideration of climate and weather. The behavior of heated air brings up questions about heat, its measurement and uses, and these in turn lead to a study of forms of energy and of simple machines for transforming energy. After an introduction to magnets and compasses, ~~current electricity is studied,~~ followed by wave motion, sound, and light. The latter topic is carried as far as a study of the compound microscope, which is then used to

observe micro-organisms, introducing a unit of study on the plant and animal kingdoms, including some principles of personal and community hygiene. The course concludes with a look beyond the earth at the moon, sun, planets, and stars.

Outline:

1. Our bodies - the circulatory and respiratory systems; the digestive system; systems, organs, tissues, and cells.
2. Foods - Carbohydrates, fats, proteins, their sources in the diet, their digestion, and their utilization in the body; vitamins, their role and sources; minerals, their sources and functions; a balanced diet.
3. Nutrition
  - a. Components of a balanced diet: caloric value; protein requirements, differences in value of animal and vegetable protein; vitamin and mineral requirements; some consequences of deficiencies: scurvy, rickets, cretinism and goiter, anemia; special requirements in childhood and in pregnancy. Examples of balanced diets and practice in planning and criticizing diets.
  - b. Cooking and storing foods: importance of conserving nutritive values; loss of vitamins by oxidation or by washing; methods of minimizing such losses.
4. Cleanliness
  - a. Cleanliness of the body. Functions of the skin, oil glands, sweat glands. Reasons for bathing; soap as a disinfectant. Hygiene of the teeth, eyes, and ears. Care of the hair. Disposal of excrement.
  - b. Cleanliness of clothing and bedding: importance of clean clothes and bedding; washing and airing.
  - c. Good housekeeping: importance of cleanliness of the house and grounds. Importance of light and air. Rats and insects: the damage they do and the dangers they bring; methods of elimination or control. Cleanliness in food preparation; importance of cooking food and boiling drinking water.
5. Microbes (including bacteria, protozoa, and viruses)
  - a. Their nature, growth, prevalence, and importance in disease, decay, and industry; demonstration of growth of colonies on a culture medium.

- b. The body's defenses against microbes: skin, lymphatic system and leucocytes, immunological reactions; artificially induced immunities by vaccines and serums; antiseptics and antibiotics.
  - c. Notes on certain diseases, referring to causative agents, mode of transmission, and methods of protecting against them: dysenteries, cholera, tuberculosis, typhoid, eye diseases, venereal diseases, smallpox, tetanus, rabies, skin infections, malaria, common cold.
6. Other Parasites
- a. External parasites: fleas, lice; how to avoid or eliminate them.
  - b. Internal parasites: flukes, tapeworms, hookworms, roundworms; mode of infection, effects on the host, prevention, treatment.
7. Alcohol, Tobacco, and Drugs
- a. Their effects on the individual.
  - b. Their social effects.
8. First Aid for Accidents
- a. Nature of first aid, general considerations, point of view, and relation to professional medical care.
  - b. First aid for wounds, broken bones, burns; shock.
9. Air - As a form of matter, its properties: occupying space, having mass, exerting pressure; a theory about air to account for these properties. Experiments with air to show that only part of it supports combustion and promotes rusting; preparation of pure oxygen and comparison of it with air; an introduction to the use of formulas for representing compounds and equations for representing chemical changes; consumption of oxygen and production of water and carbon dioxide in combustion and in respiration.
10. The Atmosphere - pressure of the atmosphere, its measurement, its role in the operation of well pumps; expansion of air when heated, rising of hot air, monsoon climate; presence and importance of water vapor in the air and of dissolved air in water; a molecular interpretation of evaporation and of dissolving; the lifting power of air for balloons and for airplanes.

11. Heat and Fire - temperature, expansion of liquids and solids when heated, temperature scales; amount of heat, the calorie, the idea of heat capacity; changes of state, latent heat; heat transfer by conduction, convection, and radiation, the Thermos bottle; the nature of fire, its control and uses, including smelting, soldering, distillation, production of charcoal.
12. Energy and Machines - kinds of energy and their interconvertibility; heat engines, voltaic cells, and other energy converters; simple machines.
13. Magnets - phenomenological study; making a compass; elementary theory of magnetism.
14. Electricity - practical work with circuits to show voltage relationships of batteries and lights in series and parallel; conductors, switches; circuit diagrams; measurement of voltage and current, Ohm's law, power in a direct-current circuit; chemical effects of the current. Electro-magnetism, electromagnet, buzzer, galvanometer, motor. Electromagnetic induction, generator, alternating current, transformer.
15. Waves and Sound - travelling and standing waves on a cord. Sound as a wave motion, pitch, loudness, quality, speed; production of sound by musical instruments.
16. Light - brightness, color, speed; action of prisms and lenses; reflection; telescope, microscope; ultraviolet light, X-rays, radio waves.
17. Life - characteristics of life common to plants and animals, cellular structure, protoplasm, reproduction, metabolism. Micro-organisms and their importance to man; the hygiene of foods and drinking water.
18. Plants and Animals - differences between plants and animals. Plants: their structure and variety, classification, photosynthesis, importance to man. Animals: their structure and variety, classification, dependence on plants.
19. Beyond the Earth - motions of the earth, day and night, the seasons; motion and phases of the moon; other planets; the sun; the stars.

NATURAL SCIENCE: Third Year

1. Anatomy and physiology of plants: the cell and the plant tissues; the function of nutrition; concepts covering the principal organs - root, stem, leaf; tropisms and growth auxins; plant food; absorption of water and minerals; nitrogen metabolism - the sources of nitrogen; nitrogen cycle; circulation of water in xylem; water evaporation; carbon metabolism - chlorophyll metabolism; solute and sap in phloem; plant respiration; anaerobic life - alcoholic fermentation; excretion of waste; plant reserves; nutrition in non-green plants.
2. The function of reproduction: reproduction in spermatophytes; angiosperms - the flower and fecundation, the fruit, the seed; gymnosperms - pine, palm. Reproduction in pteridophytes - ferns, selaginella equisetum; reproduction in mosses; reproduction in thallophyta - mushrooms and algae; asexual reproduction in nature and in the laboratory - grafting, slips, cuttings.
3. Study of bacteria: the work of Pasteur; culture media - antiseptic methods, cultivation technics. Bacteria - morphology, living habits, structure, general classification. Fermentation processes.
4. Animal anatomy and physiology: general animal biology: chemical and physical structure of protoplasm - proteins, glucids, lipids, colloid state; the animal cell - the physiological structure, principle tissues in animals. The skeleton, description and articulation. The bone-structure, chemical composition, bone formation and bone growth. The muscle system - different kinds of muscles; morphology, structure, characteristics; muscle contraction - muscle energy. The nervous system - nerve tissue; the neuron. The central nervous system - anatomy and physiology of the principal components. Spinal nerves - cerebro spinal axis, spinal chord, bulb, the brain, reflexes. The system of nutritional functions, the sympathetic and parasympathetic systems. The sense organs - the skin and its functions. The eye and vision - defects of vision. The ear and audition.
5. The function of nutrition: Digestion - the digestive apparatus, food. Digestion - diastases, results of digestion and the absorption of chyle. The blood and the blood groups, circulation. Anatomy of the circulation. Anatomy of the circulatory system - the heart and the blood vessels - physiology of circulation. Composition of lymph, function and circulation. Immunity and vaccination. Anatomy of the respiratory system; mechanical and physio-chemical reactions in respiratory processes; respiration in the tissues and in the cells. Body heat and regulation. Excretion of urine; structure and physiology of the urinary apparatus. The excretion of sweat; bile. Regulation of various

