

Carmel Christian School Curriculum



Learning goals for the curriculum

At the very heart of the Curriculum is a clarity about what the children should learn. There are learning goals for all the subjects of the primary curriculum.

The ACE curriculum Learning Goals are vital as they:

- Help identify the knowledge, skill and understanding children should be learning;
- Help focus on the most appropriate teaching strategies;
- Help decide on the best sort of assessment to use.

Within the curriculum, there are 'Subject Learning Goals' which look at specific learning through different subjects. Key subject learning goals are assessed for each unit taught.

- The Personal Learning Goals are an integral part of the curriculum. The 8 Personal Goals underpin those individual qualities and learning dispositions that children will find essential. At CCS, the Personal Goals are at the heart of our school – not just within the ACE Curriculum. We teach the children how to live and not just how to make a living.
- The eight Personal Learning Goals are embedded within the whole of school life and children are encouraged to use the Personal Goals at home too. Opportunities to experience and practice these are built into the learning tasks within each unit of work, and during the tasks which are taught in small groups.
- Learning Review meetings are held between the class teacher and child to focus on progress and attitudes towards learning. The Personal Goals are referred to during the meetings and a focus on the children can develop the goals further are discussed.
- Progress meetings with the parents are held termly to discuss progress been made by the child and to make adjustments where needed.
- The Personal Goals are also celebrated during worship/celebration assemblies weekly and then at the end of the academic year, the Personal Goals are recognised in the Assembly. Newsletters are a way of informing parents which Personal Goal is the focus.

Our Root Plan

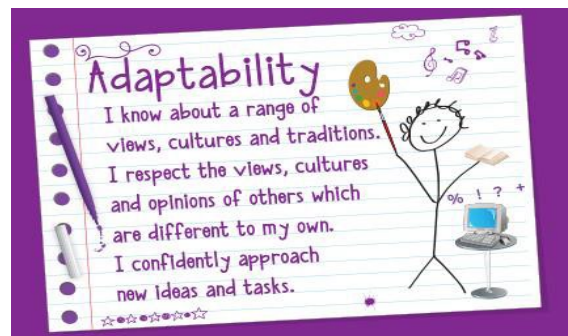
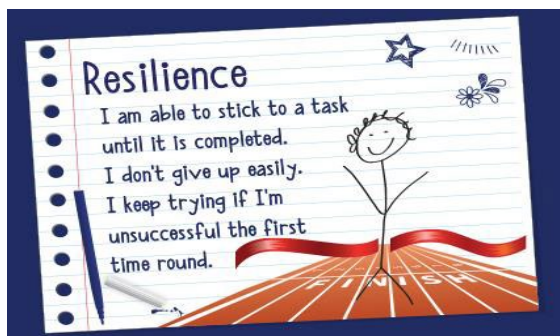
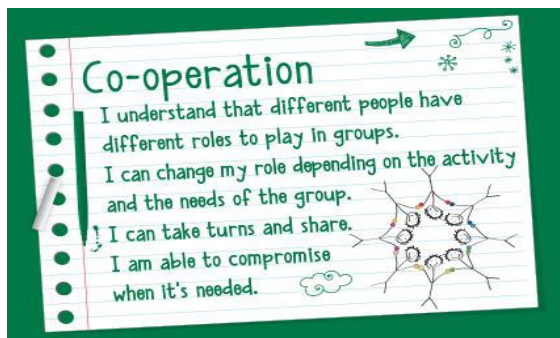
The table below shows the links between the ages of pupils, and the ACE Curriculum.

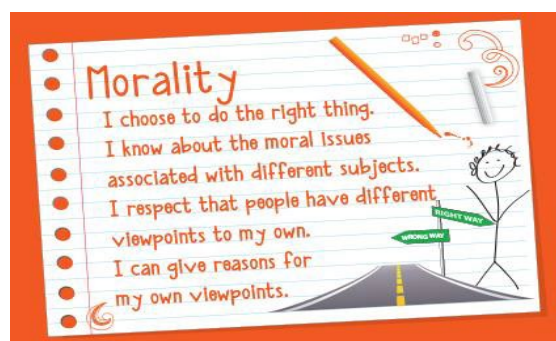
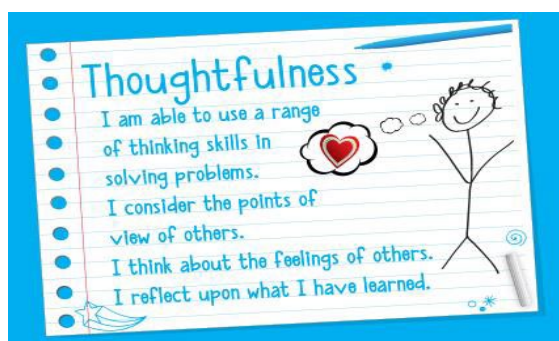
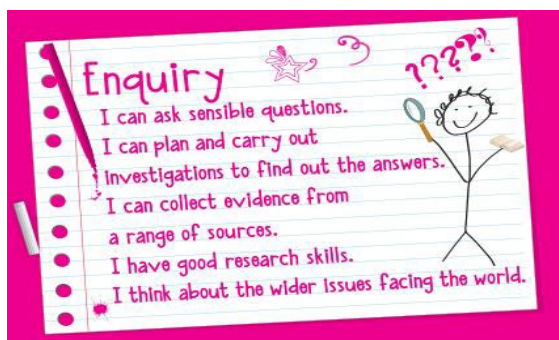
Age of Pupil	ACE Curriculum	Year Group	Unit Sequence
Up to age 5	EYFS	Reception	
Up to age 6	Milestone 1	Year 1	1001 - 1012
Up to age 7		Year 2	1013 - 1024
Up to age 8	Milestone 2	Year 3	1025 - 1035
Up to age 9		Year 4	1034 – 1048

