



Ivy Waters International Standards

Primary

Kindergarten to Grade 5 · Ages 5–11

The primary stage builds the core toolkit: reading, number sense, scientific curiosity, a second language, and a growing picture of how the world works. It ends with the Grade 5 Capstone.

The Ivy Waters Way

Ivy Waters exists for families who educate in freedom: homeschoolers, worldschoolers, and internationally mobile families whose classrooms are kitchens, markets, trains, and shorelines. These Standards are written for that life, not adapted to it afterward. Six principles run through every page:

1 The world is the classroom

Learning is not confined to a desk or a schedule. Every standard can be met and noticed in ordinary life: a market stall, a border crossing, a tide pool, or a dinner table.

3 Capabilities, not curricula

A standard names something observable your child *can do*, never a textbook, a program, or a method. How your family gets there is entirely yours: any resource, any pace, any order.

5 Freedom is structural

A learning moment with no standard attached is a complete, valid family record. Alignment is an optional lens you may apply, never a gate, a grade, or a judgment. Gaps are simply what lies ahead.

2 Moments before metrics

The unit of learning is the real moment a guardian witnesses. Records and coverage views are projections of captured evidence, never the other way around.

4 The guardian is the first observer

Standards are addressed to you in plain language, because the person who sees the learning happen is the person best placed to recognize it.

6 Permanent meaning, open evolution

Every identifier keeps its meaning; records keep the meaning of the version they cite. The catalog itself evolves in the open, through versioned governance and a public changelog.

Ivy Waters International Standards are written and owned by Ivy Waters International, independent of any other framework, standing on their own educational judgment, and published for families.

How to read this guide

Ivy Waters International Standards describe what your child can **do**, not what they have been taught, tested on, or exposed to. Every standard is written to you, the guardian, in plain language, because you are the one who sees the learning happen.

Every standard has three parts

- A **permanent identifier**, like **G5.M-01**, that never changes meaning. Records aligned to a standard keep the meaning that standard had when the record was made.
- A **capability**: one clear sentence beginning “Your child can...” describing something observable.
- A **real-life example**: the capability as you might actually meet it at a market, on a train, at the kitchen table.

The five domains

Every grade covers the same five domains: **Mathematics**, **Science**, **English**, **Language Acquisition** (a second language), and **Good Citizenship/Humanities**. The domain names you see on section headings are the grade’s own pedagogical labels; the underlying five domains never change.

Learning moments come first

A recorded learning moment is a valid family record whether or not it is matched to a standard. Alignment is a lens you may choose to apply. It is never a gate, a grade, or a judgment. Coverage gaps are simply ahead.

This guide

This Benchmark Guide covers the **Primary** stage (Kindergarten to Grade 5 · Ages 5–11). The full framework spans Early Years through Grade 8 across three stage guides and one Comprehensive Guide.

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The Primary stage in one view

Standards per domain. Every grade covers the same five domains. The count is how many distinct capabilities this guide describes for that year, not a workload or a checklist.

	Mathematics	Science	English	Language Acquisition	Good Citizenship/ Humanities	Total
Kindergarten Ages 5–6	4	3	4	2	2	15
Grade 1 Ages 6–7	4	4	4	2	2	16
Grade 2 Ages 7–8	4	3	3	2	2	14
Grade 3 Ages 8–9	3	3	3	2	2	13
Grade 4 Ages 9–10	3	3	3	2	2	13
Grade 5 Ages 10–11	3	3	2	2	5	15

The Grade 5 total includes its 3-standard Capstone, carried in the Good Citizenship/Humanities domain.

Kindergarten (Ages 5–6)

Mathematics & Quantitative Reasoning

K.M-01 Cardinality & One-to-One Quantity Matching

Your child can touch objects one by one while counting them out loud up to 20, knowing that the last number they say represents the entire total of the group.

IN REAL LIFE

At breakfast, you ask for 7 grapes. Your child touches each grape once while counting, then glances at the 3 left on the plate and says, “Three more,” without recounting them.

K.M-02 Quantitative Comparison & Relative Sizes

Your child can look at two different collections of items and tell you which group has more, which has fewer, or if they are the same, completely by sight without needing to count them one by one.

IN REAL LIFE

They look at two plates of cookies, one with 2 cookies and one with 6, and immediately identify the larger group without pointing and counting. They can look at two uneven stacks of books and tell you which is taller.