functions - nervous, hormonal; the endocrine glands, thyroids, parathyroids, spleen, adrenal glands, pituitary gland, gonads.

6. Sexual reproduction: The evolution of germinal cells into gametes; chromatic reduction; fecundation, parthenogenesis; sex determination. Laws of Mendel; chromosome theory of heredity.

PHYSICAL SCIENCE: Fourth Year

1. Astronomy (to be accompanied by naked-eye and telescopic observations as occasion permits)

The Solar System:

- a. The sun: distance, size, temperature, composition, gravitational attraction; the source of nearly all terrestrial energy.
- b. The planets: names, distance, size, revolution about the sun; their general nature and the possibility or impossibility of life on them.
- c. The earth as a planet: comparison with other planets; special conditions making life possible. Inclination of the plane of the equator to the plane of the orbit, giving rise to climatic zones and seasons.
- d. The moon: size, distance, nature; explanation of its phases and of tides; eclipses. Artificial satellites.

Stars and Galaxies:

- a. Their size, distance, number, and general nature.
- b. Their apparent daily and annual motions; recognition of a few prominent constellations and bright stars visible at this time of year.

2. Physics

Mechanics:

- a. Displacement, velocity, and force represented by vectors; vector addition; components of vectors.
- b. Kinematics: relation of distance, velocity, time, and acceleration.
- c. Forces in equilibrium. Center of gravity. Use of the balance for weighing.

- d. Forces producing acceleration; free-fall; acceleration toward the center of a curved path; orbits of satellites.
- e. Energy, work, power; simple machines: levers, wheels, inclined planes, screws; efficiency.
- f. Pressure of liquids: variation with depth; water supply systems.
- g. Pressure of gases; atmospheric pressure, the barometer.
- h. Density; buoyancy and Archimedes' principle.

Heat (the work of the 2nd year is reviewed, and each topic is expanded into more detail and especially into quantitative considerations):

- a. Temperature; expansion of solids, liquids, and gases; thermometers.
- b. Heat transfer by convection, conduction, and radiation.
- c. Heat capacity; units of heat; measurement of heat.
- d. Changes of state: vaporization, condensation, melting, freezing; latent heat; kinetic molecular theory of matter.
- e. Conversion of heat into work: heat engines; operation of the gasoline engine.

#### Magnetism and Electricity:

- a. Magnets: Review of the work of the 2nd year; notions of field strength and flux.
- b. Electricity: Review of the 2nd year's work. Heating effect of a current. Ohm's law in d.c. circuits. Internal resistance of a cell.
- c. Electromagnetic effects. Magnetic field of a current in a straight wire and in a solenoid; applications in motors, telegraph and telephone instruments, etc. Induction of an emf by change of magnetic flux; applications in d.c. and a.c. generators and in transformers. Nature of alternating current and reasons for its use.
- d. Qualitative discussion of diode and triode vacuum tubes and transistors. Introduction to basic detector and amplifier circuits in radio. Nature of radio waves.

### Optics:

- a. Nature and speed of light; comparison with heat radiation and radio waves. Rectilinear propagation and its consequences.
- b. Image formation by mirrors and lenses; positions and relative sizes of object and image. Applications in magnifying glass, camera, microscope and telescope, considered in more detail than in the 2nd year.
- c. Color: Nature of white light; formation of a spectrum by a prism; applications in chemical analysis.

### 3. Geology

#### Minerals and Rocks:

- a. Study of a few common minerals, their physical properties, chemical composition, and commercial importance. Examples: quartz, calcite, mica, rock salt, gypsum, coal, hematite, pyrite, feldspar.
- b. Origin and nature of igneous rocks. Examples: granite, basalt, obsidian.
- c. Origin and nature of sedimentary rocks. Examples: limestone, shale, sandstone. Their economic importance.
- d. Nature of metamorphism. Examples of metamorphic rocks: gneiss, schist, marble.
- e. Mineral resources of Laos, presently exploited and potentially exploitable.

- Land Forms and Geologic Processes (since the major types of land form have already been studied in earlier geography courses, the emphasis here is on the processes which shape them and which destroy them):

- a. Vulcanism and mountain building; earthquakes.
- b. Rivers; ground water; erosion by water, wind, and ice; plains and deltas.
- c. Seas and oceans; coast-lines; islands.

#### Geologic History:

- a. Basic ideas of stratigraphy; significance of fossils.

- b. An outline of earth history in terms of geologic eras; examples of past forms of life and their relation to forms now living.

Conservation of Soil, Water, Minerals, Forests, and Other Natural Resources:

- a. Mineral resources in Laos. Mining and processing operations. Conservation of mineral resources.
- b. Water and utilization of water resources, agricultural uses, power uses.
- c. Forests, reforestation procedures, lumbering and conservation. Tree culture for lumber and other products. Bamboo culture.
- d. Other resources - animal, plants, etc.

Meteorology:

- a. Cloud formations, weather station instruments and operation, (make weather station and record findings), causes of atmospheric pressure changes, temperature, humidity, wind, rain and rain cycles.
- b. Climate zones and causes of seasons.
- c. Oceans, seas, lakes, forests and their effect on climate.
- d. Climate of Laos and causes.
- e. Weather forecasting.

THE OBJECTIVES OF THE SOCIAL STUDIES

A. Meanings:

The social studies normally embrace subject matter from the fields of history, geography, political science, economics, and anthropology. However, although one may use these areas for organizational purposes, the content of the social studies also includes a process or way of learning. Through this process comes the development of meaningful social concepts and generalizations, proper social attitudes and values, and efficient social skills and abilities. The social competencies, together with understandings of the present world problems with which man struggles, are basic to good citizenship.

