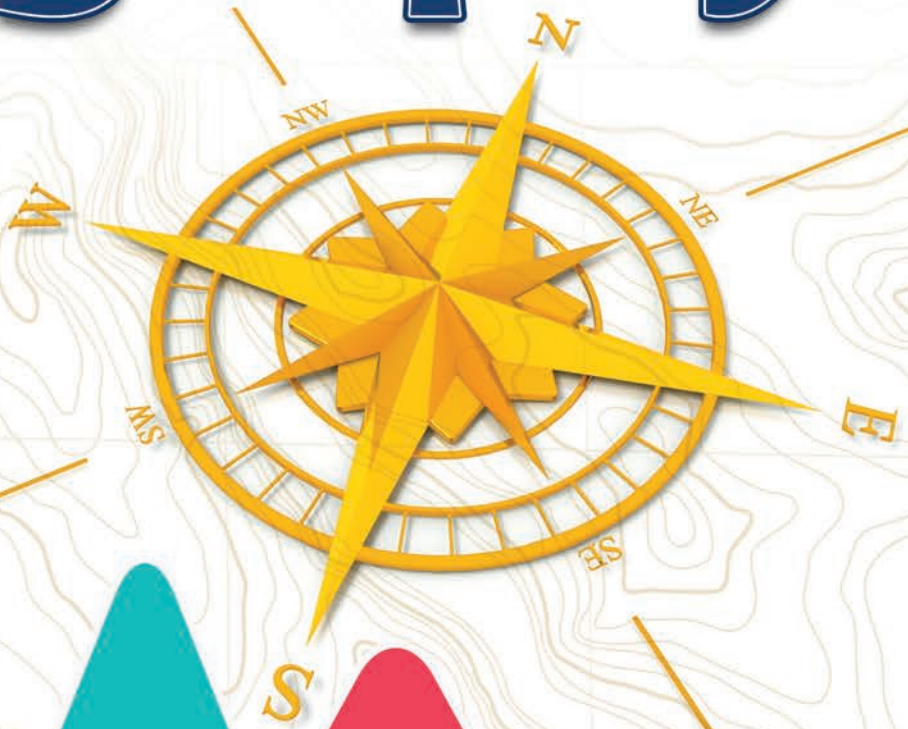
CAREER PATHS

Geography

Sarah Hendrickson
Jenny Dooley



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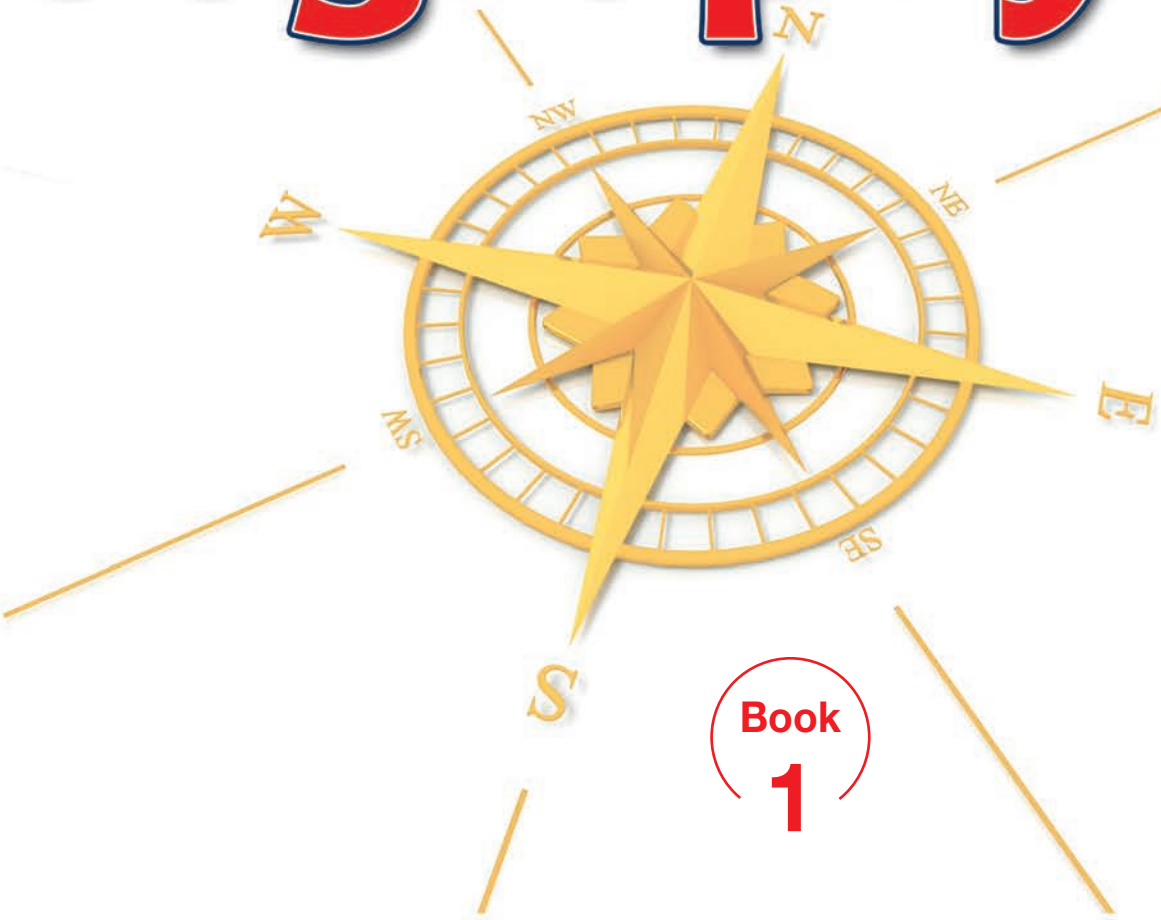
CAREER PATHS

Geography



Book 1

Jenny Dooley
Sarah Hendrickson

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Scope and Sequence

Unit	Topic	Reading context	Vocabulary	Function
1	The Earth System	Webpage	critical, dependent, Earth system, interconnected, life-support system, limited, natural resource, survive, variable, worldwide	Giving an example
2	Spheres	Textbook chapter	atmosphere, biosphere, crust, hydrosphere, interact, lithosphere, overlap, physical, stratosphere, troposphere	Recalling information
3	Parts of the Earth	Poster	angle of inclination, axis, circumference, curvature, equator, globe, horizon, plane of the elliptic, pole, spheroid, tilted	Expressing an intention
4	Movements of the Earth	Flyer	alternate, aphelion, elliptical, orbit, perihelion, revolve, rotate, season, solar system, variation	Seeking confirmation
5	Measurements	Note	acre, area, Celsius, convert, distance, Fahrenheit, hectare, imperial, kelvin, kilometer, metric, mile, temperature	Questioning accuracy
6	Numbers and Basic Math	Table	add, divide by, equal, -hundred, less, minus, multiply by, over, plus, subtract, times	Realizing a mistake
7	Large Numbers	Email	cubed, exponent, integer, leading zero, place, pi, rounding error, scientific notation, significant figure, squared, to the nth power, trailing zero	Pointing out an error
