

LITERACY

Test	Domains	Sub-Domains	Constructs	Sub-Constructs
EGRA	Phonological awareness	Orientation to print - Letter name identification - Letter sound identification - Initial sound identification - Segmentation (phoneme or syllables) - Syllable identification - Familiar word reading - Non-word reading - Oral reading fluency - Reading comprehension (with or without lookbacks) - Cloze - Listening Comprehension - Vocabulary - Dictation - Interview		
	Print knowledge			
	Orthographic knowledge			
ePIRLS		Focus on and retrieve explicitly stated information (20%)	Identifying the part of a web page that contains the information; Identifying the explicitly stated information related to a specific reading goal; Identifying specific information in a graphic (e.g., graph, table, or map)	
	Comprehension Processes in the Context of Online Informational Reading	Make straightforward inferences (30%)	Choosing among possible websites to identify the most appropriate, applicable, or useful one; Filtering the content of a web page for relevance to the topic; Summarizing the main intent of a web page; Describing the relationship between text and graphics; Inferring the potential usefulness of links	

Comprehension Processes in the Context of Online Informational Reading (cont)	Interpret and integrate ideas and information (30%)	Comparing and contrasting information presented within and across websites; Relating the information in one web page or site to information in another web page or site; Generalizing from information presented within and across web pages or sites; Relating details from different web pages to an overall theme; Drawing conclusions from information presented in multiple websites
	Evaluate and critique context and textual elements (20%)	Critiquing the ease of finding information on a website; Evaluating how likely the information would be to change what people think; Describing the effect of the graphic elements on the website; Determining the point of view or bias of the website; Judging the credibility of the information on the website

LANA

Vocabulary and Reading Comprehension	Reading for Literary Experience (stories) (2 passages)
	Reading to acquire and use information (2 passages)

LLECE

Thematic Axes	Text comprehension	Reading of continuous and discontinuous texts, from which an intratextual or intertextual work is done
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Thematic Axes (cont)	Metalinguistic and theoretical	Command of language and literature concepts, which implies focusing on language through the knowledge of its terms in order to recognize and designate properties or characteristics of texts and its parts
Textual Interpretation	Literary comprehension	Abilities linked to recognition, that is, to the identification of explicit elements of the text and localization of information in specific segments of the text.
	Inferential comprehension	Abilities linked, on the one hand, to comprehension, that is, to relating information present in distinct sequences of the text; and on the other hand, abilities linked to analysis, that is, to dividing information into its constitutive parts and establishing how they are related to one another and with the purpose and structure of the text
	Critical comprehension	Abilities linked to evaluation, that is, to assessing or judging the point of view of the narrator in the text, and distinguishing or contrasting it with other points of view as well as one's own point of view

PASEC Gr. 2

Language	Listening Comprehension	Understanding vocabulary
		Recognizing vocabulary
		Recognizing word families
		Understanding a passage

Language	Familiarization with written language reading-decoding (26%)	Recognizing written language	
		Reading letters	
		Recognizing syllables	
		Reading words	
		Recognizing non-words	
	Reading comprehension (74%)	decoding the meaning of words	
		reading and understanding sentences	
understanding texts			

PASEC Gr. 6

Reading Comprehension	Decoding isolated words and sentences	Graphophonological recognition of words	
		Decoding the meaning of isolated words and	
	Language	Reading	informative texts and documents (main part)
			literary texts
		Extracting explicit information	
		Performing simple inferences	
		Combining and interpreting information	

PILNA

Reading Comprehension	Read and critically respond to a variety of texts/genres; connect ideas in the titles and in the sequence of events across the texts; identify common grammatical conventions in the use of verb forms and in spelling of some frequently used two-syllable words; structure a story that has a beginning a
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Language Features	complication and a conclusion; draw additional details beyond the prompts (Grade 6) // Locate directly stated information in a variety of genres; recognise the correct grammatical conventions in the use of capitals for proper nouns and in spelling of blends; write a coherent text that
Writing	has a few simple ideas by using common story elements, such as a simple title, and has a beginning but the conclusion may be missing or weak (Grade 4)