Although the process and subject content of the social studies deal with bodies of knowledge related to the study of the social environment, and are, therefore, called social studies, they are related to problems in other instructional fields such as science and agriculture, and they should be taught with these relationships in mind.

B. Objectives:

Through organized studies in the social studies and the use of the process of the social studies, the teacher endeavors to help each student to:

1. Become a useful citizens in local, national, and world public affairs.
2. Develop modes of responsible behavior such as concern for others, open-mindedness, creativeness, and cooperation.
3. Develop group-action skills, recognizing the value of group decision making, respect for differences of opinion, and showing high regard for the rights of minorities while abiding by majority decision.
4. Develop the ability to think critically and creatively.
5. Appreciate and respect other people, different cultures, and the contributions of others in developing ways of living.
6. Acquire and use functional information, concepts, and understandings of the basic functions of human living.

C. Organization for Teaching:

Within the framework of the subject topics, the social studies courses will emphasize the interaction of economic, social, political and geographic forces in contemporary affairs. It will also employ, where illuminating, various historical references and concepts. The student will begin with a study of his own country, widening to a study of Asia in general and then moving Eastward to the Americas, Europe, Africa, and the Middle East. Rather than rote memorization of unrelated facts, the stress of these courses will be on thinking, reasoning and analysis, with a firm foundation of relevant factual knowledge.

## HISTORY AND GEOGRAPHY OF LAOS: First Year

Teaching will be through a combination of methods including discussions, and introduction to student research and a minimum of lectures but with a large number of teaching aids.

### General aims:

1. To develop a general knowledge of the physical features of Laos. To teach an understanding of how these have affected life of the people. Location of cities, different agricultural activities, natural wealth: metals, forest products.
2. Map skills - read and make maps of various kinds.
3. History of the Lao and of Laos, effect on government, problems of the government, economy (present, past and future), Lao leaders, past and present; foreign influences, past and present; relationship of Laos to other countries - past and future.
4. Understanding of the ways of life of the many people living in Laos and their contribution to the country. Events of today and their historical background and geographical basis.

### General Development: Geography

1. What is a map? How does what we see around us look on a map? Study a topographical map and a flat map to see how they compare. Discuss different types of maps: ethnographic, agricultural, climate, rainfall, etc.
2. Study the Mekong and its tributaries; their origins, the countryside through which they flow; and their influence on the land and men that surround them. Draw these into the maps that the students are making as they are studying.
3. Study the important mountains, plateaus and passes; what kinds of people live near them, and how do these geographic features influence those men? Include these on the students' maps.
4. Study the important towns and roads; discuss why they are located where they are and include them on the maps. These maps will then be put into the notebook that the student will use for the rest of the year.

### History

5. What is history? Why do we study it? What is the best method of studying it?

Early people of Laos; the governments they lived under (Champa, Angkor); the effect those foreign cultures had on the early people; what happened to those early people.

6. The Lao people themselves; the first mention of them, their founding of the kingdom of Nan Chao, their achievements and their expansion under Khun Lo, their gradual southward migration, defeat of Nan Chao.
7. The founding of Lan Xang and the expansion under Fa Ngum; the growth of knowledge with the coming of Buddhism and writing.
8. Sam Sere Thai's expansion and organization of the kingdom, the economic growth of the country and of Buddhism, the influence of Buddhism on village life.
9. A review of Lan Xang and what life was like then including the achievements which had already been made or learned by the Lao people.
10. Years of war with Annam; the struggle for the throne and the weakening of the country which led to the war with Annam; eventual rebuilding and consolidating done by Souvanna Palang.
11. Years of peace and development of trade with Thailand; further strength of Lan Xang; Photisarath and how he strengthened Buddhism and tried to discourage the worship of the Phi; removal of the capital to Vientiane and why; war with Siam and the beginnings of the war for Chiang Mai.
12. Setthathirat battles the Burmese; alliance with Ayuthia; fortifying and beautification of Vientiane.
13. Burmese invasions of Laos; disputes over the succession to the throne; interfamilial strife which leads to the weakness of the country; the confused historical period.
14. Peace and unity under Souvanna Vongsa; agreements to define boundaries; visit of the first Europeans; war with Tran Ninh; achievements made in the arts and crafts; first official Buddhist schools established; execution of his son which led to the division of the country.
15. Capture of Vientiane by Sai Ong Hue and the Vietnamese army; separation from Luang Prabang; Chao Anou's strengthening of Vientiane and attempted bid for independence; Vientiane devastated and the kingdom ended; Tran Ninh became part of Annam; Luang Prabang became a dependence of Siam but sent homage to Annam to offset Siam's influence - and this became the excuse for the French to take over Laos as a protectorate.

16. The Ho's invaded from China; the Siamese army chased them out and stayed to influence the country; Pavie's first Mission; Siamese army leaves Luang Prabang.
17. Zakhirine became king; Pavie's 2nd and 3rd missions; French menace Bangkok; left bank under French control - but the majority of the Lao remain under Siamese control on the right bank; the 1902, 04 and 07 treaties; King Sisavang Vong became king over a smaller Laos than the old Lan Xang.
18. French fiscal control and judicial organization; maps of the country.
19. Japanese occupation and capitulation; formation of the Lao Issara; Modus Vivendi and internal autonomy; right bank territories returned to Laos.
20. Constituent Assembly, the new Constitution and independence in the French Union.
21. Pathet Lao organized; began invasions; Geneva Conference; the 1956-7 agreements between the RLG and the PL; Kong Le's coup d'etat; Geneva Agreements of 1962 and the government of the National Union.

#### GOVERNMENT

22. A study of the government of Laos - the legislature. Visit either the National Assembly or see the film "You and your legislature."
23. The executive branch: including the Prime Minister and the cabinet; the Ministry of the Interior. Who are they and what do they do?
24. The Judicial Branch - what courts are there and where are they? What kinds of laws are they and where did they come from? Pay a visit to one of the courts to see the procedures.

#### ECONOMICS

25. A general study of the economics of Laos - including a review of the resources available and the present industries. Pay a visit to one of the factories.
26. A study of the imports and exports of the country and how they affect life. Show the interdependence of countries today.