8	Analyzing Quantities	Guide	decimal number, fraction, improper fraction, mixed number, -out of-, percent, point, quantity, reduce, whole number	Expressing surprise
9	Describing Change	Article	climb, decrease, decline, expand, fluctuate, increase, plummet, rise, shrink, stabilize	Expressing concern
10	Properties of Matter	Textbook chapter	atom, compound, electron, element, ion, matter, molecule, neutron, proton, subatomic particle	Expressing confusion
11	Energy	Poster	chemical energy, conserve, energy, heat, kinetic energy, potential energy, release, thermal energy, transfer, work	Asking for information
12	Maps	Syllabus	atlas, cardinal direction, cartography, compass, direction, globe, grid, legend, map, point of reference, scale, title	Showing agreement
13	Map Measurements	Textbook chapter	altitude, coordinate system, degree, latitude, longitude, meridian, minute, parallel, prime meridian, second	Realizing a misconception
14	Map Projections	Encyclopedia article	azimuthal projection, combination projection, condensation, conic projection, cylindrical projection, disproportionate, great circle, interrupted projection, map projection, planar projection, property of location, rhumb line	Expressing interest
15	Challenges with Maps	Blog post	conformal, detail, distort, equal-area, equidistance, limitation, negligible, practical, relationship, symbolic	Seeking confirmation