PIRLS

Purposes for Reading	Literary Experience (50%)	accomplished through reading fiction; readers engage with the text to become involved in events, settings, actions, consequences, characters, atmosphere, feelings, and ideas, and to enjoy language itself
	Acquire and Use Information (50%)	associated with informative articles and instructional texts; the informational texts used reflect students' authentic experiences with reading informational text in and out of school

Processes of Comprehension	Focus on and retrieve explicitly stated information (20%)	Identifying information that is relevant to the specific goal of reading; Looking for specific ideas; Searching for definitions of words or phrases; Identifying the setting of a story (e.g., time and place); Finding the topic sentence or main idea (when explicitly stated)
	Make straightforward inferences (30%)	Inferring that one event caused another event; Concluding what is the main point made by a series of arguments; Identifying generalizations made in the text; Describing the relationship between two characters
	Interpret and integrate ideas and information (30%)	Discerning the overall message or theme of a text; Considering an alternative to actions of characters; Comparing and contrasting text information; Inferring a story's mood or tone; Interpreting a real-world application of text information
	Evaluate and critique context and textual elements (20%)	Judging the completeness or clarity of information in the text; Evaluating the likelihood that the events described could really happen; Evaluating the likelihood that an author's argument might change what people think and do; Judging how well the title of a text reflects its main theme; Describing the effect of language features, such as metaphors or tone; Determining an author's perspective on the central topic

PISA 2015

Situation	Personal (30%)			
	Educational (25%)			
	Occupational (15%)			
	Public (30%)			
Text	Text format	Continuous (60%)		
		Non-continuous (30%)		
		Mixed (5%)		
		Multiple (5%)		
	Text Display Space	Fixed (typical of print media)		
		Dynamic (typical of digital media)		
	Text type	Description		
		Narration		
		Exposition		
		Argumentation		
Instruction				
Aspect	Access and retrieve (25%)	Retrieving information - Forming a broad understanding - Developing an interpretation - Reflecting on and evaluating the content of a text - Reflecting on and evaluating the form of a text		
	Integrate and interpret (25%)			
	Reflect and evaluate (50%)			
Cognitive Processes	Text processing	Read fluently	Ability to read words and connected text accurately and automatically, and to phrase and process these words and texts in order to comprehend the overall meaning of the text; The ease and efficiency of reading texts for understanding	
		Locate information	Access and retrieve information within a text	
			Search and select relevant text	

PISA 2018

Cognitive Processes (cont)	Text processing (cont)	Understand	Construction of a memory representation of the literal meaning of the text; integration of literal text contents with one's prior knowledge through mapping and inference processes
			Reflect on content and form (20%)
			Detect and handle conflict (10%)
	Task management processes	Setting of reading goals and strategies	
	Self-monitoring of reading goals and strategies		
Texts	Source	Single	Single texts are defined by having a definite author (or group of authors), time of writing or publication date, and reference title or number
	Organisation and navigation	Static	Static texts have a simple organisation and low density of navigation tools (typically, one or several screen pages arranged in a linear way)
		Dynamic	Dynamic texts feature a more complex, non-linear organisation and a higher density of navigation devices
	Text format	Continuous	Continuous texts are formed by sentences organised into paragraphs. Examples of text objects in continuous text format include newspaper reports, essays, novels, short stories, reviews and letters, including on e-book readers.