Up to age 10	Milestone 3	Year 5	1048 - 1060
Up to age 11		Year 6	
Up to age 12	Milestone 4	Year 7	1061 - 1072
Up to age 13		Year 8	1073 - 1084

ACE Curriculum subjects
English
Math
Science
History
Geography
Literature; Reading; Word Building
Computing
PSHE
Citizenship
PE
DT
Art
Music
Chess; Photography; Dance

Personal Learning Goals





Types of learning: knowledge, skills and understanding

The Learning Goals are the foundation on which the curriculum is built. They define what children might be expected to know, what they might be able to do and the understandings they might develop in their academic and personal. At CCS, we believe that differentiating between knowledge, skills and understanding is crucial to the development of children's learning. We also believe that knowledge, skills and understanding have their own distinct characteristics that impact on how each is planned for, learned, taught, assessed and reported on.

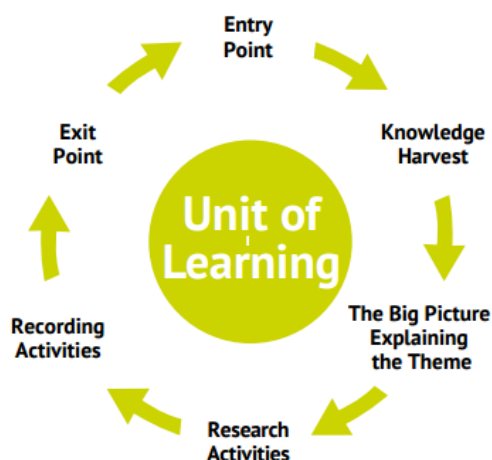
1. Knowledge: refers to factual information. Knowledge is relatively straightforward to teach and assess (through quizzes, tests, multiple choice, etc.), even if it is not always that easy to recall. You can ask your children to research the knowledge they have to learn but you could also tell them the knowledge they need to know. Knowledge is continually changing and expanding – this is a challenge for schools that have to choose what knowledge children should know and learn in a restricted period of time.

2. Skills: refer to things children are able to do. Skills have to be learned practically and need time to be practiced. The good news about skills is the more you practice, the better you get at them!

3. Understanding: refers to the development or 'grasping' of conceptual ideas, the 'lightbulb' moment that we all strive for. Understanding is always developing. None of us ever 'gets there', so you can't teach or control understanding, but what the PACE do allow you to do is provide a whole range of different experiences through which children's understandings can deepen.

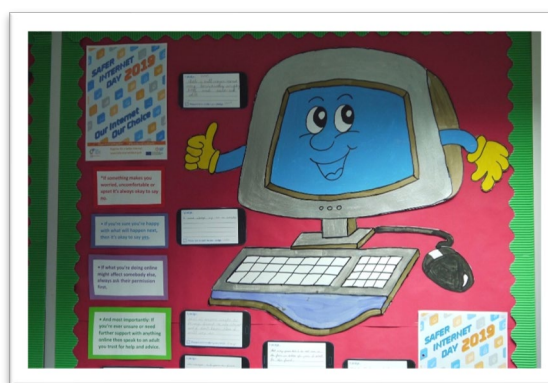
4. Character: What makes a person successful is his character. Sixty different character traits of Jesus have been identified in the Bible which is part of the learning process. Character has to be taught and the curriculum is designed to assist the teacher to teach these character traits so it can become a lifestyle for each child.

The process of learning



The Entry Point is an exciting and memorable event that launches every PACE unit. The aim of the entry point is to get children thinking about, and engaged with, the learning that's to follow – ‘my goal’

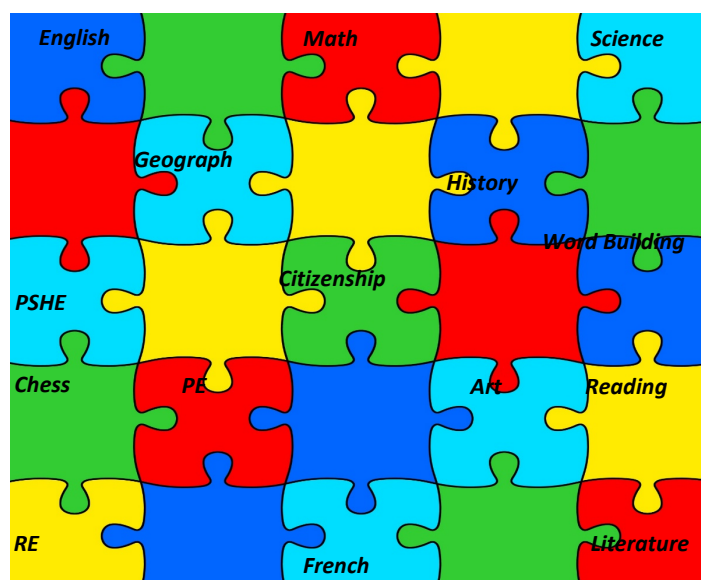
The Knowledge Harvest provides teachers with the chance to find out what children already know about the theme and helps them to personalise the unit by finding out what children want to learn in order to tailor their lessons accordingly. It reinforces connections between existing and new learning and allows children to take ownership of their learning.



Explaining the Theme provides teachers, children and parents with the big picture of the unit before it launches so that connections

between subjects and concepts can be facilitated.

The Big Picture provides teachers with subject-based background information and research which links to the learning contained within each unit.



Research Activities: Each subject area has planned research activities which are designed to make sure that children can access information in a way that is appropriate to them, drawing on a wide range of learning approaches such as role play, digital learning, library research and so on.

Recording Activities: The recording activities enable children to process and present the information they have gained in their research activities through a range of approaches which tap into their different strengths and interests, and enable them to get better at other ways of recording. This might involve learning through digital recording, drama, musical compositions, maps, graphs, experiments, art work and so on.