## PROBLEMS STUDY

27. Discuss various problems that face the country and try to think of possible solutions that fit in with the situation that Laos finds itself in today. Problems might include:
- a. How can we use our natural resources wisely in developing the economy.
  - b. What can be done to help the economy develop?
  - c. What industries could be developed in the country to utilize the resources that are at hand?
  - d. What can students do to help their country?
  - e. What can be done to make all the citizens of Laos feel a part of the country, regardless of ethnic group?
  - f. How can we make our school or city a better place to live, work and play?
  - g. How can we use leisure time more effectively?

This would be on a very elementary level - but would begin to develop the students' ability to think out the various parts of a problem and then try to seek out the solutions. It would prepare them for the more difficult problem solving that they will have in later classes.

## SOCIAL STUDIES: Second Year

1. Introduction to Geography:
  - a. What is geography?
  - b. How maps are used in geography, basic tools needed for using maps and globes.
  - c. Basic geographic terms and concepts.
  - d. Location of countries in Asia and Southeast Asia - capitals, major rivers, bodies of water.
2. Southeast Asia:
  - a. Land forms:
    - Islands and peninsulas
    - Location of countries in relation to each other and the world
    - Outstanding land features
    - Effect of land features on population distribution

b. Climate:

Tropical climate - explanation and definition  
Monsoon season - regional variation and causes  
Regional variations in climate  
Influence of climate on vegetation and way of life  
Interaction of land and climate

c. History:

Origins of peoples of the area  
Chinese, Indian and Moslem influences  
The role of religion  
The Khmer Kingdom - Angkor  
Reasons for the entrance of Westerners  
Positive and negative effects of colonization  
Japanese occupation and World War II  
Growth of independence movements  
Problems after independence

d. People:

Origins  
Occupations  
Population distribution  
Urban and rural areas  
Ethnic minorities in remote regions  
Differences and similarities in customs  
Major religions and animism

e. Farming and fishing:

Areas of land cultivation  
Types of farming  
Problems faced by farmers; solutions  
Major crops  
Competition from synthetic products  
Importance of fish  
Difficulties and improvements in the fishing industry  
Fishing and farming as complementary activities

f. Natural resources:

Role of foreigners in development  
Location and uses of major resources - minerals, water-power, forests  
Importance of resources for economic development  
Problems in developing resources; solutions

g. Transportation and communication:

Types of transportation  
Influence of land forms and climate on transportation  
Problems and solutions in transportation  
Types of communication  
Role in uniting a country

h. Festivals, recreation, arts:

Similarities and differences among countries  
Religious influences in art and architecture  
Origins of festivals and different types of recreation

3. Depth Study of Individual Countries:

Indonesia  
The Philippines  
Burma  
Thailand  
Malaysia  
Singapore  
Sarawak, Sabah and Brunei

Each of these countries will be studied in terms of:

- a. Geography, climate, natural resources, population patterns, occupations, transportation and communication, urban areas.
- b. Capsule history  
Current events
- c. Government, education

Note: Laos, Cambodia and Vietnam have been omitted from this list because this material is covered in the First Year Social Science course. Reference will, of necessity, be made to these countries during the year, but they will not be studied in depth in this part of the course.

4. Beyond Southeast Asia:

a. China:

Geographic features and political areas  
Climate and variations  
Major cities and rivers  
Agriculture  
Natural resources and industry  
The Chinese people - population and culture

The Communist Revolution - causes and consequences  
Communist China and Nationalist China  
China and world affairs - current events

b. Japan:

Geographic features and climate  
Major urban areas  
population patterns  
Rural areas and agriculture  
Industrial progress and resources  
The problem of raw materials  
World War II and its effects  
Social and cultural change in Japan  
Political change  
Current events in Japan

c. India:

Geographic features and variations in climate  
Growth of major urban areas  
Population - size and distribution  
Agricultural problems  
Natural resources and problems of industrialization  
British colonialization and its effects  
The social system and culture of India  
Problems of Pakistan  
Neutrality in India  
Current events

5. Conclusion:

Asia and Southeast Asia  
The Role of Asia in World Affairs  
The Future - What Direction?

SOCIAL STUDIES: Third Year

North and South America

1. Background for world affairs: the political world - cultural forces, economic forces, geo-political forces, large and small nation relationships. Maps and globes and their relationship to the world.
2. The United States of America: History, politics, geographical features, government; role in world affairs, Canada and its inter-relatedness to the United States of America; politics, history, geographical features; relationship to the commonwealth.

3. Latin America: History, politics, geographical features, governments, inter-relationships of one country to another in the area; contributions and effects on world affairs.
4. Oceans, air and space in world affairs: physical geography of the oceans, political relationships involved in the oceans; politics and relationship of the space age to world politics, social affairs and understanding of geography.

#### SOCIAL STUDIES: Fourth Year

##### Europe, Mediterranean countries and Africa

1. Europe: Western civilization and culture development in Europe; European nations and colonies, commerce, agriculture, industries. Northwest, Scandinavian countries - people, economies, geography, politics. Southern and Eastern Europe: Countries involved: people, history, economies, geography, politics. The Soviet Union: Geography, economics, politics, history, place in world affairs.
2. The Middle East: Contribution to the sociological, economic and political development of the western nations - connecting link between East and West - North and South. Geographical features, history, economics, politics and effect on world affairs.
3. Africa: History, countries involved, effect of colonialism, emergence of nations to nationalism; geography, politics, economics, history and effect on world affairs.
4. Interrelationship of the changing world: European Common Market nations and the relationship of geography, politics, economics on the world scene. Lessons to be learned from the ECM for other areas of the world (Southeast Common Market of Nations), etc.

#### GOALS OF THE PRACTICAL ARTS IN TEACHER EDUCATION

Practical arts experiences are on-going; they arise from previous experiences and contribute to further experiences. A good program can accomplish the following:

1. Deepen understanding of the content of any instructional field.
2. Provide enrichment activities and experiences which clarify thinking, extend knowledge, and supply meanings which build desired concepts. Motivate further study and experience and create new interests.
3. Create opportunity for functional use of language, science and arithmetic skills. Provide opportunities to develop physical

coordination. Provide opportunities for working together cooperatively and for social growth. Provide wholesome creative outlets. Provide for emotional growth through satisfaction found in planning and creating.

4. Develop an appreciation for the dignity of labor, the skill of the craftsman and the problems of society involved in industry.
5. Realization of importance of developing worthy free-time activities; Develop a realization of the value of planning, efficient execution of plans, evaluation of results of a well executed plan. Develop a realization of one's limitations in developing materials and working with the natural environment.