Texts (cont)	Text format (cont)	Non-continuous	Most non-continuous texts are composed of a number of lists. Examples of non-continuous text objects are lists, tables, graphs, diagrams, advertisements, schedules, catalogues, indexes and forms. These text objects occur in both fixed and dynamic texts.
		Mixed	Many fixed and dynamic texts are single, coherent objects consisting of a set of elements in both a continuous and non-continuous format. Mixed text is a common format in magazines, reference books, reports. In dynamic texts, authored web pages are typically mixed texts, with combinations of lists, paragraphs of prose and often graphics. Message-based texts, such as online forms, e-mail messages, forums, also combine texts that are continuous and non-continuous in format
	Type	Description Narration Exposition Argument Instruction Interaction Transaction	

PISA-D

Processes (Aspects)	Retrieving information	Ranges from locating explicitly stated individual pieces of information, such as individual words or phrases, to finding information in long passages
	Forming a broad understanding	
	Developing an interpretation	
	Reflecting on and evaluating the content of a text	
	Reflecting on and evaluating the form of a text	
	Literal comprehension	Requires students to comprehend explicitly stated information that may be found in individual words, sentences or passages
Situation	Personal (30%)	
	Educational (25%)	
	Occupational (15%)	
	Public (30%)	
Text	Text format	Continuous (60%)
		Non-continuous (30%)
		Mixed (5%)
		Multiple (5%)
	Text Display Space	Fixed (typical of print media)
		Dynamic (typical of digital media)
	Text type	Description
		Narration
		Exposition
		Argumentation
Instruction		
Transaction		

SACMEQ

Narrative Prose	Word/picture association involving positional or directional prepositions requiring the linkage of a picture to a position or a direction in order to answer the question
	Recognising the meaning of a single word and being able to express it as a synonym in order to answer the question
	Linking information portrayed in sequences of ideas and content when reading forward
	Seeking and confirming information when reading backwards through text
	Linking ideas from different parts of text. Making inferences from text or beyond text, to infer author's values and beliefs
Expository Prose	Word/picture association involving positional or directional prepositions requiring the linkage of a picture to a position or a direction in order to answer the question
	Recognising the meaning of a single word and being able to express it as a synonym in order to answer the question.
	Linking information portrayed in sequences of ideas and content when reading forward
	Seeking and confirming information when reading backwards through text.

Expository Prose (cont)	Linking ideas from different parts of text. Making inferences from text or beyond text
Documents	Word/picture association involving positional or directional prepositions requiring the linkage of a picture to a position or a direction in order to answer the question.
	Linking simple piece of information to item or instruction.
	Systematic search for information when reading forward.
	Linking more than one piece of information in different parts of a document
	Use of embedded lists and even subtle advertisements where the message is not explicitly stated.

SEAPLM

Reading Literacy	Text Format	Continuous (50-60%)
		Non-continuous (30-40%)
		Composite (5-15%)
	Text Type	Narrative (35-45%)
		Descriptive (15-25%)
		Persuasive (10-20%)
		Instructional (0-10%)
		Transactional (0-10%)
		Label (10-20%)
	Process	Locate (35-45%)
		Interpret (30-40%)
		Reflect (10-20%)
		Recognize word (10-20%)

Writing Literacy	Text Type	Narrative (10-20%)
		Descriptive (25-35%)
		Persuasive (15-25%)
		Instructional (5-15%)
		Transactional (15-25%)
		Label (5-15%)
	Process	Generating Ideas (20-30%)
		Controlling text structure and organisation (10-20%)
		Managing coherence (10-20%)
		Using vocabulary (10-20%)
		Controlling syntax and grammar (15-25%)
Other language specific features (i.e. spelling, character formation, punctuation) (5-15%)		

MATH

Test **Domains** **Subdomains** **Constructs** **Sub-constructs**

EGMA

Number Identification
Quantity Discrimination
Missing number (number patterns)
Addition and Subtraction (both basic facts in Level 1 and double digit in Level 2)
Word Problems

LANA

Numeracy	Basic facility with numbers
	Whole number computation
	Basic fractions
	Reading graphs

LLECE

Thematic Axes	Numerical proficiency	Meaning of the number and structure of the numbering system
		Interpretation of situations concerning representation and construction of numerical relations in diverse contexts
		Utilization of operations appropriate for the situation (addition, subtraction, multiplication, division, exponentiation, etc.)
	Geometric Proficiency	Attributes and properties of bidimensional and tridimensional objects