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Unit 6 – Numbers and Basic Math 14

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Unit 8 – Analyzing Quantities 18

Unit 9 – Describing Change 20

Unit 10 – Properties of Matter 22

Unit 11 – Energy 24

Unit 12 – Maps 26

Unit 13 – Map Measurements 28

Unit 14 – Map Projections 30

Unit 15 – Challenges with Maps 32

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1 The Earth System

Get ready!

1 Before you read the passage, talk about these questions.

1 What is the Earth system?
2 What areas of study are included in geography?

Standish University

Departments

Geography

Are you interested in a broad science education? Join the Geography Department!

Geography covers all areas of the **Earth system**. Some departments just focus on life sciences or physical sciences. Geographers recognize that these subjects are **interconnected**. That is, all of the Earth's processes are **dependent** on many **variables**. Humans, for example, need particular conditions to **survive**. For one, we need a consistent **life-support system**. And we also need access to many **natural resources**. Of course, these resources become more and more **limited** every day.

In Geography, students learn about these **critical** factors and how to address complex, **worldwide** problems. We prepare our graduates to improve the world!

Reading

2 Read the webpage. Then, mark the following statements as true (T) or false (F).

1 __ The Geography Department covers multiple sciences.
2 __ According to the webpage, the destruction of life-support systems is a worldwide problem.
3 __ Geography students learn about issues facing the entire world.

Vocabulary

3 Match the words or phrases (1-6) with the definitions (A-F).

1 __ survive
2 __ limited
3 __ dependent
4 __ worldwide
5 __ Earth system
6 __ natural resource

A requiring something else in order to function
B a huge set of interconnected processes that work together
C a substance or process in nature that people use
D applying to the entire Earth or many parts of it
E not widely available
F to remain alive

4 **Read the sentence pairs. Choose which word or phrase best fits each blank.**

1 **critical / interconnected**

A Water is a(n) _____ factor for human survival.

B Many systems on Earth are _____ with each other.

2 **life-support system / variable**

A Humans are just one _____ in the Earth system.

B The _____ includes all the sources of food on Earth.

5 **Listen to and read the webpage again. How are humans dependent on the Earth system?**

Listening

6 **Listen to a conversation between an advisor and a student. Choose the correct answers.**

1 What is the conversation mostly about?

A areas of geography that interest the woman

B a recent research project on geographic principles

C the relationship between geography and languages

D required courses for geography majors

2 What does the man recommend?

A talking to political science majors

B visiting the geography department

C learning more about life sciences

D writing an essay about natural resources

7 **Listen again and complete the conversation.**

Advisor: Okay, Greta. Let's talk about selecting a major. Last time, we discussed **1** _____ _____.

Student: That still interests me. But I'm **2** _____ _____ in environmental issues.

Advisor: You'd like to study the role humans played in the **3** _____ _____?

Student: Yes. For instance, I know that we're facing issues with **4** _____ _____.

Advisor: Certainly. They're limited, and we're using them **5** _____ _____.

Student: Right. For humans **6** _____ _____, we must be careful. Can you make a recommendation about what major addresses those concerns?

Speaking

8 **With a partner, act out the roles below based on Task 7. Then, switch roles.**

USE LANGUAGE SUCH AS:

Lets talk about ...

For instance, ...

I'd suggest ...