#### ARTS AND CRAFTS: Second Year

1. Use and care of common hand tools; making simple tools (drills, saws, planes, hammers, chisels, squares, augers).
2. Bamboo craft, construction of simple projects including rattan development. Simple bookbinding and metal craft.
3. Sign and poster making, using stencils, silkscreen techniques and block printing techniques. Lettering with pen and brush. Layout and simple sketch drawing. Reading and producing simple blue prints.
4. Application of paints and varnishes. Mix paints, thin and applications.
5. Simple lacquer ware construction and development; in-laying and wood carving.
6. Simple ceramic techniques. Kiln operation, turning, throwing, forming.

#### PRACTICAL ARTS (BOYS): Third Year

1. Woodworking (18 weeks):
  - a. Lao woods: names (Lao and scientific), physical qualities, growth characteristics, uses. Types of woods commercially available, Lao forestry methods, seasoning of woods - Laos, general techniques.
  - b. Shop planning and measurement: reading and understanding pictorial drawing; orthographic projection drawing, measurement systems, standard lumber measurements.

- c. Hand tools: names and uses of tools, care and maintenance, practice in usage. Simple projects utilizing each tool.
- d. Woodworking processes: methods of planing, squaring, sawing, nailing, screwing, gluing, pegging.
- e. Finishing techniques: scraping, sanding, preparation of woods, stains, fillers, sealers. Types of abrasives, tools, methods of use and proper tools to be used.
- f. Types of wood finishes: varnishes-types, methods of application, thinners, solvents, drying and durability. Shellac: types, method of application, thinners, solvents, drying and durability. Lacquers, paints and enamels.
- g. Electrical power tool use: table saw, jointer, band saw, drill press, wood lathe, portable power tools: methods of use, safety factors, why and when to use each tool as well as the how to use.

## 2. Metal Work (6 weeks):

- a. Learn to use metal worker's tools: hacksaw, drill, file, anvil, hammer, folding rule, pliers, wooden mallet, raising hammer, planishing hammer, tinners' shears, dividers, calipers, scriber.
- b. Learn to heat iron, to planish circular, square and rectangular pieces, to form sharp points; tempering and hardening of steel, bending and shaping.
- c. Silver solder, electric solder.
- d. Learn how to drill galvanized iron, planish iron and aluminum sheets. Make simple tools, planing, forming, shaping.
- e. Make simple objects using tools, jigs and techniques learned: i.e. cube form, triangular, hexagonal forms, cups, trays, oil can, metal plates, etc.

## 3. Auto Mechanics (6 weeks):

- a. Learn first echelon maintenance on a motor vehicle; types of engines and power transmission; various system: power suspension, control. Oiling, greasing, battery care, radiator care, tightening and checking of machines.
- b. Change and repair a tire, wheel bearing, oil seal, fan belt, generator, starter, check timing, adjust timing, adjust distributor and clean points and spark plugs.

- c. Stress cleanliness, periodic maintenance and records, general maintenance.
4. Electricity (4 weeks):
    - a. Learn to use electricians' tools: round pliers, flatnose pliers, cutting pliers, screw driver, electric and torch soldering irons, wire strippers.
    - b. Learn how to set an electric wire, a fuse, to cut an electric current, to connect a light, a bell, a receptacle. Solder wire joints and connections. Stress safety.
    - c. Learn principles of electric generation and magnet, magnetic fields, current flow, Ohm's law, Volta law, measurement of current flow, resistance.
    - d. Study operation of a single cylinder gasoline generator. Be able to operate and maintain.
  5. Masonry (2 weeks):
    - a. Mason tools and how to use them. Making simple mason aids.
    - b. Make concrete forms, mix and pour concrete. Lay up a small brick or block wall and a retaining wall. Finish a flat surface of poured cement and cement plastering. Lay out a corner and square it; following a construction plan.

HOME ECONOMICS (GIRLS): Third Year

1. Basic human physiology and applied personal health: emphasis on digestion, circulation, respiration, elimination. Good sanitation habits: importance of safe water supply, etc. Garbage and waste disposal: soak pit, latrine, rubbish burning, etc. Insect and rodent control: mosquito netting, screens, food covers, clean yards, food storage. Washing hands and dishes: proper use of soap or soap substitutes and hot clean water.
2. Introduction to nutrition: four food groups and water. Proper maintenance and procedures of a food's laboratory. Sanitation and simple food preparations: washing and peeling fruits and vegetables, cooking rice. Time and energy management in kitchen work: analysis of steps in preparation and cooking of foods.
3. Proper grooming and use of household machines: dressing, care of hair, nails and body. Care and use of the sewing machine: names of the parts of the machine, correct method of threading, operation, maintenance, cleaning. Simple sewing projects: apron, button holes, seam finishing, children's clothing.

AGRICULTURE (4 Hours): Fourth Year

1. Rubbish and elimination of garbage. Using garbage as fertilizer. Using garbage as animal feed, fish feed.
2. Fish propagation and pond care.
3. Garden tools and their care. Essential conditions for growing fruit trees, fertilization, spraying, harvesting. Vegetable gardening (location, watering, spraying, fertilizers, harvesting).
4. Selection of vegetable seeds for the climate and local conditions. Fruit trees, grafting, trimming, picking, harvesting.
5. Domestic animals: objectives of raising domestic animals, animal cages - their arrangement and care; care and feeding of animals; diseases and prevention; marketing.
6. Essential things to know for the raising of chickens, ducks, geese, pigeons, rabbits, hogs, cows, water buffalo.
7. Bees, beehives and methods of growing and developing hives; marketing, care. Silkworms and their propagation.
8. Individual or group projects in raising small animals and developing of vegetable gardens.

HOME ECONOMICS: Fourth Year

1. Food preparation: different methods of cooking: frying, boiling, roasting, steaming.
2. Meal planning and food buying: field trips to school kitchen and market.
3. Maternal and child care unit: female physiology, pregnancy, prenatal care, child care, handling the new baby, clothing.
4. First aid and safety in the home: ways and means of preventing common childhood and household accidents. Emergency first aid practices, bandaging, burns, cuts, artificial respiration.
5. Making clothing: blouse - construction of a pattern, cutting a blouse, selection of material, fitting, finishing. Care and repair of clothing: patching, buttons, replacing a zipper, weaving, mending. Construction of a "Sin."