Exit Point: the exit point completes every unit. It helps children to draw on their prior learning, reminding them of all the connections between subjects that they have made, and creates time and opportunities to build their understanding of their learning, and to reflect on this individually and as a group. The exit point is an excellent chance to engage with parents, guardians and carers and involve them

Learning beyond the classroom

Planning with the Curriculum Units

The ACE units (PACES) of learning are detailed and rigorous, however at CCS we believe that adapting those plans is an essential process to ensure that the learning is purposeful, and builds on the interests of our children and the strengths of our context. Teachers plan their lessons units across the different mileposts using the online Route Planner tool.

At CCS, we firmly believe that learning can take place anywhere! During the initial planning stages of a unit, staff identify opportunities for learning outside the classroom – whether this be a school trip, a visitor to school or a walk around the local area.

Assessment and the Curriculum

The curriculum has been designed to help teachers help children learn effectively and with enjoyment. But it isn't enough to assume that children are learning, we need some way of measuring their gains in learning. CCS uses the ACE Curriculum recommended assessment for

learning programme, 'Classroom Monitor' supports teachers in assessing, and children in self-assessing, their progress with key skills from the Learning Goals.

■ Teachers' rubrics: these are essentially, success criteria. They help teachers observe and record the level at which children are learning in terms of 'beginning', 'developing' and 'mastering' (across the different mileposts).

■ Children's rubrics: child-friendly versions of the above, in age appropriate language, for children to use when self and peer-assessing.

■ Learning advice: specific learning activities and advice, which can be used in class and shared with parents, that helps children to move from one stage to the next with their learning. This forms the final part of the feedback loop – feeding forwards to next steps and improvements in learning.

Our Curriculum Implement

LEVEL: ABCs

The ABCs Learning to Read programme is an excellent thirteen-week phonics programme for pupils who test 80 percent or higher on the Reading Readiness Test. It is a well-organised programme that uses animal stories to reinforce all the alphabet sounds. It also reviews alphabet sequencing and word relationships. Scripture passages support the phonics lessons, and stories illustrate character traits. This programme also utilises various activities to help develop physical skills, small motor skills, and visual discrimination. ABCs with Ace and Christi provides pupils with all the tools needed to be able to move into the individualised instruction of the first-level A.C.E. PACE curriculum. While completing the programme, pupils are also introduced to numbers and simple Math skills.

The 12-15-week programme includes:

- Twelve PACEs each of Reading, Word Building, and Animal Science, and Math PACEs, all of which prepare the pupil for the self-instructional PACE programme.
- A Progress Report for objectively reporting the child's progress.
- A Reading Readiness Pre-Test and a Post Test to evaluate reading ability.
- A two-volume instructional manual with detailed easy-to-follow plans for each day - total of 900 pages.
- Large Alphabet Sound Cards for display and review.
- Tactile-Kinetic Cards to impact the shapes of letters in your child's mind.
- An Audio Song CD for reinforcement of 36 sounds and songs.
- Small Alphabet Sound Cards for individual review by pupils.

After completing the Post Test with a pass score, the pupil immediately begins English, Social Studies, Science and Math PACEs. Completing through PACE 1012 in each of these subjects concludes the average pupil's grade 1 experience.

LEVEL 1-3: FOUNDATION PHASE

In this phase learning materials cover Mathematics, English Language and Life Skills, which include Social Studies, Science, Creative Arts, Physical Education and Health.

MATHEMATICS (PACEs1001–1012)

The pupil:

- Reviews and learns numbers in symbol, name, and number words from zero to ten. Counts and writes from zero to one hundred.
- Solves simple addition, subtraction, and word problems.
- Learns to tell time.
- Learns about money.
- Learns how to solve money problems.
- Reviews length comparison: longer and shorter.
- Reviews recognition of basic shapes.
- Reviews order of numbers: before, between, after; and contrasting numbers—same, not the same, more than, and less than.
- Learns days of the week, and months of the year.
- Learns measurement: longer/shorter; lighter/heavier; faster/slower; more/less.

ENGLISH (PACEs 1001–1012)

The pupil:

- Reviews consonant and vowel sounds.
- Is introduced to reading and writing of word families and sentences.
- Studies blends, diphthongs, ending sounds, and suffixes.
- Develops reading comprehension skills.
- Copies sentences using proper capitalization and punctuation.

WORD BUILDING (PACEs 1001-1012)

The pupil:

- Recognizes long and short vowels and letter sounds.
- Studies auditory and visual discrimination—consonant letters and the sounds of C and G.
- Reads words and sentences.
- Learns important concepts—matching like and different shapes, colour usage, rhyming pictures, directional words, and story sequence.
- Practices letter formation—writing words and sentences and alphabet sequence.
- Learns to follow instructions—using colour and spatial terms.
- Is encouraged in character development through examples given in each

SCIENCE (PACEs 1001-1012)

The pupil:

- Pronounces and learns new vocabulary words as they are defined and used in the text.
- Discovers wisdom as he learns about creation of the Earth and Earth's movements and the four seasons.
- Learns about the design and care of the human eye and ear; high, low, soft, and loud sounds.
- Learns about the importance of personal health—clean teeth and hands.
- Gains a respect for people as he learns about wisdom, goodness, kindness, and that all things belong to God.
- Reads stories and answers questions about creation.
- Continues to build eye-hand coordination by drawing shapes, irregular shapes, and directional lines

SOCIAL STUDIES (PACEs 1001-1012)

The pupil:

- Builds reading skills.
- Discerns objects with wheels, on the water, and in the sky.
- Begins globe and map study and reads about Pilgrims and the United Kingdom.
- Develops respect for the law, obedience to rules and laws, and good study habits.
- Learns to care for things, that hard work is a virtue, how to share with others, and ownership.
- Learns about people diversity and their work and homes and clothing of different climates.
- Reviews stories about Adam, Eve, Cain, Abel, and Noah;
- Learns how to give to charities and the poor; giving to missionaries; and how to pray for leaders and all people.
- Is encouraged in character development through examples given in each PACE

LEVEL 2 MATHEMATICS (PACEs 1013–1024)

The pupil:

- Continues learning to add and subtract, to carry and borrow 2-and 3-digit numbers, solves word problems, and works addition and subtraction facts vertically and horizontally.
- Completes timed drills and oral drills.
- Learns to relate multiplication to addition.
- Counts and writes by twos, fives, and tens; counts and writes from 1–500; writes numbers in place values of 1s, 10s, and 100s; and writes numbers on a calendar.
- Recognizes and writes number words.
- Learns to identify odd and even numbers.
- Reviews telling time.
- Reviews numbers that are greater than and less than.
- Learns how to solve money problems.
- Learns about measurement: meter, kilogram, litre.
- Learns measurement in informal units: hands, blocks, cups.
- Recognizes and constructs geometric shapes.

ENGLISH (PACEs 1013–1024)

The pupil:

- Reviews phonics—identifies vowels, consonants, blends, diphthongs, and suffixes.
- Learns punctuation—telling and asking sentences, capitalization, quotation marks, and apostrophes.
- Learns suffixes—s, -ed, -ing, and -er.
- Is introduced to compound words.
- Studies confusing words—no/any, can/may, is/are, does/do, to/too/two.
- Discovers parts of speech—nouns, prepositions, verbs, and adverb concepts.
- Is introduced to word order and concepts—sequences, same/opposite, homonyms, rhyming words, and poetry.
- Writes friendly letters.
- Practices writing sentences.
- Reads paragraphs for comprehension.
- Is encouraged in character development through examples given in each

WORD BUILDING (PACEs 1013-1024)

- The pupil:

- Practices printing letters, words, and sentences.
- Reads and gains a greater understanding of vowels and consonants.
- Learns phonics rules—double and triple vowel sounds, blends, endings, digraphs, and diphthongs.
- Is encouraged in character development through examples given in each PACE.
- Expands vocabulary with new spelling words in each PACE.
- Word Builder, a vocabulary software programme for Levels 2–8, is also used for additional reinforcement and drill.

SCIENCE (PACEs 1013-1024)

- The pupil:

- Expands his knowledge of the days of Creation, the first man and woman.
- Learns about animals, the seasons and weather, heavenly bodies, plains, flat lands, valleys, hills, and mountains.
- Enlarges his vocabulary with the introduction of new words.
- Builds reading comprehension.
- Continues to build eye-hand coordination by drawing shapes, irregular shapes, and directional lines.
- Learns how God made every person unique through the introduction of fingerprints, etc.
- Learns about the five senses.
- Is encouraged in character development through examples given in each PACE.

SOCIAL STUDIES (PACEs 1013-1024)

- The pupil:

- Learns about travel—maps, signs, the compass, camping, and directions.
- Learns about communities, farms and ranches, fruits and orchards.
- Builds reading comprehension and learns new vocabulary in every PACE.
- Uses visual discrimination to draw similar shapes.
- Surveys the mission field of Spain, and observes a rally.
- Learning About Provinces
- Learning About Freedom
- Learning About Pledges.
- Is encouraged in character development through examples given in each PACE.

LEVEL 3

MATHEMATICS (PACEs 1025–1036)

The pupil:

- Adds 3-digit to 3-digit numbers, subtracts 3-digit from 3-digit numbers, and solves word problems with carrying and borrowing.
- Learns multiplication facts 1–9 with timed drills and oral drills.
- Reviews numbers in place values of 1s, 10s, and 100s; writes numbers to count on a number line; reviews and writes on charts; and learns to use picture tables to determine height.
- Reviews telling time and learns half-hour, quarter-hour, and 5-minute increments.

- Learns Roman numerals.
- Reviews measurements: m, cm, kg, g, l and ml.
- Writes ordinals first through tenth.
- Learns to divide objects or sets into halves.
- Learns about all coins and notes.
- Learns how to solve money problems.
- Math Builder, a computerized mathematic flashcard program, is also used for additional reinforcement and drill.

ENGLISH (PACEs 1025–1036)

The pupil:

- Alphabetizes words.
- Learns about sentence types—declarative, interrogative, and exclamatory sentences.
- Learns about basic punctuation marks.
- Practices cursive writing—lowercase and capital letters.
- Learns parts of speech—nouns (common, proper, singular, and plural), pronouns, adjectives, verbs (action and state-of-being), and prepositions.
- Uses compound words.
- Understands word concepts—antonyms, synonyms, homonyms, confusing words, and confusing word pairs (a/an, learn/teach, sit/set, let/leave, their/there, its/it's, and can/may).
- Writes letters and addresses envelopes.
- Is encouraged in character development through examples given in each PACE.
- Learns about rhyming words and poems.

LITERATURE & CREATIVE WRITING (PACEs 1013-1024)

The pupil:

- Finishes stories and answers questions following one-page stories; chooses story endings.
- Recognizes and writes descriptive sentences.
- Sharpens reading and comprehension skills.
- Writes a personal narrative.
- Practices handwriting and speed reading.
- Relates to character-building objectives in each PACE.

WORD BUILDING (PACEs 1025-1036)

The pupil:

- Practices printing letters, words, and sentences.
- Reads and gains a greater understanding of vowels and consonants.
- Learns phonics rules—double and triple vowel sounds, blends, endings, digraphs, and diphthongs.
- Is encouraged in character development through examples given in each PACE.
- Expands vocabulary with new spelling words in each PACE.
- Word Builder, a vocabulary software programme for Levels 2–8, is also used for additional reinforcement and drill.