K.M-03 Visual Pattern Recognition

Your child can spot, copy, and predict simple repeating patterns using colors, sizes, or shapes in their daily surroundings.

IN REAL LIFE

Looking at sidewalk brick layouts, they notice the sequence: “Red brick, grey brick, red brick, grey brick. The next one has to be red!”

K.M-04 Spatial Geometry & Structural Properties

Your child can recognize and name standard flat shapes (circles, triangles, squares) and basic physical positions (above, below, next to, inside) while exploring.

IN REAL LIFE

Your child looks at a round clock or a bicycle tire and notes, “That’s a circle shape!” They understand and execute directional games like “Hide behind the tree!”

Science & Innovation

K.S-01 Sensory Observation & Material Properties

Your child can use their senses to safely describe objects and classify them by how they feel, look, or sound (e.g., rough, smooth, loud, soft, shiny).

IN REAL LIFE

Walking on a beach, your child collects shells and sorts them into two piles: “These ones are rough and bumpy, but these ones are totally smooth.”

K.S-02 Living Anatomy & Biological Tracking

Your child can identify and name the basic visible parts of humans, animals, and plants and understands that living things grow and change.

IN REAL LIFE

While looking at a family pet, they can point out: “The bird uses its beak to eat and its wings to fly.” They notice plant roots drink water from the dirt.

K.S-03 Weather Tracking & Environmental Cycles

Your child can notice daily weather patterns, recognize changes in temperature, and observe how those variations change what they wear or do.

IN REAL LIFE

Your child sees rain on the window, grabs their coat, and calls, “We need the umbrella!”

English & Expressive Literacy

K.E-01 Phonemic Awareness & Alphabet Mechanics

Your child knows that every letter has a name and a matching sound, can identify the starting sound of spoken words, and can match capital letters with lowercase letters.

IN REAL LIFE

You say the word “Dog,” and your child proudly tells you, “Dog starts with the /d/ sound, like the letter D!”

K.E-02 Early Decoding & Simple Word Blending

Your child can slide individual letter sounds together to read short, three-letter words (consonant-vowel-consonant words like cat, bug, sit, hop).

IN REAL LIFE

Pointing to a word in a book, your child sounds out each letter aloud: c-a-t, then merges them fluidly to say: “Cat!”

K.E-03 Print Concepts & Book Navigation

Your child understands how a book functions: they know words are read from left to right, top to bottom, and recognize that the printed text carries the story's actual meaning.

IN REAL LIFE

When handed a book upside down, they automatically flip it right-side up before pretending to read it.

K.E-04 Story Recall & Verbal Comprehension

After listening to an engaging story or read-aloud book, your child can tell you what happened, name the main characters, and talk about their favorite part.

IN REAL LIFE

You finish reading *The Three Little Pigs*. Your child can summarize the plot: "The big bad wolf blew down the houses, but he couldn't blow down the brick one!"

Language Acquisition (Second Language)

K.L-01 Auditory Imitation & Vocal Play

Your child can listen to native speakers or audio clips in a foreign language and playfully mirror the specific accents, cadences, and sounds they hear.

IN REAL LIFE

While traveling or listening to a language app, your child tries to copy the exact vocal tone and inflection of a local guide or speaker.

K.L-02 Foundation Vocabulary & Baseline Courtesy

Your child can accurately use basic localized manners and high-frequency target words (greetings, expressing thanks, counting to 5) in context.

IN REAL LIFE

When a local vendor hands them an ice cream cone, your child looks them in the eye and confidently says, "Gracias" or "Grazie."

Global Citizenship & Humanities

K.C-01 Personal Identity & Family Traditions

Your child can talk about who they are, describe their family traditions, share stories about their background, and notice that different families have unique daily rhythms.

IN REAL LIFE

Your child explains a special holiday tradition to a new friend: “Every year for my birthday, my family makes pancakes together.”

K.C-02 Collaborative Play & Community Kindness

Your child practices foundational interpersonal skills: taking turns, sharing physical objects, showing active empathy when someone is hurt, and helping take care of their immediate space.

IN REAL LIFE

At the playground, your child hops off the swing when another child is waiting and says, “Your turn.” Before leaving, they help gather the toys into the travel bag.

Grade 1 (Ages 6–7)

Mathematics & Quantitative Reasoning

G1.M-01 Number & Place Value (Tens and Ones)

Your child understands that two-digit numbers are built out of bundles of tens and leftover ones. They can group objects to count them faster and can read, write, and order numbers up to 100.

