

The Cartographer's Journey

K-12 learning roadmap

Planning edition 0.3 | September 29, 2026

This is a plan of topics and their order, not a textbook. It contains 13 levels and 52 proposed unit slots. The two introductory sections currently available provide seven lessons. They do not complete kindergarten. The remaining 50 proposed units need research, detailed instruction, practice, and review.

Four books follow one sequence

The Student Book supplies reading and illustrated explanations. The Adult Teaching Guide supports instruction. The Student Workbook contains matched activities and checks. The Answer and Assessment Guide supplies keys and criteria. Each component uses the same unit and lesson IDs.

Levels and readiness

Grade labels organize increasing complexity, not age deadlines. Beginning readers need adult read-aloud and support. Detailed placement instruments and a comprehensive topic coverage audit remain in development. Proposed demonstrations below are planning targets, not released assessments.

Kindergarten entry

Adult-supported observation, communication, and access adaptations; no independent reading required

Reading and page design

One picture and one concrete idea at a time. Short phrases and sentences, usually 2-6 words. Adult introduces unfamiliar labels; independent reading uses explicitly taught sounds and words.

GEO-K-01 | Position and familiar places

3 introductory lessons available; full strand coverage remains unfinished.

GEO-K-02 | Pictures, symbols, and simple maps

4 introductory lessons available; full strand coverage remains unfinished.

GEO-K-03 | Land and water

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-K-04 | Weather and places people live

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Locate an object relative to a named reference
- Make a simple map and explain its symbols
- Describe an observed difference between a land area and a water area

Research priorities

- Check USGS early map resources for symbol and overhead-view progression
- Select accessible local photographs with accurate land, water, and weather labels

Level 1

Demonstrated prerequisite skills from level K; placement is skill-based

Reading and page design

Short familiar sentences and brief decodable passages. Picture support, repeated sentence patterns, and one clear direction per activity.

GEO-1-01 | Neighborhood maps and routes

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-1-02 | Landforms and bodies of water

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-1-03 | Seasons and local environments

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-1-04 | Places and everyday movement

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Draw a route through a familiar place using a key
- Classify pictured landforms using taught observable features
- Record local seasonal observations without generalizing them to all places

Research priorities

- Verify landform definitions with USGS examples
- Check local seasonal evidence and Southern Hemisphere contrasts with NOAA resources

Level 2

Demonstrated prerequisite skills from level 1; placement is skill-based

Reading and page design

Short paragraphs with familiar vocabulary. Introduce new words beside concrete pictures and examples; support a gradual move from decoding to fluent meaning.

GEO-2-01 | Directions, keys, and map purpose

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-2-02 | Globes, continents, and oceans

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-2-03 | Communities and resources

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-2-04 | Connections between places

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Use a key and cardinal directions on an oriented map
- Locate the continents and oceans using an explicitly named convention
- Trace one documented connection between two communities

Research priorities

- Verify continent and ocean naming conventions and alternate models
- Source community-resource examples without attributing one livelihood to an entire culture

Level 3

Demonstrated prerequisite skills from level 2; placement is skill-based

Reading and page design

Connected paragraphs and short sections. Explain subject words in context; use labeled pictures, simple tables, and worked examples.

GEO-3-01 | Scale and relative location

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-3-02 | Regions of the United States

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-3-03 | Climate, landforms, and livelihoods

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-3-04 | Transportation and settlement

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Use a simple map scale to estimate a distance
- Compare two United States regions using physical and human evidence
- Explain one documented relationship among transport, settlement, and environment

Research priorities

- Check map scale prerequisites against the mathematics sequence
- Select Census and NOAA data with dates and geographic boundaries

Level 4

Demonstrated prerequisite skills from level 3; placement is skill-based

Reading and page design

Several linked paragraphs with headings. Define new terms, explain diagrams, and connect concrete examples to simple generalizations.

GEO-4-01 | Latitude, longitude, and reference maps

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-4-02 | State and local geography

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-4-03 | North American environments

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-4-04 | Population and resource use

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Locate a place using supplied latitude and longitude
- Compare physical and human features of a state and a North American region
- Read a population map and distinguish total population from density

Research priorities

- Verify coordinate conventions and hemispheres with USGS material
- Audit North American examples for Canadian, Mexican, Indigenous, and other regional coverage

Level 5

Demonstrated prerequisite skills from level 4; placement is skill-based

Reading and page design

Longer explanations broken into purposeful sections. Introduce comparisons, multi-step examples, and simple source notes with guided practice.

GEO-5-01 | World regions and map comparison

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-5-02 | Watersheds and land processes

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-5-03 | Biomes and human adaptation

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-5-04 | Trade routes and migration

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Compare two maps of the same world region and explain their purposes
- Trace water through a mapped watershed
- Use evidence to describe a migration or trade connection without treating it as a universal pattern

Research priorities

- Check watershed and biome terminology with USGS and NOAA
- Find dated migration and trade sources and explain what the datasets omit

Level 6

Demonstrated prerequisite skills from level 5; placement is skill-based

Reading and page design

Clear middle-grade prose. Define technical vocabulary, separate facts from inferences, and scaffold multi-step reasoning with diagrams and examples.

GEO-6-01 | Africa and regional diversity

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-6-02 | Southwest Asia and North Africa

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-6-03 | Europe and physical-human systems

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-6-04 | Population maps and field evidence

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Compare places within an African region rather than presenting Africa as uniform
- Describe a physical-human relationship in Europe or Southwest Asia using maps
- Explain a population-map pattern while separating description from proposed cause

Research priorities

- Audit regional boundaries and the overlap of North Africa with Africa
- Choose locally produced or authoritative regional sources alongside global datasets

Level 7

Demonstrated prerequisite skills from level 6; placement is skill-based

Reading and page design

More sustained explanatory reading. Build arguments from evidence and model how to read charts, excerpts, and multi-step procedures.