## THE OBJECTIVES OF THE LANGUAGE ARTS

### Discussion

The development of skills in the language arts means the development of skills in the process of communication, without which no nation can prosper and the family of nations cannot achieve permanent peace in the world. This is not so much due to the fact that different nations speak different languages as it is to the interpretation put on what is said. Communication is the exchange among people of thoughts, beliefs, information and feelings, and it embraces all means of conveying ideas. It is a vital need of man that he be able to express himself in spoken and written forms so that others may understand him. In the process of communicating there must be those who express and those who receive these expressions, and it must be a two-way process, because unless the receiver reacts in some way to the ideas of another, communication has not taken place.

Thus, the language arts program may be divided into the study and practice of four related language processes: The expressive (outgoing) processes of speaking and writing and the receptive (incoming) processes of reading and listening. Through the interaction of all of these processes comes understanding, and understanding causes some kind of action within the individual, because communication is meaningless unless it reflects thinking.

Language is not the only means of communication because man also expresses himself through the media of music, dance, drama and the graphic arts, and he encounters in daily living numerous sounds and symbols that have meaning for him. It is the responsibility of the language arts program to develop in students the basic language skills.

### Objectives

The language arts program seeks to develop skills of communication for learning, for living with others, for becoming self-sufficient, productive citizens through assisting students to:

1. Communicate effectively in situations involving the organization, assimilation and expression of ideas.
2. Acquire the specific language skills of listening, speaking, writing, reading and studying.

3. Become acquainted with worthwhile literature; to be interested in reading it and using it to increase understanding of human behavior and spiritual values.

4. Understand the uses of mass media and to discriminate between good and bad uses of such media.

5. Become interested in other languages as an aid in understanding other peoples, and their history and literature, and as a tool for further study through these languages.

6. Acquire poise and self-confidence through using the language appropriately and correctly.

7. Make sound judgments and assume responsibility for their spoken and written language.

### Organizing for Teachers

Because of the importance of the Lao language in developing a literate nation and in welding the people together through close and better communication, and because the teachers being prepared will teach for the most part in the Lao language, it is thought that some organized Lao language experience should be provided during each year.

An effective, practical control of both spoken and written language is a necessity in the society and schools of Laos. It is justly hoped and expected that through special teacher training programs initiated in Laos that instruction in language can be upgraded. Emphasis is placed upon proper use of languages - spoken and written - as well as how to transmit this knowledge to others. The attempt is made to accent a mode of instruction which is active and concrete in the betterment of language instruction.

A deliberate effort has been made in Laos toward a gradual but systematic organization of a complete course of instruction which has been revised for all grades in the national language while care is taken to maintain and expand the teacher's facility in the acquisition of information through the use of the English or French language.

Since the language of instruction in the English section of the ESP is the English language, major emphasis during the first few years is given to this language. However, Lao and French languages come into the program and have a proportionate place in the language arts specialized training field.

## ENGLISH - FIRST YEAR

### English Pronunciation

#### Objectives

The purpose of the pronunciation course in the English Section at the National Education Center is to teach the students to correctly pronounce the sounds of English. When languages are taught, the teachers do not usually concentrate on pronunciation. Thus a student is not actually taught to pronounce the language he is learning. But we do specifically teach the difficult sounds of English.

Some English sounds are very similar to Lao sounds, e. g., /n m/. We do not bother with these sounds. But some English sounds have no equivalent in the Lao language. It is these sounds that are taught during the pronunciation hour each day, e. g., /r w g z/, many other consonants, and most of the vowels.

Often one hears somebody speaking with an "accent". Sometimes it is obvious what the mistake is: /l/ confused with /r/ by a Lao speaking English; /ph/ confused with /p/ by an American speaking Lao. All the problems that Lao speakers have with English sounds have been studied and catalogued. It is these sounds that are being taught in pronunciation.

### English Grammar

#### Objectives

Linguistic analysis reveals that all languages, spoken and written, can be broken down into basic structural patterns. These sentence patterns are the framework of grammar. It is hoped that the student will gain an understanding of the underlying differences between his own language and English and soon acquire a mastery of the patterns of the new language.

The method used to impart this skill to the students is generally referred to as the "mimicry-memorization" technique. The student is asked to imitate the teacher's reproduction of the material and to memorize the patterns so that eventually his responses will become fairly spontaneous. He is then able to construct his own sentences by substituting vocabulary words into the proper positions in the sentence patterns.

The learning process is cumulative, and proceeds from known to unknown, since the more difficult patterns are derived from simpler patterns that the student has already practiced.

## English Vocabulary

### Objectives

To acquaint the student with words and phrases which can be utilized in different daily situations, enabling him to become aware of the innumerable possibilities in which one sentence pattern or structure can be applied.

Lessons are taught with a graded series of pictures illustrating new words and situations. Each lesson is built around a "theme" within range of the student's experience and background.

The emphasis in vocabulary, as in the other parts of the program, is on the spoken rather than on the written word. The assumption is that the value of a language is most apparent to the beginner when he can communicate orally.

## Penmanship and Composition

### Objectives

The English course for the first year places primary emphasis on English as a spoken language. The student is instructed to imitate the sounds and patterns of English orally. However, as English is a written as well as a spoken language, it is beneficial for the student to learn the mechanics of writing English.

Although most Lao students have been acquainted with the Roman lettering system, their handwriting skills have shown need for improvement. By helping the student to write with simpler strokes and movements, he will be able to write more quickly and legibly.

A by-product of this course is that the material used will reinforce what the students are doing in their oral drills. The latter part of the course will deal with composing and organizing more difficult material. Each student will be able to write papers on assigned topics effectively and use his imagination through the medium of written English.

### Methods

The beginning of this course deals with the rudimentary aspects of correct handwriting. From forming small letters to writing meaningful sentences, the students are shown the mechanics of written English. With a small number of students in each class, every period will afford enough time for individual attention.

Homework will be frequently assigned to assure continuous practice. A special text workbook has been selected to aid the students with practical examples.

For composition, students will be given pictures and themes with which to write short stories. The teacher will discuss these in class (vocabulary, etc.) and the students will put their thoughts and reactions into written English.

### Language Laboratory

#### Objective

The most difficult skill to acquire in language learning is near native comprehension of the spoken language. Much listening practice is essential. Experience has shown that the sounds and rhythms reproduced by a machine are comprehended better than those produced by the human voice, especially if the student is listening to his own voice.

#### Methods

In the language laboratory the student hears the language as recorded by native speakers and repeats portions of the lessons, recording his own voice on the tape. He can then play back the tape to compare his voice with the master lesson. At the same time the teacher tunes in his own headphones to the student's tape recorder and checks pronunciation and comprehension. The laboratory in this way frees the teacher for individual attention to each student while the others can continue to work.