IN REAL LIFE

Counting a jar of buttons, your child makes 4 groups of ten and says, “That’s 40, plus these 3 makes 43.”

G1.M-02 Addition, Subtraction & Counting Patterns

Your child can skip-count perfectly by 2s, 5s, and 10s. They can confidently add and subtract single-digit numbers (numbers 1 through 9) and understand how to add tens together (like $20 + 30$).

IN REAL LIFE

Your child climbs the stairs counting by twos: “2, 4, 6, 8, 10.” Later, with 7 apple slices on the plate, they eat 3 and say, “Four left.”

G1.M-03 Spatial Awareness & 2D/3D Geometry

Your child can name basic flat shapes (2D) and solid shapes (3D), and they can spot them hidden in everyday buildings, toys, and nature.

IN REAL LIFE

Your child stops in front of a rooftop and says, “That’s a pyramid, like in Egypt!” They trace its triangle face with a finger, then spot a cylinder in a soup can at the shop.

G1.M-04 Measurement & Estimation

Your child understands the passage of time (days, hours, weeks), can recognize local currency, and can accurately guess which objects are heavier, longer, or hold more liquid.

IN REAL LIFE

Your child watches the clock and calls, “The big hand is at twelve, so it’s three o’clock!” At the beach, they lift two buckets before deciding which one is heavier.

Science & Innovation

G1.S-01 The Scientific Method

Your child acts like a scientist. They do not just watch things happen. They make a guess (prediction) beforehand, test it, and observe what happens when they change one rule (variable).

IN REAL LIFE

Before sending a toy car down a ramp, your child says, “I think this one will go faster because the ramp is steeper.” Then they race both cars to check.

G1.S-02 Living Organisms & Ecosystems

Your child understands that animals and plants are alive, and they can see how their bodies or leaves are uniquely designed to survive in their specific home environment.

IN REAL LIFE

Your child studies a cactus and works out loud: “It’s fat because it’s full of water, right? For when it doesn’t rain?”

G1.S-03 Material Properties & States

Your child can sort objects by what they are made of (wood, metal, plastic, liquid, gas) and understands how things melt, freeze, stretch, or break.

IN REAL LIFE

They watch an ice cube melt in their juice or water vapor rise from a boiling pot and explain that the water is changing forms because of the heat.

G1.S-04 Forces, Light & Shadows

Your child understands that things move because of a push or a pull, and they know how shadows are made when light is blocked.

IN REAL LIFE

On a sunny walk, your child jumps between sunlight and shade, watches their shadow disappear, and says, “It only shows when the sun is behind me.”

English & Expressive Literacy

G1.E-01 Reading Accuracy & High-Frequency Fluency

Your child can decode new words using phonics rules, reads smoothly out loud, and instantly recognizes the core Top 100 Sight Words (like the, have, because, said) without pausing to sound them out.

IN REAL LIFE

While reading a storybook, they sound out a tough word like s-t-o-m-p naturally, then fluidly read the rest of the sentence because it contains common words like “the” and “said”.

G1.E-02 Spelling Mechanics & Phonics Patterns

Your child is building the physical and mental patterns needed to write words correctly. They understand how letters blend together to make sounds (like sh, ch, th, ing) and apply those patterns when writing.

IN REAL LIFE

Writing a postcard, they know that the word “shop” starts with sh and “play” ends with ay. They use basic capitalization for the start of names and sentences.

G1.E-03 Grammar & Narrative Structure

Your child can tell a complete, structured story with a clear beginning, middle, and end, using correct punctuation (periods, question marks) when typing or writing it out.

IN REAL LIFE

Recounting their day, they say: “First, we went to the castle. Then, we ate gelato. Finally, we saw the street performers!”

G1.E-04 Comprehension & Audio Theme Extraction

When your child listens to an audiobook or reads a story, they can explain the main lesson, describe the characters’ feelings, and guess what might happen next.

IN REAL LIFE

After a story in the car, your child says, “He kept cheating, so nobody trusted him at the end.”

Language Acquisition (Second Language)

G1.L-01 Auditory Recognition & Local Greetings

Your child can listen to the local language around them and pull out familiar everyday phrases, friendly greetings, and basic directions.

IN REAL LIFE

When entering a bakery in Spain, your child hears “Hola, buenos días” and immediately knows the shopkeeper is saying hello and wishing them a good morning.

G1.L-02 Environment Navigation & Visual Literacy

Your child can use context clues, visual symbols, and single localized keywords to safely figure out their surroundings in a foreign country or neighborhood.