SCIENCE (PACEs 1025-1036)

The pupil:

- Learns about the solar system.
- Learns about the concept and measurement of time.
- Learns about animal and plant life cycles.
- Recalls and continues the study of God's Creation.
- Studies man's freedom to choose to love and obey God.
- Read stories using new vocabulary and visual discrimination.
- Looks at geological changes- jungles and hot lands, tundra and cold lands, volcanoes and earthquakes.
- Is encouraged in character development through examples given in each

PACE.SOCIAL STUDIES (PACEs 1025-1036)

The pupil:

- Learning About Provinces.
- Learns about Laws of the country.
- Is introduced to different forms of communication—telephone, email, languages, sign language,
- Braille, microphones, CD recordings, the printing press, and prayer.
- Learns about conservation of water and land use and the natural resources water and gas.
- Gains interest in geography—continents on the map and globe, Spain, and Israel.
- Distinguishes between different types of communities, businesses, and agriculture—farms and products.
- Studies God's Laws (Ten Commandments) and to do good and do right.
- Continues to learn new vocabulary words in each PACE.
- Is encouraged in character development through examples given in each PACE

LEVEL 4-6:

The Intermediate phase include Mathematics, English Language, First Additional Language, Social Studies, Science and Life Skills.

MATHEMATICS (PACEs 1037–1048)

The pupil:

- Learns additional multiplication facts; 10 and 11 times tables, and simple division skills; identifies and uses relationships between operations, such as division as the inverse of multiplication, to solve problems.
- Matches word sentences with number sentences and reviews number words and symbols.
- Rounds numbers on a number line to the nearest 5 and 10.
- Reviews and learns Roman numerals 1–50 and word problems converting to numerals.
- Learns to borrow and subtract 3-digits minus 3-digits, checks by addition, and borrows and subtracts from 10s, 100s, and 1000s.
- Learns to use the terms addend, sum, minuend, subtrahend, difference, multiplier, multiplicand, and product to match correct numbers in problems.
- Learns fractions through shaded parts of a circle, learns equivalency in fractions, and adds and subtracts like fractions.
- Learns to add and carry to 10s, 100s, and 1000s—4-digits and 4-digits.

- Reviews and demonstrates understanding of basic money concepts and skills.
- Learns metric units of length, mass, volume.
- Solves problems regarding length, mass, volume.
- Collects and organizes data.
- Represents data on pictographs and bar graphs.

ENGLISH (PACEs 1037–1048)

The pupil:

- Continues cursive writing.
- Practices alphabetizing and increases his comprehension of vowels and consonants.
- Reviews and expands knowledge of the parts of speech—nouns (common, proper, singular, plural, and subject nouns), verbs (action, state-of-being, and helping), pronouns, adjectives, adverbs, prepositions, conjunctions, and interjections.
- Develops paragraph writing skills and reviews the types of sentences—declarative, interrogative, imperative, and exclamatory.
- Identifies and practices using ending punctuation.
- Learns the use of a colon and an apostrophe in contractions and possessives.
- Begins to use the dictionary.
- Learns proper letter writing form.
- Reviews and expands word concepts (antonyms, synonyms, homonyms), confusing words, word pairs, and contractions.
- Is encouraged in character development through examples given in each PACE.

LITERATURE & CREATIVE WRITING (PACEs 1025-1036)

The pupil:

- Puts sentences, instructions, and stories in order; learns sequencing and placement.
- Uses action and descriptive words and learns about limericks.
- Expands imagination.
- Discovers heroes and enemies in a story.
- Creates stories from pictures.
- Writes story titles and reports.
- Learns about characters, plot, and setting; employs comparison; shows comprehension and order in a story.
- Continues to practice speed-reading and handwriting skills.
- Locates places on maps.
- Uses Scripture to learn how to respond to difficult situations that might arise.
- Considers character-building examples placed throughout each PACE in the course.

WORD BUILDING (PACEs 1037-1048)

The pupil:

- Develops vocabulary by reviewing consonants and vowels, beginning and ending sounds, doubled consonants, suffixes, and prefixes.
- Is introduced to syllables, contractions, and more compound words.
- Learns to form plurals with es and changes to i and f to v.
- Is encouraged in character development through examples given in each PACE.

SCIENCE (PACEs 1037-1048)

The pupil:

- Learns about the water cycle—condensation, evaporation, precipitation, cloud shapes, and the characteristics of air and water.
- Studies living and non-living matter, gravity, minerals and their uses, plants' needs, and plant conservatories.
- Identifies simple machines.
- Learns about respiration and blood circulation, the diaphragm and heart, digestion and saliva.
- Focuses on good hygiene and teeth; bacteria, viruses, and fungi; and the design and function of the skin.
- Is introduced to early men of science.
- Studies rockets and airplane flight.
- Understands the need for exercise, sleep, and proper nutrition for the human body.
- Is encouraged in character development through examples given in each PACE.
- Continues to add new vocabulary words.

SOCIAL STUDIES (PACEs 1037-1048)

The pupil:

- Learns how the earth moves,
- kinds of lands and water on the earth.
- Learns about maps and globes, directions and distance, latitude and longitude, transportation.
- Learns about world history, John Wycliffe.
- Studies various missionaries, David Brainerd, Colonial life, Indians of New England.
- Studies William Carey, India.
- Studies George Mueller and his orphanage, England.
- Studies David Livingstone, Africa.
- Studies Hudson Taylor, China.●
- Studies people and places, landmarks, people and their needs, San Hunter-Gatherers,
- Learns about different types of farms and farming, food production, resources and services, access to food and water, environment.
- Learns about local history, conducts oral history and interviews, families and communities, democracy and leadership.