Thematic Axes (cont)	Geometric Proficiency (cont)	Translations and rotations of a figure
		Translations and rotations of the same figure on a plane
		Notions of congruency and similarity between figures
		Designs and constructions of geometric bodies and figures
	Proficiency in measurement	Magnitudes, estimates, and range of these estimates
		The uses of units of measurement, patterns, and coins
	Statistical proficiency	Use and interpretation of data and information
		Measures of central tendency
		Representations of data
	Proficiency in variation	Numerical and geometric regularities and patterns
		Identification of variables
		Notion of function
Direct and inverse proportionality		
Cognitive Processes	Recognition of objects and elements	Identification of mathematical facts, relations, properties, and concepts expressed in a direct and explicit manner in the wording
	Solution of simple problems	Use of mathematical information that is explicit in the wording, referring to a single variable, and the establishment of direct, necessary relationships in order to reach the solution.

Cognitive Processes (cont)	Solution of complex problems (cont)	Reorganization of mathematical information presented in the wording and the structuring of a proposed solution from non-explicit relationships, in which more than one variable is involved
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PASEC Gr. 2

Arithmetic	Counting
	Quantifying and handling quantities of
	Performing operations
	Completing series of numbers
	Solving problems
Geomtery, Space and measurement	Recognizing geometric shapes
	Determining spatial location
	Appraising size

PASEC Gr. 6

Arithmetic recognizing, applying and solving problems using:	Operations	
	Whole numbers	
	Decimal numbers	
	Fractions	
	Percentages	
	Series of numbers and data tables	
Measurement - recognizing, applying, and solving problems involving the concept of size:	Length	
	Mass	
	Capacity	
	Surface Area	
	Perimeter	
Geometry and Space	Recognition of the prospects of:	Two- or three-dimensional geometric shapes
		Geomteric relations and transformations
	Orientation in and visualization of space	

PILNA

Numeracy	Numbers	Write a four-digit number not involving zero in words and numerals I write a three digit number involving zero in numerals and write a four digit number involving zero in words; complete increasing number patterns involving decimal numbers to one decimal place in a relation and recognise money according to its value; add two to four-digit numbers with two- to three-digit numbers with regrouping, and add two decimal numbers with the same number of decimal places and with regrouping; multiply a two-digit number and one-digit number with no regroupinh; multiple a two digit number and a one-digit number with no regrouping and solve simple word problems involving subtraction; use a ruler to draw and read a given length and tell the time to the hour only from an analogue clock
	Operations	
	Measurement and Data	
	Time	
	Money	

PISA 2015

Mathematical Processes	Formulating Situations Mathematically (25%)	Identifying the mathematical aspects of a problem situated in a real-world context and identifying the significant variables	Underlying competencies, or mathematical capabilities: Communication; Mathematising; Representation; Reasoning and Argument; Devising strategies for solving
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Mathematical Processes (cont)		Recognising mathematical structure (including regularities, relationships, and patterns) in problems or situations	problems; Using symbolic, formal and technical language and operations; Using mathematical tools
	Formulating Situations Mathematically (25%) (cont)	Simplifying a situation or problem in order to make it amenable to mathematical analysis	
		Identifying constraints and assumptions behind any mathematical modelling and simplifications gleaned from the context	
		Representing a situation mathematically, using appropriate variables, symbols, diagrams, and standard models	
		Representing a problem in a different way, including organising it according to mathematical concepts and making appropriate assumptions	
		Understanding and explaining the relationships between the context-specific language of a problem and the symbolic and formal language needed to represent it mathematically	
		Translating a problem into mathematical language or a representation	
		recognising aspects of a problem that correspond with known problems or mathematical concepts, facts or procedures	