IN REAL LIFE

At a station, your child matches the train symbol on a sign to the one on the map and leads you toward the platform without needing the written words.

Global Citizenship & Humanities

G1.C-01 Cultural Empathy & Historical Appreciation

Your child shows active curiosity and deep respect for how people live differently around the world. They respect foreign customs, try local foods, and enjoy exploring regional histories.

IN REAL LIFE

Visiting a temple or cathedral, your child automatically lowers their voice and mimics the local sign of respect because they realize it is a sacred space for that community.

G1.C-02 Environmental Stewardship & Civic Observation

Your child notices how human systems work (like recycling, transportation, or community rules) and takes small, intentional actions to keep their current environment clean and beautiful.

IN REAL LIFE

Walking along a beach, your child stops to pick up plastic trash and says, “We need to put this in the bin so the sea turtles don’t eat it.”

Grade 2 (Ages 7–8)

Mathematics & Quantitative Reasoning

G2.M-01 Three-Digit Place Value & Number Composition

Your child can compose, decompose, and round numbers up to 1,000, identifying exactly what the “hundreds” digit means in a real physical group.

IN REAL LIFE

Looking at a price tag of \$358, your child explains: “That is 3 hundreds, 5 tens, and 8 ones.” They round a highway sign of 182 miles to the nearest ten (180).

G2.M-02 Multiplicative Thinking & Fractional Equal Sharing

Your child understands multiplication as equal rows or groups, can recall basic 2, 5, and 10 times tables, and recognizes fractions ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$) as equal parts of a whole object.

IN REAL LIFE

Baking a batch of muffins in a 3x4 tin, your child looks at the rows and says, “3 rows of 4 means there are 12 muffins total!” They recognize one slice of a four-piece pizza is exactly one-quarter ($\frac{1}{4}$).

G2.M-03 Measurement Units & Standard Conversions

Your child can use real tools (rulers, scales, measuring cups) to measure length, weight, and capacity using standard metric or imperial units, and can read an analog clock to the nearest 5 minutes.

IN REAL LIFE

Helping you pack a suitcase, your child uses a luggage scale and reads that it weighs 15 kilograms. Looking at an analog clock, they tell you it is 2:25 PM.

G2.M-04 Data Extraction & Tally Chart Processing

Your child can record information using simple tally marks and translate that real-world data into basic bar graphs or pictograms to answer questions.

IN REAL LIFE

Sitting at an outdoor cafe, your child tallies the colors of passing cars (5 red, 3 blue, 8 white) and can tell you which color is the most popular based on their marks.

Science & Innovation

G2.S-01 Biological Classification & Life Cycles

Your child can sort living organisms into categories based on their features (e.g., mammals vs. reptiles) and can outline a complete life cycle.

IN REAL LIFE

At a farm, your child points from a chicken to a cow and works it out aloud: “This one has feathers and this one has hair, so they can’t be the same kind of animal.”

G2.S-02 Structural Material Testing & Changing Shapes

Your child can test how forces like bending, twisting, stretching, and squishing alter everyday materials, identifying which materials return to their original shape.

IN REAL LIFE

After stretching a rubber band and squashing a lump of clay, your child says, “The rubber band jumps back, but the clay just stays squished.”

G2.S-03 Planetary Systems & Earthly Water Cycles

Your child understands how the water cycle functions in nature (evaporation, condensation, precipitation) and can identify how the Earth rotates to create day and night.

IN REAL LIFE

Your child returns to a puddle that has almost vanished and asks, “Did the sun pull the water up? Is that how it gets back into clouds?”

English & Expressive Literacy

G2.E-01 Reading Independent Fluency & Structural Decoding

Your child reads early chapter books smoothly out loud with expression, using context clues and prefix/suffix definitions to unpack unfamiliar multi-syllable words.

IN REAL LIFE

Your child reads a book independently and uses the prefix un- to figure out that unhappy means not happy, or re- to see that re-read means to read again.

G2.E-02 Structured Sentences & Paragraph Formatting

Your child can write or type short paragraphs that maintain a singular topic, using correct capitalization, commas in lists, and apostrophes for simple contractions.

IN REAL LIFE

Writing a journal entry about a museum visit, your child accurately groups their thoughts together and uses mechanics like don't instead of do not.

G2.E-03 Informational Extraction & Character Evolution

Your child can read a fiction or non-fiction text and identify the core plot points, the main problem, and how a character's feelings change throughout the story.