LEVEL 5

MATHEMATICS (PACEs 1049–1060)

The pupil:

- Defines and identifies new math terms: quotient, dividend, numerator, and denominator.
- Uses addition, subtraction, division, and multiplication with fractions; identifies proper and improper fractions; and reduces fractions to lowest terms.
- Factors numbers from least to greatest, and finds the Greatest Common Factor (GCF) and the Least Common Denominator (LCD) of fractions.
- Recognizes the place value of each digit in numbers up to thousands.
- Learns to represent and compare whole numbers and decimals.
- Learns the commutative properties of addition and multiplication and estimation.
- Compares numbers, sentences, words, decimals, and fractions using > and < symbols.
- Defines and identifies prime numbers.
- References charts, pictographs, and line graphs.
- Writes Roman numerals 1–399.

- Learns basic geometry—points, lines, rays, and angles; identifies geometric shapes; identifies similar and congruent figures; and finds the volume, perimeter, and area of figures.
- Learns about probabilities and ratios.
- Processes simple unit conversions such as centimetres to meters within a system of measurement.
- Learns about temperature.

ENGLISH (PACEs 1049–1060)

The pupil:

- Expands his knowledge of nouns and verbs and learns the agreement of subjects and verbs.
- Learns to diagram the subject, action verb, state-of-being verb, predicate noun, adjectives, adverbs, and direct object of a sentence.
- Identifies and correctly uses verbs that are often misused, modifiers, and pronouns.
- Changes a given list of verbs from singular to plural.
- Reviews pronouns and identifies the kinds (personal, interrogative, demonstrative, and indefinite) and cases (subjective, objective, and possessive).
- Recognizes simple and complete subjects and predicates.
- Is introduced to predicate adjectives and comparative degrees of adverbs.
- Recognizes complete sentences and fragments, learns four sentence patterns, and develops paragraphs.
- Learns and practices punctuation rules including quotation marks, underlining titles, etc.
- Increases word concepts (antonyms, synonyms, homonyms) and learns about heteronyms.
- Writes business and friendly letters.
- Demonstrates a mastery of proper capitalization.
- Is encouraged in character development through examples given in each PACE.

LITERATURE & CREATIVE WRITING (PACEs 1037-1048)

The pupil:

- Uses imagination, deductive reasoning, and comparison and contrast.
- Learns to draw conclusions and find the main idea of a paragraph.
- Makes predictions about the end of a story and discerns between “alike” and “different.”
- Increases dictionary skills, learns about biographies, autobiographies, and libraries.
- Finds valuable lessons in character-building stories.
- Writes a letter to a missionary, an invitation, an anecdote, a sketch, and a story ending.

WORD BUILDING (PACEs 1049-1060)

The pupil:

- Identifies parts of speech—nouns, verbs, and present and past tenses.
- Recognizes syllable divisions and accents.
- Evaluates root words, prefixes, and suffixes.
- Forms plurals by changing the endings.
- Is encouraged in character development through examples given in each PACE.

SCIENCE (PACEs 1049-1060)

The pupil:

- Explores living and non-living matter and active, dormant, and extinct volcanoes.
- Learns about energy—work, force, kinetic, potential, and radiant energy.
- Studies oceanography, astronomy, comets, and the aurora borealis and aurora Australis.
- Studies the outer, inner, and middle ear; hearing difficulties; and vibration, pitch, and frequency of sounds.
- Studies molecular and atomic theories; friction, heat, and gravity; and expansion and contraction.
- Views dinosaurs and fossils.
- Learns the relationship between botany, meteorology, and zoology.
- Discovers the Biblical view to scientific matters.
- Learns new vocabulary words in each PACE.
- Is encouraged in character development through examples given in each PACE.

SOCIAL STUDIES (PACEs 1049-1060)

The pupil:

- Learns how to be a wise steward.
- Studies North American Indians, John Eliot.
- Learns about early American history: time line, early explorers,
- Learns about line of Demarcation, Sovereignty of God in history, England's influence, what God wants in government, early settlement in the New World.
- Studies physical structure: physical features and human activity, resources: natural and human resources; water and energy, mining, manufacturing and recycling.
- Learns about climate and maps, temperature, rainfall, vegetation, human activity, map work, sketches and grids, scale.
- Learns about population and health, density and distribution, population problems, health and diseases.
- Learns about provincial heritage, government and democracy, provincial traditions and government, elections and the Constitution, democracy and leadership.
- Studies the Industrial Revolution: the domestic system, the rise of factories, employers and employees, changes in the textile industry, mass production, needs of industry.
- The Industrial Revolution.
- American history (1901-1935): Theodore Roosevelt, The Monroe Doctrine, The Spanish-American War, World War 1, The League of Nations, The Treaty of Versailles, America after the war.
- American history 1929-present: world depression, dictators conquer neighbours, the Bolshevik Revolution.
- World War II. Great leaders of the Allies. Allied Powers win the War.
- The United Nations. The Korean War. The Vietnam War.

LEVEL 6 MATHEMATICS (PACEs 1061–1072)

The pupil:

- Learns the properties of addition and multiplication—commutative, associative, identity, and zero.
- Works with exponents and is introduced to expanded notation using exponents.
- Rounds and estimates large numbers and works mental estimation problems.
- Learns factoring rules (divisibility rules); identifies prime numbers and composite numbers.
- Reviews fractions and fraction terms; adds, subtracts, multiplies, and divides fractions; changes fractions to decimals using long division; and converts fractions to percentages.