In the laboratory the classroom grammar and pronunciation lessons may be reinforced and new material for aural comprehension, such as stories and dialogues, may be introduced.

### ENGLISH - SECOND YEAR

Reading: The Faye L. Bumpass series of graded readings, which include the most common 2000 words of English, should be finished. The students will have begun the series in their First Year English course. When they finish the Bumpass series the students should read THE PEARL by John Steinbeck.

A PICTURE COMPOSITION BOOK, by Aphay Chanvimon. A series of picture stories with words and phrases to be used in writing short

stories. This might be expanded to two or more hours a week after the students have learned to write correct English sentences.

Writing English sentences: MODERN ENGLISH WORKBOOK, BY Thomas Lee Crowell, Jr. (This is the second book in a series of three books of increasing difficulty.) The first in the series, LEARNING AMERICAN ENGLISH, by Grant Taylor, McGraw-Hill, should have been completed in First Year English.

ORAL ENGLISH LESSONS FOR LAO SPEAKERS, Unit II. This is a book of dialogues which should be memorized to facilitate a command of spoken English.

The first four weeks of Second Year English should be devoted to a review of ENGLISH FOR LAO SPEAKERS, Vol. II, GRAMMAR, Lessons 22-32.

### ENGLISH - THIRD YEAR

#### Intensive Reading

After the completion of the Faye L. Bumpass series of graded readings the gradual building up of vocabulary in carefully controlled circumstances should be continued by using Grant Taylor's AMERICAN ENGLISH READER. This is designed to allow maximum opportunity for the absorption of useful vocabulary within the framework of controlled and limited sentences, and to emphasize the conversion of "passive" language ability (reading and listening) into its active counterpart (writing and speaking). It is designed to call close attention to vocabulary and structures with only secondary emphasis being placed on plot or ideas.

The student should not only see and hear but also repeat and write new words or the alternate forms of known words in the course of going through each story. Also, there is frequent repetition of vocabulary to facilitate absorption. Derivative forms of words such as "adventurous" from "adventure" are clearly illustrated. In addition, great emphasis has been placed on oral and written questioning which gives the teacher the maximum opportunity to stress the observation of structural detail (tenses, plural forms, articles, etc.)

After the above book has been completely mastered, taking about two years, the students should go into AMERICAN READINGS by R. M. Grindell, which is based on the same principles and format but is not simplified.

## Grammar Revision

Because of the thoroughness of the ~~first year intensive English course~~, grammar revision as such should be minimal; also, practice in all the precepts is included in the Intensive Reading Course described above. However, it would be useful for the students to be able to be referred to a book for some specific point. Therefore Book III of ENGLISH FOR TODAY should be issued to the third year.

## Composition Course

~~After the mastery of the writing of sentences in the second year the students proceed to learning the basic arts of essay writing.~~

This begins in the third year with the study of how to construct paragraphs around single main ideas. This will be done by using material from ENGLISH FOR TODAY, Book IV. After the first term, extended essay writing will be undertaken. ~~The arts of accumulating ideas, arranging progressive paragraphs, the special skill of writing introductory and concluding paragraphs, and informal letter writing, should~~ all be covered in the third year.

## ENGLISH - FOURTH YEAR

### Objectives

To stimulate thought and broaden horizons to include some of the more profound thoughts in the English language put into concrete situations; to encourage analytical and logical thought, ultimately leading to the relating of facts, drawing of inferences, and evaluation of the work by applying it to their own experience; to encourage close attention to what is being said and not what the students think is being said; to show the language which the students have learned being used well. A special course book has been designed to introduce all the major types of literature - fiction, drama, non-fiction and poetry. This book is designed to lead up to ENGLISH FOR TODAY, Book VI, LITERATURE IN ENGLISH.

The fourth year will begin with review of all third year work and lead into the topics of writing relevantly, short story writing, descriptive paragraphs and formal letter writing. At this stage much practice will be given in argumentative writing and a premium will always be placed on good organization of ideas.

1. Grammar. The grammar course in ENGLISH FOR TODAY, Book IV, should be covered. This gives the student a thorough grounding in the construction of a complex sentence in all its varieties.

2. Comprehension. The first techniques of answering fairly simple comprehensive questions should be instilled. The passages in ENGLISH FOR TODAY, Book IV, provide adequate material for this.

3. Summary or Precise Work. The students learn how to pick out the main ideas in a paragraph and then in a passage. This provides a training, along with comprehensive work, in the logical differentiation of ideas. Some of this work can be done with the passages in ENGLISH FOR TODAY but other material will have to be introduced.

4. Paragraph and Essay Writing. Students should, by the beginning of the year, be able to plan and write a coherent essay of about three or four paragraphs. Whatever the type of essay - descriptive, argumentative or narrative - a premium should be placed on the logical progression of ideas.

5. Vocabulary. The enlargement of the student's vocabulary should be encouraged through the close study of the passages in ENGLISH FOR TODAY, Book IV, and other texts. The former book only takes the level of vocabulary up slowly, so other material should be introduced.

6. Private Reading. One lesson a week should be set aside for private reading in the library. The simple formula "the more a student reads the better his English" is always true. Wide and consistent private reading must be encouraged, especially individual use of the Section library and the British and U. S. Information Service libraries.

7. Literature. A limited amount of literature should be introduced in a simplified form. Short stories form a good basis for the future, as they are manageable in size.

#### ENGLISH - FIFTH YEAR

Objectives of the course are as follows, although in a subject like English it is difficult to be really specific about materials introduced to facilitate the attaining of these objectives:

1. Grammar. Study of grammar as such should have progressed to the level of the correction of individual mistakes. In fact, some remedial revision will be necessary.

2. Comprehension. The technique of answering fairly complex and interpretative-type questions should be instilled. Materials for this can be either selected short stories or passages, or from the book FURTHER COMPREHENSION AND PRECISE PIECES by L. A. Hill and R. D. S. Fielden, published by Longmans, London.

3. Summary or Precise Work. The standard at the end of the year should have risen so that the students can tackle reasonably complex passages and be able to extract the logical procession of main ideas. The above-mentioned book is quite useful.

4. Paragraph and Essay Writing. By the end of the year, students should be well-practiced in the different types of essay - descriptive, argumentative or narrative. When the basic techniques of essay writing have been mastered, greater scope can be given to imaginative writing.

5. Vocabulary. The enlargement of vocabulary will continue through wider reading and class study of texts.

6. Private Reading. One lesson a week should be set aside for private reading in the library; wide and consistent private reading must be encouraged.