IN REAL LIFE

After finishing a story, your child can tell you: "At the start, the boy was terrified of the ocean, but by the end, he was excited to go swimming because his grandfather helped him."

Language Acquisition (Second Language)

G2.L-01 Short Sentence Construction & Personal Descriptions

Your child can use simple vocabulary strings to state their age, name, feelings, and basic preferences in the target language.

IN REAL LIFE

In a foreign setting, your child can confidently step forward and say: "Me llamo Alex, tengo siete años" (My name is Alex, I am seven years old).

G2.L-02 Transactional Requests & Immediate Needs

Your child can ask for food, water, directions to a restroom, or help from an adult using polite local phrases.

IN REAL LIFE

At a foreign market, your child points to an apple and says: "S'il vous plaît, je voudrais une pomme" (Please, I would like an apple).

Global Citizenship & Humanities

G2.C-01 Geographic Literacy & Map Navigation

Your child can read a simple city, park, or world map, identifying the four cardinal directions (North, South, East, West) and standard map symbols.

IN REAL LIFE

While exploring a park, your child holds the map and says: “The monkeys are North of us, so we need to go up this path past the water fountain symbol.”

G2.C-02 Economic Exchange & Community Infrastructure

Your child understands that people work jobs to earn income, that items have variable costs, and can observe how a town or city meets the needs of its residents (parks, transit, sanitation).

IN REAL LIFE

On a crowded tram, your child notices how many people get on and asks, “Where would all these people park if there wasn’t a train?”

Grade 3 (Ages 8–9)

Mathematics & Quantitative Reasoning

G3.M-01 Four-Digit Numerical Mastery & Decimals

Your child can work with numbers up to 10,000, understands place value positioning, and can read and write decimal values to the tenths place (e.g., 4.2).

IN REAL LIFE

Your child reads 8,450 on the trip counter as “eight thousand four hundred and fifty.” In the kitchen, they see 1.5 kilograms on the scale and say, “That’s one and a half kilos.”

G3.M-02 Multiplication Table Fluency & Basic Division

Your child possesses rapid mental recall of multiplication facts up to 10×10 and understands the inverse relationship with division (e.g., if $3 \times 4 = 12$, then $12 \div 3 = 4$).

IN REAL LIFE

You ask, “What is 7×8 ?” and they quickly reply, “56.” They divide 24 colored pencils equally among 4 travel packs ($24 \div 4 = 6$).

G3.M-03 Coordinate Grid Navigation

Your child can find and plot locations on a basic 2D grid map using ordered coordinate pairs (x, y).

IN REAL LIFE

Playing the game Battleship, or reading a grid-based travel map, your child can accurately find the point located at coordinate (C, 4) or (3, 5).

Science & Innovation

G3.S-01 Ecosystem Interdependence & Food Chains

Your child can construct a functional food chain showing how energy flows from the sun to producers (plants) and consumers (animals), and can predict what happens if a habitat is disrupted.

IN REAL LIFE

Finding nibbled leaves on a forest walk, your child follows the chain aloud: “A caterpillar ate this, and maybe a bird eats the caterpillar. What eats the bird?”

G3.S-02 Human Anatomy (Skeletons & Muscles)

Your child can explain how the human skeletal system protects vital organs and works in tandem with muscles to allow movement.

IN REAL LIFE

After a long climb, your child presses their ribs and says, “These are like armour for your heart.” Then they flex an arm to show the muscle doing the pulling.

G3.S-03 Electrical Pathways & Circuit Mechanics

Your child can build or sketch a basic electrical circuit using a power source (battery), conductors (wires), and a load (lightbulb), and knows the difference between an open and closed circuit.

IN REAL LIFE

Fixing a flashlight, your child presses one loose wire into place and watches the bulb turn on: “It only works when the whole path touches!”

English & Expressive Literacy

G3.E-01 Multi-Paragraph Composition & Speech Integration

Your child can write or type an organized, multi-paragraph essay or creative narrative using transitions, distinct introductory and concluding thoughts, and proper dialogue punctuation.

IN REAL LIFE

Your child drafts a multi-paragraph story about an explorer and correctly encloses spoken text in quotation marks: “Look over there!” shouted the captain.

G3.E-02 Grammatical Parts of Speech Optimization

Your child purposefully uses adverbs, adjectives, and correct verb tenses (past, present, future) to make their writing and verbal descriptions highly expressive.