- Reviews decimals; adds, subtracts, multiplies, and divides decimals; defines repeating and terminating decimals; and changes decimals to percentages.
- Relates percentages and decimals to fractions, learns common percentages, changes percentages to decimals, and finds percentages of a number.
- Is introduced to integers.
- Learns order of operation.
- Learns the terms equations and inequalities when comparing number sentences (<, >, =).
- Defines a variable and solves equations (one variable) using inverse operations.
- Works with ratios and proportions, and uses proportions to solve problems.
- Finds the probability of an event, and expresses probability as a ratio.
- Uses critical thinking skills to solve word problems.
- Defines and interprets circle, line, bar, and double-line graphs.
- Builds geometric knowledge; measures angles; finds the perimeter, area, and volume; and defines the parts of a circle.
- Rounds money to find estimated costs and solves money problems.
- Learns about additional conversions of units and volume.

ENGLISH (PACEs 1061–1072)

The pupil:

- Increases word concepts—antonyms, synonyms, homonyms, and heteronyms.
- Reviews nouns—common, proper, compound, singular, plural, possessive; and learns about collective nouns and nouns in apposition.
- Expands verb knowledge (action, linking, state-of-being, regular and irregular) to include verb tenses (present, past, future), and conjugation of all six tenses; verb agreement; and the review of troublesome verbs (learn/teach, sit/set, lay/lie, rise/raise).
- Identifies pronouns—personal (subjective and possessive), interrogative, demonstrative, relative, reflexive, and indefinite.
- Builds upon parts of speech—comparisons using adjectives and adverbs, prepositions and phrases, coordinating conjunctions, interjections, and diagramming.
- Strengthens sentence writing by using sentence patterns, interesting words, and exact nouns; recognizes subject and verb agreement; and types of clauses.
- Practices writing paragraphs and begins outlining and research.
- Uses simple, compound, and compound-complex sentences with effective coordination and subordination of ideas to express complete thoughts.
- Learns to identify types of sentence patterns and clauses.
- Learns about punctuation and capitalization.
- Learns how to prepare an outline.
- Is encouraged in character development through examples given in each PACE.

LITERATURE & CREATIVE WRITING (PACEs 1049-1060)

The pupil:

- Adds to his knowledge of short story elements—setting, characters, plot, and order.
- Learns about the four types of conflict in stories.
- Discovers personification, alliteration, anagrams, analogies, antonyms, homonyms, homophones, similes, and metaphors.
- Considers time order and narrative, cause and effect, point of view, comparison and contrast, and the difference between fact and opinion.
- Distinguishes between topic sentences and supporting sentences and persuasive and descriptive writing.

- Gains knowledge of the Far North and Africa, biomes, Morse code,
- The metric and English systems of measurement, and art terms and concepts.
- Recognizes editing and proofreading marks.
- Writes a book report and review and defines and writes anagrams and anecdotes.

WORD BUILDING (PACEs 1061-1072)

The pupil:

- Reviews phonics rules—vowels, consonants, blends, diphthongs, and digraphs.
- Builds on the parts of speech foundation—present, past, and progressive tenses; and forming plurals.
- Classifies words that are homonyms, words with more than one definition and easily confused, and negative words.
- Identifies division rules and accenting syllables.
- Begins to study word histories through the use of a dictionary.
- Is encouraged in character development through examples given in each PACE.

SCIENCE (PACEs 1061-1072)

The pupil:

- Expands his vocabulary base with the addition of new vocabulary words.
- Explores the theories, properties, and laws of magnetism, and the uses of magnets; acids, bases, elements, solvents, solutes, and solutions in chemistry;
- Higher and lower plants, and the process of photosynthesis.
- Looks at the history, nature, and uses of electricity; chemical, mechanical, and nuclear sources of electricity and measuring electricity.
- Learns about the central nervous system, the senses, the structure and function of the skeletal and muscular systems,
- Infectious and non-infectious diseases, treatment of and defence against diseases,
- Digestion and nutrition.
- Builds knowledge of previously introduced character traits.

SOCIAL STUDIES (PACEs 1061-1072)

The pupil:

- Studies Civilization from c.2000 to 1400 B.C. Israel's oppression in Egypt, The Exodus.
- Migration of Noah's descendants after the flood, the world in the times of the Patriarchs.
- Studies how Jacob rises to power in Egypt, Great famine
- Civilization from c1400 to 1000 B.C. Learns about Israel in the wilderness Judges of Israel.
- Learns about the fall of Israel to captivity, Kingdom of Israel, Assyrian Empire, New Babylonian Empire.
- Studies Civilization from c.1000 to 500 B.C. the captivity of Judah to return of Jews to Jerusalem, Persian Empire, Jerusalem rebuilt,
- Learns about trade, transportation and development, resource and industries, international trade, world trade issues, transportation, poverty, development projects.
- Learns about climate, environmental issues and map work.
- Learns about the history of science and technology: earliest inventions,
- Renaissance, Industrial Revolution, modern inventions.
- Studies the history of medicine, early history, cause of disease, x-rays and radioactivity, antibiotics, modern inventions, world health problems, prevention of diseases

The Senior phase materials build further on grade 4–7 with the addition of Economic and Management Sciences and Creative Arts.

MATHEMATICS (PACEs 1073–1084)

The pupil:

- Reads, writes, and works with whole and mixed numbers, integers, and proper and improper fractions.
- Learns the proper mathematical terminology—dividend, multiplicand, product, simplify, minuend, quotient, numerator, and denominator; changes fractions and decimals to percentages; finds the number when a percentage is known;
- Finds the mean, mode, median, range, and rank; and
- Interprets graphs, stem and leaf plots, and box and whisker plots.
- Is introduced to business and consumer arithmetic—profit and loss, commission, discounts, bills and receipts, and invoices with discounts; ratios, proportions, and percentages.
- Reviews geometric concepts and finds perimeter, circumference, and surface area.
- Learns principles of finance, budgeting, saving, investing, and bank services.
- Reviews basic geometry concepts and symbols and uses a protractor and compass to find perimeter and area of shapes and solids.
- Is introduced to equations—variable, sets, and set notation; vocabulary; symbols; and word problems.

