



## CORE CURRICULUM PRODUCTS

### INTERMEDIATE PHASE

#### GRADE 4

(Content of additional subjects available on request)

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### MATHEMATICS (PACEs 1037–1048)

The student:

- 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 South African metric units of length, mass, volume.
- Solves problems regarding length, mass, volume.
- Collects and organizes data.
- Represents data on pictographs and bar graphs.

### ENGLISH LEARNING MATERIALS

#### ENGLISH (PACEs 1037–1048)

The student:

- 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 student:

- 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 student:

- 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 y to i and f to v.
- Is encouraged in character development through examples given in each PACE.

## SCIENCE (PACEs 1037-1048)

The student:

- 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.

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The student:

- Learns about Abraham and Isaac, Jesus on the Sea of Galilee, how the earth moves, kinds of lands and water on the earth.
- Learns about God's promise to Abraham, maps and globes, directions and distance, latitude and longitude, transportation.
- Learns about world history of Christian education, Christian education today, John Wycliffe.
- Studies various missionaries, David Brainerd, Colonial life, Indians of New England.
- Studies Isaiah, William Carey, India.
- Studies Joseph, George Mueller and his orphanage, England.
- Studies John the Baptist, David Livingstone, Africa.
- Studies Hudson Taylor, China.
- Studies people and places, landmarks, people and their needs, San Hunter-Gatherers, South Africa.
- 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, Christianity and Christian leaders.
- Learns about the history of transport and travel, cars and trains, ships and airplanes, modern transport, space travel, transport and trade in South Africa.

## MATHEMATICS (PACEs 1049–1060)

The student:

- 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 LEARNING MATERIALS

### ENGLISH (PACEs 1049–1060)

The student:

- 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 student:

- 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 student:

- 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 student:

- 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 from a Biblical perspective.
- Learns the relationship between the Bible and botany, meteorology, and zoology.
- Discovers the Bible to be the final authority in 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 student:

- Learns how to be a wise steward.
- Studies North American Indians, John Eliot.
- Learns about early American history: time line, early explorers, line of Demarcation, Sovereignty of God in history, England’s influence, what God wants in government, early settlement in the New World. Daniel and Nebuchadnezzar. Know that it is God who works in lives.
- 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, mapwork, sketches and grids, scale.
- Learns about population and health, density and distribution, population problems, health and diseases.
- Learns about early South African societies, the San Hunter-Gatherers, the Khoikhoi, early African farmers.
- Learns about developments in South Africa by 1880, land divisions, different groups, significant clashes and wars before 1880, discovery of gold and the consequences.
- 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, God's plan for employers and employees, changes in the textile industry, mass production, needs of industry. The Virtuous woman. Solomon's Proverbs. Prepare to do a lot of work.
- 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 neighbors, 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. The Rise of Christian Education.

## GRADE 6

### MATHEMATICS (PACEs 1061–1072)

The student:

- 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 LEARNING MATERIALS

#### ENGLISH (PACEs 1061–1072)

The student:

- 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 student:

- 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 student:

- 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 student:

- 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, and digestion and nutrition.
- Builds knowledge of previously introduced character traits.

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The student:

- Learns about Creation, the fall of man, sons of Adam, the flood, New World after the flood.
- Studies migration of Noah's descendants after the flood, Tower of babel, Terah, Abraham, Isaac, Jacob, the world in the times of the Patriarchs.
- Studies how Jacob enters Canaan, journeys to Egypt and rises to power in Egypt, Great famine, Joseph reunited with family, Jacob's death, Civilization from c.2000 to 1400 B.C. Israel's oppression in Egypt, The Exodus.
- Learns about Israel in the wilderness, Civilization from c1400 to 1000 B.C., preparation to enter Canaan, Conquest of Canaan, Judges of Israel.
- Learns about the fall of Israel to captivity of Judah: office of prophet, life of Samuel the prophet, Kingdom of Israel, Assyrian Empire, New Babylonian Empire.
- Studies the captivity of Judah to return of Jews to Jerusalem, Isaiah, God's prophet for Judah, Persian Empire, Jerusalem rebuilt, Civilization from c.1000 to 500 B.C.
- 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 democracy and global population patterns, national symbols, South Africa's government, the Children's Charter and the Earth Charter, global population patterns, population density and distribution, population growth, urbanization.
- Learns about ancient African civilizations and the history of exploration, early explorers, America and the South Seas, Africa.
- 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.