IN REAL LIFE

Instead of saying “The dog ran,” your child writes, “The massive hound ran swiftly across the muddy field.”

G3.E-03 Analytical Reading & Subtext Analysis

Your child can read a text and infer things that aren’t explicitly written on the page by analyzing clues left by the author.

IN REAL LIFE

Reading a story, your child says, “It doesn’t say she’s angry, but she slammed the door and stomped, so she’s definitely angry.”

Language Acquisition (Second Language)

G3.L-01 Basic Conversational Exchange

Your child can ask and respond to simple questions from native speakers about their immediate interests or current environment.

IN REAL LIFE

Met by a peer abroad, your child can exchange comments on sport preferences: “¿Te gusta el fútbol? Sí, me gusta mucho” (Do you like soccer? Yes, I like it a lot).

G3.L-02 Environmental Vocabulary Consolidation

Your child can identify and group common household objects, local animals, and daily weather patterns using clear targeted nouns and descriptors.

IN REAL LIFE

Looking out at a rainstorm abroad, your child notes: “Hoy hace mal tiempo, está lloviendo” (Today the weather is bad, it is raining).

Global Citizenship & Humanities

G3.C-01 Historical Contextualization & Archaeology Basics

Your child understands that societies change over time, can distinguish between primary artifacts and secondary text accounts, and enjoys exploring ancient civilizations.

IN REAL LIFE

At a museum, your child studies a worn Roman coin and says, “A real person used this back then. The scratches are part of the history too.”

G3.C-02 Anthropological Awareness & Local Adaptations

Your child observes how historic populations modified their physical environments (dams, terraced farming, architectural adjustments) to survive and build communities.

IN REAL LIFE

Traveling through mountainous regions, your child points to terraced hillside steps and notes: “They carved steps into the mountainside so they could retain water and farm rice on steep slopes.”

Grade 4 (Ages 9–10)

Mathematics & Quantitative Reasoning

G4.M-01 Multi-Digit Operational Accuracy & Decimals

Your child can multiply three-digit numbers by two-digit numbers, read decimals to two places (e.g., 3.75), and comfortably round long numbers.

IN REAL LIFE

Planning a group outing, your child works out that 14 tickets at \$25 cost \$350. At the till, they read \$4.75 as four dollars and seventy-five cents without rounding it to five.

G4.M-02 Fractional Computations & Equivalent Variations

Your child can identify equivalent fractions (knowing that $\frac{2}{4}$ is identical to $\frac{1}{2}$) and can add or subtract fractions that have the same bottom number (denominator).

IN REAL LIFE

Doubling a recipe, your child pours $\frac{3}{8}$ cup of oil and then $\frac{2}{8}$ cup more, checks the markings, and says, “That’s $\frac{5}{8}$ altogether.”

G4.M-03 Angular Measurement & Geometric Principles

Your child can identify acute, obtuse, and right angles, and can use a standard physical protractor to measure degrees (°) accurately on geometric plans.

IN REAL LIFE

Your child holds a protractor against a bridge drawing, measures a support at about 45°, and says, “That one is acute because it’s smaller than a right angle.”

Science & Innovation

G4.S-01 Botanical Architecture & Plant Functionality

Your child can explain the exact scientific functions of a plant’s roots, stem, leaves, and flowers, including early concepts of pollination and photosynthesis.

IN REAL LIFE

Watching a bee move between flowers, your child notices yellow dust on its legs and asks, “Is it carrying pollen to the next flower so that one can make seeds?”

G4.S-02 Optical Physics (Light Transmission & Reflection)

Your child understands that light travels in straight lines, can bounce off reflective surfaces, and behaves differently when passing through transparent, translucent, and opaque materials.

IN REAL LIFE

Your child shines a torch through clear glass, baking paper, and a book. They sort them aloud: “All the light, some light, no light. So this one is translucent.”

G4.S-03 Chemical Innovations & Reversible vs. Irreversible Transitions

Your child can distinguish between temporary physical changes (like freezing water) and permanent chemical alterations (like burning wood or baking an egg).

IN REAL LIFE

Poking a campfire, your child asks whether the ash could ever become wood again. They work out that it cannot and say, “So it’s irreversible.”

English & Expressive Literacy

G4.E-01 Persuasive Text Formatting & Rhetoric

Your child can plan, draft, and finalize an essay or pitch explicitly designed to persuade a reader, backing up claims with logical reasons.