ENGLISH (PACEs 1073–1084)

The pupil:

- Identifies, reviews, and diagrams simple, compound, and complex sentence patterns.
- Reviews eight parts of speech and studies prepositions, conjunctions, and interjections.
- Is introduced to infinitives and gerunds.
- Reviews principal parts of regular and irregular verbs—perfect tenses; conjugation of all six tenses; progressive verb forms; transitive and intransitive verbs; and subject-verb agreement.
- Increases noun study—exact, compound, collective, plural, and possessive.
- Develops use of personal pronouns—nominative, objective, and possessive case; demonstrative, interrogative, relative, reflexive, and indefinite pronouns.
- Applies adjectives as indefinite pronouns, nouns, participles, and predicate adjectives.
- Develops writing and communication skills through use of sentence variety, outlining, paragraph writing, composition writing, and proofreading.
- Works with paragraph structure—indenting, main idea, topic sentence, summary, dependent and independent clauses, and phrases.
- Is encouraged in character development through examples given in each PACE.

LITERATURE & CREATIVE WRITING (PACEs 1061-1072)

The pupil:

- Locates words in a dictionary, identifies word families, and defines new vocabulary words.
- Reads and answers thought questions.
- Uses visual discrimination.
- Writes expository and descriptive paragraphs, essays, simple and detailed explanations, directions, personal diary entries; cause and effect; fact and opinion; and exposition, description, persuasion, and narration.
- Identifies figures of speech, sensory detail, and climax and resolution of story.

- Solves word and logic puzzles.
- Converts information into bar graphs.

WORD BUILDING (PACEs 1073-1081)

The pupil:

- Reviews word studies—synonyms, homonyms, antonyms, heteronyms, commonly misspelled words,
- Greek word parts, and words of Spanish and French origin.
- Expands grammar usage—regular and irregular verb forms, forming adjectives from nouns and adverbs, interjections, complete subject, and complete predicate.
- Integrates thinking and writing with correct punctuation.
- Reviews, memorizes, and learns abbreviations—days of the week, months, states, and capitals.
- Continues to study phonics rules—different sounds of s and c, ending sounds, prefixes and suffixes, diphthongs, and accent and syllable division.
- Writes about the character traits taught in each PACE.

SCIENCE (PACEs 1073-1084)

The pupil:

- Learns the scientific method.
- Characteristics of living things-movement, reactions, use of food and oxygen, cells, growth, regeneration and reproduction.
- Plant kingdom and Animal kingdom. Man-ruler of the kingdom.
- Viruses. Bacteria-round, rod, and spiral shaped bacteria, growth and reproduction, helpful bacteria, and harmful bacteria. Algae-one celled and many celled. Fungi-yeasts and many celled fungi. Mosses.
- Botany-complex plants. Conducting system-roots, stems, leaves and flowers. Food-making process-photosynthesis. Reproduction-sexual and sexual methods. Needs of plants-light, warmth, water and minerals. Ferns, cone-bearing plants, and flowering plants.
- Invertebrate animals. One-celled-amoeba and paramecium. Simple-sponges, jellyfish, coral, flatworms and roundworms. Complex-molluscs, spiny-skinned animals, segmented worms and arthropods.
- Vertebrates. Characteristics. Body structures. Behaviour. Cold-blooded vertebrates-fish, amphibians and reptiles.
- Matter and Materials: properties of matter; Acids, Bases and Neutrals; Separating mixtures; Periodic Table of the Elements
- Warm-blooded vertebrates. Characteristics of birds. Characteristics of mammals. Flying mammals, rodents, carnivores, marine mammals, hoofed mammals and primates. Man: God's special, unique creation-separate and distinct from animals.
- Energy and energy change: Sources of energy; Potential and Kinetic energy; Heat transfer; Insulation, Energy saving and Energy transfer; National Electricity supply (Including careers)
- Inheritance and genetics. Embryos. Inherited traits-patterns and combinations. Gene alterations-chemical, natural (handicaps), plant and animal types, and diabetes. Gene functions.
- Skeletal. Structure and function. Form. Divisions.
- Muscular system. Functions-body movement, breathing, blood circulation, digestion of the head and face. Structure. Tissue. Circulatory system.
- Ecology-living things and their environments. Populations, communities, and ecosystems. Goals of ecology study. Balance of nature.
- Creation, the flood, the present world, the future world. Cycles of nature. Organisms that live together.
- Ecology-biomes, tundra biome. Tiaga-coniferous forest. Deciduous forest biome. Grassland biome. Desert biome. Tropical rain forest. Marine environment.

- Ecology-air pollution. Types. Effects on man, wildlife, and their environment. Controls. Ecology-water pollution types. Effects. Controls. Energy resources.
- Is encouraged in character development through examples given in each PACE and expands his ability to use each of these traits in real-life situations.

SOCIAL STUDIES (PACEs 1073-1086)

The pupil:

- Learns about industrialization.
- Learns about World War I and World War II.
- Human Rights
- The Declaration of Human Rights
- Human Rights in the United Kingdom
- Learns to be decisive.
- Have understanding in making the right decisions – to be discerning.
- Learns to be true to God and others
- Learns to always do right, according to God's Word – to be consistent.

GEOGRAPHY

- Learns about settlements, transportation and natural resources.
- Development issues
- Sustainable use of Resources
- Social and Environmental Conflicts – Land Formations
- Map information
- Map Skills
- The use of Photographs
- Earth as our inheritance
- Earth in space
- Planets of our solar system
- Sun's effect on earth
- Layers of the earth
- Types of rock in the crust
- Topography of the crust
- Meditate upon the most hopeful aspects of any situation – to be optimistic.