GEO-7-01 | East, South, and Southeast Asia

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-7-02 | Oceania and Pacific regions

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-7-03 | Latin America and the Caribbean

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-7-04 | Resource distribution and urbanization

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Compare environmental and settlement patterns in two Asian regions
- Describe a Pacific or Latin American case using specific local evidence
- Explain how a resource-distribution map can support and limit an urbanization claim

Research priorities

- Check representation of Indigenous Pacific and Latin American peoples in sources
- Verify resource and urbanization datasets and their units, dates, and uncertainty

Level 8

Demonstrated prerequisite skills from level 7; placement is skill-based

Reading and page design

Longer texts and increasingly independent analysis. Explain abstract ideas through examples before formal language and applications.

GEO-8-01 | Projection, scale, and map distortion

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-8-02 | Global climates and hazards

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-8-03 | Migration and settlement patterns

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-8-04 | Political boundaries and disputed maps

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Identify a distortion produced by a specified map projection
- Explain a mapped hazard using probability and exposure evidence
- Compare boundary depictions and attribute any disputed territorial claim

Research priorities

- Verify projection demonstrations with geodetic sources
- Check hazard terminology and boundary disputes against dated primary institutional records

Level 9

Demonstrated prerequisite skills from level 8; placement is skill-based

Reading and page design

High-school subject prose with precise definitions, worked methods, source context, and explicitly labeled interpretation.

GEO-9-01 | Geographic inquiry and GIS foundations

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-9-02 | Physical systems and spatial data

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-9-03 | Culture, identity, and place

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-9-04 | Population and development indicators

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Create a simple GIS map with a stated coordinate system and source
- Compare development indicators without equating an average with every resident
- Support a place-based explanation with both physical and human data

Research priorities

- Check GIS tool licensing, accessibility, and data provenance
- Verify indicator definitions and limitations with their original statistical agencies

Level 10

Demonstrated prerequisite skills from level 9; placement is skill-based

Reading and page design

Extended explanations and evidence comparison. Scaffold unfamiliar specialist terms while increasing independent synthesis and application.

GEO-10-01 | Agriculture and land-use systems

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-10-02 | Cities and infrastructure

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-10-03 | Economic networks and globalization

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-10-04 | Environmental change and risk

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Compare land-use patterns using a consistent spatial scale
- Trace an economic network through documented exchanges
- Distinguish hazard, exposure, and vulnerability in an environmental-risk case

Research priorities

- Source comparable land-use and infrastructure data with collection dates
- Check causal claims about globalization and environmental change against research evidence

Level 11

Demonstrated prerequisite skills from level 10; placement is skill-based

Reading and page design

Sustained analysis, complex sources, and multi-step projects. Explain assumptions, limits, and alternative interpretations supported by evidence.

GEO-11-01 | Remote sensing and cartography

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-11-02 | Water, energy, and resource decisions

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-11-03 | Geopolitics and regional case studies

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-11-04 | Fieldwork, sampling, and uncertainty

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Interpret a remote-sensing image while identifying resolution limits
- Compare water or energy options with an explicit evidence table
- Design field sampling and identify a likely source of uncertainty

Research priorities

- Verify sensor bands, resolution, and processing descriptions with NASA or USGS
- Check fieldwork permissions, sampling methods, and location-privacy protections

Level 12

Demonstrated prerequisite skills from level 11; placement is skill-based

Reading and page design

Advanced secondary reading and independent inquiry. Use precise subject language, transparent sources, and capstone applications; optional extensions remain labeled.

GEO-12-01 | Geospatial analysis and accessibility

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-12-02 | Comparative regional research

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-12-03 | Geographic models and ethical data use

Planned. Topic research, lessons, exercises, and assessments are not yet released.

GEO-12-04 | Evidence-based geographic capstone

Planned. Topic research, lessons, exercises, and assessments are not yet released.

Proposed demonstrations

- Analyze a spatial question with reproducible data steps
- Compare regional findings while accounting for scale and data gaps
- Present a geographic capstone with sources, uncertainty, and an accessible map

Research priorities

- Check dataset licenses and potential disclosure of sensitive locations
- Audit the full sequence for Arctic, Antarctic, and regional coverage gaps

Research and production gates

Each future topic requires authoritative evidence, explicit prerequisites, taught-before-tested content, cumulative practice, keyed assessment, illustrations that support the concept, and editorial and educational review. Framework references do not establish full coverage. No complete KDP edition is ready.

Sources for current sections

USGS - Map Adventures

USGS identifies this map-education resource as appropriate for K-3. Different viewpoints, symbols, and simple maps inform original tabletop activities. Individual learners still require supported practice; the resource does not validate complete kindergarten coverage.

<https://www.usgs.gov/educational-resources/map-adventures>

USGS - What do maps show?

Background support for map selection and keys; not a kindergarten readability model. The 1994 publication record corresponds to a poster bearing 1993. Original child pages use familiar objects and adult-supported diagrams.

<https://www.usgs.gov/publications/what-do-maps-show>

Office of Head Start - Interactive Early Learning Outcomes Framework: Ages Birth to Five

Early-childhood guidance informs adult support, concrete exploration, and communication options. The original Academy sequence does not adopt a standards framework. This birth-to-five resource does not establish full kindergarten coverage, independent reading readiness, or grade-by-grade validation for later levels.

<https://www.headstart.gov/interactive-head-start-early-learning-outcomes-framework-ages-birth-five>