IN REAL LIFE

Your child writes a short case for visiting the science museum first, using its opening time, ticket price, and the exhibit everyone wants to see as three reasons.

G4.E-02 Figurative Language Identification

Your child spots and integrates similes, metaphors, and personification within text to extract deeper narrative art.

IN REAL LIFE

While reading, your child catches the phrase “the wind whispered through the trees” and explains: “The author is using personification to make the wind seem alive.”

G4.E-03 Evidence Extraction & Textual Substantiation

When asked about a book or article, your child does not just state an opinion. They go back into the text to locate specific sentences or quotes to support their claims.

IN REAL LIFE

You ask why a character failed a mission, and your child flips the page back and reads: “Right here on page 42, it says he forgot to check the map before heading north. That’s exactly why he got lost.”

Language Acquisition (Second Language)

G4.L-01 Creative Writing & Short Descriptive Paragraphs

Your child can draft 3-4 cohesive sentences in the target language to describe a physical location, a personal memory, or an intended event.

IN REAL LIFE

Your child drafts a brief digital travel message or postcard: “Hier j’ai visité un château. C’était très grand et beau” (Yesterday I visited a castle. It was very big and beautiful).

G4.L-02 Contextual Listening Comprehension

Your child can listen to an uninterrupted broadcast, public announcement, or local story spoken at standard conversational pace and isolate the core informational points.

IN REAL LIFE

Listening to a train platform announcement abroad, your child translates: “They just said our train is delayed by ten minutes and arriving on platform three.”

Global Citizenship & Humanities

G4.C-01 Micro-Economics & Global Supply Chains

Your child understands that objects are rarely built entirely in one place, discovering how global raw materials, shipping routes, and international labor networks link modern economies.

IN REAL LIFE

Reading the tiny print on their shoe, your child finds three different countries named and asks why a single shoe needed all of them.

G4.C-02 Comparative Civil Governance & Laws

Your child notices that different countries utilize distinct models of governance (monarchies, democracies, republics) and can compare how different modern communities establish public legal systems.

IN REAL LIFE

After seeing both a monarch and a prime minister in the news, your child asks which one makes the rules and compares the answer with how leaders are chosen at home.

Grade 5 (Ages 10–11)

Mathematics & Quantitative Reasoning

G5.M-01 Percentage Computations & Rational Conversions

Your child can move fluidly between fractions, decimals, and percentages, and can calculate percentages out of whole amounts during transactions.

IN REAL LIFE

You spot a “30% off” sign in a shop, and your child works out the actual sale price in their head before you reach the till. They might also check whether the “¾ full” fuel gauge really matches 75%.

G5.M-02 Non-Like Denominator Fractional Computations

Your child can add and subtract fractions that possess different bottom numbers by identifying a common denominator first (e.g., computing $\frac{1}{2} + \frac{1}{3}$).

IN REAL LIFE

Combining leftover ingredients, your child figures out that half a bag of rice plus a third of a bag makes five-sixths of a bag: enough for tonight’s dinner, but not tomorrow’s too.

G5.M-03 Dimensional Spatial Measurement (Area, Perimeter, Volume)

Your child can accurately measure and apply geometric formulas to calculate the perimeter and surface area of regular polygons, alongside basic 3D volume parameters ($V = l \times w \times h$).

IN REAL LIFE

Packing for a move or a flight, your child measures a suitcase and calculates whether the box of books will fit. Later, they work out how many litres the guesthouse aquarium holds.

Science & Innovation

G5.S-01 Human Cardio-Respiratory Systems

Your child can explain how the human heart pumps oxygenated blood through blood vessels and how the lungs exchange oxygen and carbon dioxide.

IN REAL LIFE

After a steep hike, your child takes their own pulse, notices their breathing has doubled, and explains why: their muscles needed more oxygen, so the heart and lungs sped up to deliver it.

G5.S-02 Forces in Equilibrium (Gravity, Friction, Magnetism)

Your child can use arrows to diagram balanced and unbalanced physical forces acting on an object, calculating net motion outcomes.

IN REAL LIFE

Watching a loaded scooter or a tug-of-war on the beach, your child sketches the forces with arrows: “Gravity pulls the bags down, friction holds the wheels, and the bigger push wins.”

G5.S-03 Material Separation Mechanics & Solutions

Your child knows how to safely separate mixtures using scientific techniques like evaporation, distillation, filtration, and sieving, identifying soluble vs. insoluble compounds.