Mathematical Processes (cont)	Formulating Situations Mathematically (25%) (cont)	Using technology (such as a spreadsheet or the list facility on a graphing calculator) to portray a mathematical relationship inherent in a contextualised problem
	Employing mathematical concepts, facts, procedures and reasoning (50%)	Devising and implementing strategies for finding mathematical solutions
		Using mathematical tools, including technology, to help find exact or approximate solutions
		Applying mathematical facts, rules, algorithms and structures when finding solutions
		Manipulating numbers, graphical and statistical data and information, algebraic expressions and equations, and geometric representations
		Making mathematical diagrams, graphs and constructions, and extracting mathematical information from them
		Using and switching between different representations in the process of finding solutions
		Making generalisations based on the results of applying mathematical procedures to find solutions
		Reflecting on mathematical arguments and explaining and justifying mathematical results
Interpreting, applying and evaluating mathematical outcomes (25%)	Interpreting a mathematical result back into the real-world context	

Mathematical Processes (cont)	Interpreting, applying and evaluating mathematical outcomes (25%) (cont)	Evaluating the reasonableness of a mathematical solution in the context of a real-world problem
		Understanding how the real world impacts the outcomes and calculations of a mathematical procedure or model in order to make contextual judgements about how the results should be adjusted or applied
		Explaining why a mathematical result or conclusion does, or does not, make sense given the context of a problem
		Understanding the extent and limits of mathematical concepts and mathematical solutions
		Critiquing and identifying the limits of the model used to solve a problem

PISA-D

Mathematical Processes	Formulating Situations Mathematically (25%)	Identifying the mathematical aspects of a problem situated in a real-world context and identifying the significant variables	Underlying competencies, or mathematical capabilities: Communication; Mathematising; Representation; Reasoning and Argument; Devising strategies for solving problems; Using symbolic, formal and technical language and operations; Using mathematical tools
		Recognising mathematical structure (including regularities, relationships, and patterns) in problems or situations	
		Simplifying a situation or problem in order to make it amenable to mathematical analysis	
		Identifying constraints and assumptions behind any mathematical modelling and simplifications gleaned from the context	

Mathematical Processes (cont)	Formulating Situations Mathematically (25%) (cont)	Representing a situation mathematically, using appropriate variables, symbols, diagrams, and standard models
		Representing a problem in a different way, including organising it according to mathematical concepts and making appropriate assumptions
		Understanding and explaining the relationships between the context-specific language of a problem and the symbolic and formal language needed to represent it mathematically
		Translating a problem into mathematical language or a representation
		recognising aspects of a problem that correspond with known problems or mathematical concepts, facts or procedures.
		Using technology (such as a spreadsheet or the list facility on a graphing calculator) to portray a mathematical relationship inherent in a contextualised problem
		Selecting an appropriate model from a list
	Employing mathematical concepts, facts, procedures and reasoning (50%)	Devising and implementing strategies for finding mathematical solutions
	Using mathematical tools, including technology, to help find exact or approximate solutions	

Mathematical Processes (cont)	Employing mathematical concepts, facts, procedures and reasoning (50%)	Applying mathematical facts, rules, algorithms and structures when finding solutions
		Manipulating numbers, graphical and statistical data and information, algebraic expressions and equations, and geometric representations
		Making mathematical diagrams, graphs and constructions, and extracting mathematical information from them
		Using and switching between different representations in the process of finding solutions
		Making generalisations based on the results of applying mathematical procedures to find solutions
		Reflecting on mathematical arguments and explaining and justifying mathematical results
		Performing a simple calculation
		Drawing a simple conclusion
		Selecting an appropriate model from a list
	Interpreting, applying and evaluating mathematical outcomes (25%)	Interpreting a mathematical result back into the real-world context
Evaluating the reasonableness of a mathematical solution in the context of a real-world problem		

Mathematical Processes (cont)	Interpreting, applying and evaluating mathematical outcomes (25%)	Understanding how the real world impacts the outcomes and calculations of a mathematical procedure or model in order to make contextual judgements about how the results should be adjusted or applied
		Explaining why a mathematical result or conclusion does, or does not, make sense given the context of a problem
		Understanding the extent and limits of mathematical concepts and mathematical solutions
		Critiquing and identifying the limits of the model used to solve a problem
		Evaluating a mathematical outcome in terms of the context.
Mathematical Content	Change and relationships (25%)	Functions - Algebraic expressions - Equations and inequalities - Coordinate systems - Relationships within and among geometrical objects in two and three dimensions - Measurement - Numbers and units -
	Space and shape (25%)	
	Quantity (25%)	
	Uncertainty and data (25%)	
Contexts	Personal (25%)	
	Occupational (25%)	
	Societal (25%)	
	Scientific (25%)	