7. Literature. A look at all the major forms of English literature should be accomplished this year. This should begin with:

a. A selection of widely differing short stories should be read and studied in class.

b. One novel should be studied in detail in class.

c. Some one-act plays should be read and one full-length play studied in detail. If possible, a one-act play might be produced.

d. A look at simple poetry should be introduced towards the end of the year.

As the year progresses, a gradual increase in the introduction to interpretative and literary approaches should be achieved. Students should read the literature prescribed for the Lower Cambridge English examination for the year.

## FRENCH - THIRD AND FOURTH YEARS

Grammar, writing reports, writing letters, development of vocabulary, recitation of poetry, learning popular songs, pronunciation.

Language laboratory experiences.

### LAO LANGUAGE

The first four years are devoted to perfecting the language arts skills, and the contents during each year is similar to that of the others, each year building on the bear before. The various phases of the language arts are taught in integrated fashion with a special course devised for each. The work becomes more advanced with each year.

#### First Year:

Development of reading skill, work analysisism mastery of sight vocabulary, deriving meanings from the printed page, understanding context clues, learning the use of dictionary and other reference material. Emphasis upon grammar and sentence structure.

#### Second Year:

The improvement of writing and grammar: learning correct letter and work forms; learning proper use of punctuation; understanding sentence and paragraph structure; writing letters, written reports; understanding good composition and the writing of essays.

#### Third Year:

Understanding of good composition and the writing of essays; outlining; development of good oral expression: techniques of good discussion; extemporaneous and prepared speeches: learning to speak in front of a class with proper use of the language and with distinctness and clarity of delivery.

#### Fourth Year:

Emphasis upon advanced grammar, writing skills, speaking skills: improvement of spelling; improvement of listening skills; learning how to gather news and report by writing for school newspaper.

FOUR YEAR TERMINAL PROGRAM OF TEACHER TRAINING - ENGLISH SECTION, ESP

An examination will be given to all students in the English Section at the end of the Third Year. The results of this examination will determine the students to terminate their teacher preparatory work at the end of the Fourth Year and those to continue through the Seven Year program.

The Fourth Year terminal students will take a special program during the Fourth Year to better prepare them to work in the primary grades of the schools in Laos.

TERMINAL PROGRAM: Fourth Year

1. Theoretical Pedagogy	(2 trimesters)	10 hours
2. Practice Teaching	(1 trimester)	Full time
3. English Language	(2 trimesters)	6 hours
4. French Language	(2 trimesters)	6 hours
5. Lao Language	(2 trimesters)	3 hours
6. Agriculture or Home Economics	(2 trimesters)	4 hours
7. Youth Activities	(2 trimesters)	3 hours

THEORETICAL PEDAGOGY: 10 hours - two trimesters

1. Child growth and development: attention span, motivation, interests of children, problems of discipline, psychology of learning.
2. Lesson planning: study of teacher manuals for grades 1, 2, 3, 4; lesson plans, material development for unit of study; scheduling, evaluation, classroom organization, general administration and student records.
3. Making instructional materials. Classroom observations (a minimum of four observations with emphasis upon teacher techniques in introducing a lesson, teaching the lesson, using teaching aids, summarizing a lesson, coordination between subject areas and follow-up).

PRACTICE TEACHING: One Trimester

1. Students will observe the first week in the classroom to which he has been assigned. Daily discussions will be held with the regular classroom teacher and supervising teacher.
2. The student assumes responsibility for the class starting the second week and continues through the trimester.
3. Saturday mornings will be used by the supervising teacher to work with all student teachers to discuss and assist on problems encountered during the week. If necessary, Saturday afternoons will be utilized in the audio-visual materials center to prepare teaching materials for the following week.

ENGLISH LANGUAGE: 6 hours

FRENCH LANGUAGE: 6 hours

LAO LANGUAGE: 3 hours

AGRICULTURE: 4 hours

or  
HOME ECONOMICS 4 hours

Follow the program already outlined in the curriculum outline except for French which is to utilize the program outlined for year four and year five. Enough French should be encountered to work with grade 4 children in the schools.

YOUTH ACTIVITIES: 4 hours

1. Co-curricular activities - organizing play activities, clubs, special field trips, role of youth in community affairs.
2. Work at least one day per week with a social welfare youth group in teaching sports, crafts and games.

## EVALUATION PROCEDURES

The general aim of the teacher in the teacher-learner process is to produce change in student behavior or to reinforce already existing, desirable behavior. The teacher's aim and responsibility, in the process of evaluation, therefore, is to gather evidence as to whether desirable behavioral changes are taking place. These data then are used to assist the teacher and the pupil in the provision of better learning situations which are more conducive to the evolvment of the changes desired.

### Basic Principles in Evaluation

In seeking information concerning pupil progress, the teacher is guided by a set of principles, some of which may be stated as follows:

1. Evaluation begins with goals, since it is the central task in evaluation to appraise progress toward these expressed objectives.
2. Evaluation uses a variety of procedures because there is a variety of goals, and testing procedures toward one may not work in testing another.
3. Evaluation concerns all aspects of pupil growth, because while a student is developing sensitivity toward his social and civic responsibilities, he also is broadening his intellectual capacity and is maturing physically. Experiences in one area of growth affect other areas, either in desirable or undesirable ways.
4. Evaluation occurs continuously in the constant assessment of on-going activities in the classroom.
5. Evaluation requires the help of students, because through self-evaluation, assisted by the teacher, the students learn their strengths and weaknesses and what to do about them. This procedure also serves to strengthen the understanding of the goals sought.
6. Evaluation takes into account the wide range of differences among students, because it is not expected that all students will attain the same level of success at the same time and in all desirable traits.

### Devices and Procedures in Evaluation

The specific goals for the English Section have been expressed in terms of behaviors sought. With these goals constantly in mind, the teacher uses a variety of devices and procedures available for use in evaluation. Some of these are as follows:

1. Essay examinations, if properly prepared, require students to recall information pertinent to their writing, and it affords the opportunity for students to organize ideas, summarize data, identify the most important facts, and apply knowledge to the solution of problems.
2. Objective type forms are used when it is not the teacher's purpose to test the subjective, except as she devises the questions. These tests afford the opportunity for sampling a large range of information, and take the form of "true-flase", "multiple-choice", "matching", and "completion."
3. Observing students, both in and outside the classroom in all areas of endeavor, will reveal developing patterns of behavior, problems encountered, existence of personal un-met needs.
4. Anecdotal records often are used to record teacher observations of the students in order that the teacher may devise better ways to assist the students with whatever difficulties they experience.

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- 42 -

- 42 -

- 42 -