IN REAL LIFE

In the kitchen, your child points out that straining pasta is filtration, that salt disappears in water but sand doesn’t, and that the white crust left when seawater dries on rocks is evaporation doing the separating.

English & Expressive Literacy

G5.E-01 Research Report Formulation & Citation Frameworks

Your child can independently research a complex theme, synthesize data from multiple separate books or websites, organize it into a structured report, and compile a clear list of sources (bibliography).

IN REAL LIFE

Curious about sea turtles after a beach encounter, your child reads two books and three websites, writes a structured report on why the nesting numbers are falling, and lists every source at the end.

G5.E-02 Critical Literacy & Intent/Bias Detection

Your child reads news articles, advertisements, or opinion editorials and identifies whether the author is presenting objective facts or trying to manipulate opinions via biased vocabulary.

IN REAL LIFE

Reading hotel reviews or a news article together, your child points out loaded words: “They say ‘cramped,’ but the other review says ‘cozy’ for the same room. One of them is trying to make us feel something.”

Language Acquisition (Second Language)

G5.L-01 Multi-Tense Linguistic Versatility

Your child can naturally alternate between past actions, current situations, and future intentions when speaking or writing in the target language.

IN REAL LIFE

Chatting with a local friend, your child naturally says the equivalent of “Yesterday we visited the waterfall, today we’re resting, and tomorrow we’ll take the bus north,” using three tenses in one breath.

G5.L-02 Self-Sovereign Real-World Transactional Competence

Your child can handle a complex transaction independently, like purchasing specific transit passes or ordering custom meals with ingredient modifications.

IN REAL LIFE

Your child walks up to the counter alone and orders lunch in the target language: no cheese, extra rice, one to take away. They count their change without switching to English.

Global Citizenship & Humanities

G5.C-01 Governance Systems & Civic Structures

Your child understands that communities organize themselves through rules, laws, and leadership. They can compare how decisions get made in different places (a village council, a city government, a national election), including the basic rights and responsibilities people hold.

IN REAL LIFE

After seeing an election poster or a town meeting in a place you’re staying, your child asks how leaders get chosen there and compares it with home: “So here the mayor is appointed, but in our country we vote?”

G5.C-02 Global Trade, Supply Chains & Interdependence

Your child can trace how an everyday product travels from raw material to shelf, including who grows it, who transports it, and who sells it. They can explain how countries depend on one another for things they cannot produce themselves.

IN REAL LIFE

Holding a chocolate bar, your child works backwards: the cacao grew in Ghana, was shipped to a factory in Belgium, and ended up in a market in Mexico. They can explain why the price includes every stop along the way.

The Grade 5 Capstone: The Exhibition & Entrepreneurial Pitch

CP-05-01 Market Validation & Product Conception

Your child can identify a gap or problem in their current community or global travels, survey potential users, and design a product prototype or service concept to solve it.

IN REAL LIFE

Your child notices travelling families constantly losing water bottles, interviews five other kids at the co-work hub, and sketches a clip-on bottle sleeve. Then they ask the same kids whether they would actually buy one.

CP-05-02 Financial Modeling & The Micro-Business Canvas

Your child maps out the core financials of their idea: listing fixed startup costs, calculating the exact cost of production, defining the retail price, and declaring the business's profit margin.

IN REAL LIFE

For their bracelet stall, your child lists the beads and cord costs (\$14), works out each bracelet costs \$1.40 to make, prices them at \$4, and proudly announces a \$2.60 profit per sale.

CP-05-03 The Capstone Pitch Execution

Your child compiles a professional, visually compelling slide deck or physical presentation board and delivers a formal 5-to-10 minute verbal pitch explaining their business, its value proposition, and its financial health.

IN REAL LIFE

Your child stands in front of the camera (or the family dinner table first) with their slide deck and delivers the full pitch: the problem, the product, and the numbers. Then they field questions without a script.

Next: Middle

The Middle Benchmark Guide (Grades 6 to 8 · Ages 11–14) moves from learning the tools to using them through abstraction, real investigation, and independent work that culminates in the Grade 8 Capstone.

FROM MOMENTS TO RECORDS

1 · Capture

Note the real moment as it happens in your words and photos. The original entry is always kept.

2 · Align

Optionally connect a moment to a standard from this guide. You approve every alignment or leave it unaligned. Both are complete records.

3 · Project

Journeys, portfolios, and records are built from what you captured and approved. The keepsake and the record are the same moment.