SACMEQ

Number	Recognise numbers. Link patterns to numbers
	Apply single operations to two digit numbers or simple fractions
	Extend and complete number patterns
	Combine arithmetic operations in order to link information from tables and charts when performing calculations.
	Combine operations in order to make calculations involving several steps and a mixture of operations using combinations of fractions, decimals, and whole numbers
Measurement	Recognise units of measurement. Apply basic calculations using simple measurement units
	Convert measurement units when undertaking one-step operations
	Apply two and three-step arithmetic operations to numbers. Use and convert measurement units
	Combine operations in order to make calculations involving several steps and a mixture of operations using a translation of units
Space-data	Link patterns and graphs to single digits. Recognise and name basic shapes
	Translate shapes and patterns. Identify data in tabular form
	Combine arithmetic operations in order to link information from tables and charts

Space-data (cont)	Link data from tables and graphs in order to make calculations involving several steps and a mixture of operations
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SEAPLM

Context	Personal (25-30%)
	Local (25-30%)
	Wider world (25-30%)
	Intra-mathematical (15-20%)
Process	Translate (20-30%)
	Apply (40-60%)
	Interpret and Review (20-30%)
Content	Number and Algebra (35-45%)
	Measurement and Geometry (35-45%)
	Chance and Data (15-25%)

TIMSS

Content Domains	Number	
	Algebra	
	Geometric Shapes and Measures / Geometry	
	Data Display / Data and Chance	
Cognitive Domains	Knowing	
	Applying	
	Reasoning	
Mathematical Content	Change and relationships (25%)	Functions - Algebraic expressions - Equations and inequalities - Coordinate systems - Relationships within and among geometrical objects in two and three dimensions - Measurement - Numbers and units - Arithmetic operations - Percents, ratios and proportions - Counting
	Space and shape (25%)	

Mathematical Content (cont)	Quantity (25%)	principles - Estimation - Data collection, representation and interpretation - Data variability and its description - Samples and sampling - Chance and probability
	Uncertainty and data (25%)	
Contexts	Personal (25%)	
	Occupational (25%)	
	Societal (25%)	
	Scientific (25%)	

LINKS

Test

EGRA

ePIRLS https://timssandpirls.bc.edu/pirls2016/downloads/P16_Framework_2ndEd.pdf

LANA <http://www.iea.nl/lana>

LLECE <http://unesdoc.unesco.org/images/0024/002439/243983e.pdf>

PASEC Gr.2 <http://www.pasec.confemen.org/evaluation/?annee=PASEC2014>

<http://ilsa-gateway.org/studies/frameworks/76>

PASEC Gr.6 <http://ilsa-gateway.org/studies/frameworks/76>

PILNA http://www.forumsec.org/resources/uploads/attachments/documents/2014FEEdMM.03_Attachment_PILNA_Report.pdf

PIRLS https://timssandpirls.bc.edu/pirls2016/downloads/P16_FW_Chap1.pdf

PISA 2015 http://www.keepeek.com/Digital-Asset-Management/oecd/education/pisa-2015-assessment-and-analytical-framework_9789264255425-en#page1

PISA 2018 <https://www.oecd.org/pisa/data/PISA-2018-draft-frameworks.pdf>

PISA-D <https://www.oecd.org/pisa/pisa-for-development/8%20-%20How%20PISA-D%20measures%20reading%20literacy.pdf>

SACMEQ https://www.acer.org/files/AssessGEMs_SACMEQ.pdf

EGMA <https://shared.rti.org/content/early-grade-mathematics-assessment-egma-toolkit#>

SEAPLM

TIMSS https://timssandpirls.bc.edu/timss2015/downloads/T15_FW_Chap1.pdf