Student A: You are an advisor. Talk to Student B about:

- his or her interests
- how the interests relate to geography
- your recommendations

Student B: You are a student. Talk to Student A about your interests.

Writing

9 **Use the conversation from Task 8 to complete the email.**

INBOX OUTBOX CONTACTS LOG OUT

Dear Glenn,

It's time to choose a major. Last time we spoke, you mentioned that you enjoy _____.

I know you also like _____.

The Geography Department has some great courses. For example, there's a course on _____.

Let me know what you think about majoring in Geography.

Stephanie Pecos
Academic Advisor

CAREER PATHS

Geography

Book 2

Jenny Dooley
Sarah Hendrickson

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Scope and Sequence

Unit	Topic	Reading context	Vocabulary	Function
1	The Scientific Method	Report	conclusion, control group, experiment, experimental group, hypothesis, independent variable, observation, problem, result, scientific method, testable	Expressing an opinion
2	Systems 1	Poster	accounting, closed system, consumption, extensive quantity, final, generation, initial, input, intensive quantity, open system, output, Universal Accounting Equation (UAE)	Expressing confusion
3	Systems 2	Lecture notes	adjust, balance, counteract, dynamic equilibrium, energy system, influence, materials system, negative feedback, positive feedback, regulate, reinforce, subsystem	Giving a reminder
4	Landforms	Brochure	canyon, escarpment, glacier, hill, island, mountain, peninsula, plain, plateau, relief, valley	Making a recommendation
5	Plate Tectonics	Textbook chapter	continental, continental drift, convergent boundary, divergent boundary, earthquake, fault, oceanic, plate, plate tectonics, seafloor spreading, seismology, subduction, transform boundary, volcano	Making an assumption
6	The Rock Cycle	Poster	aggregate, consolidation, crystallization, erode, igneous rock, lithification, magma, melt, metamorphic rock, metamorphism, pressure, rock, rock cycle, sedimentary rock	Clarifying a point
7	Minerals	Report	calcite, carbonate, cleavage, color, composition, crystalline, hematite, inorganic, luster, magnetite, metallic, mineral, naturally occurring, quartz, range, silicate	Discussing pros and cons
8	Soil	Report	clay, fertile, grain, gravel, humus, leaching, parent material, regolith, sand, sediment, soil, subsoil, topsoil, vegetation, viability	Responding to good news
9	Water	Webpage	aquifer, flow, groundwater, lake, pond, river, spring, stream, subsidence, tributary, water table, well	Inquiring about results
10	The Hydrologic Cycle	Article	advection, cloud formation, condensation, evaporation, hydrologic cycle, ice, infiltration, liquid, precipitation, sublimation, transpiration, vapor	Making a realization
11	Atmospheric Processes	Weather report	atmospheric pressure, cloud, cyclone, dew, fog, hail, humidity, jet stream, prevailing wind, rain, sleet, snow, trade wind, wind	Describing consequences
12	Climate Zones 1	Encyclopedia article	annual range, arid, climate, daily range, desert climate, humid, microclimate, moisture, monsoon climate, rainforest climate, region, steppe climate, tropical climate	Correcting a false impression
13	Climate Zones 2	Cover letter	elevation, humid mesothermal, humid microthermal, humid subtropical, Mediterranean, mild, moderate, polar tundra, range, subarctic, temperate oceanic, zone of transition	Expressing lack of knowledge
14	Seasons	Textbook chapter	Antarctic Circle, Arctic Circle, daylight, darkness, equinox, hemisphere, incline, oblique ray, solstice, Tropic of Cancer, Tropic of Capricorn, vertical ray, weather	Recalling information
15	Time Zones	Column	central meridian, confusion, daylight-saving time, frame of reference, Greenwich Mean Time (GMT), International Date Line, jog, political boundary, solar noon, standard time, time zone, Universal Time	Expressing doubt

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CAREER PATHS

Geography

Book 3

Jenny Dooley
Sarah Hendrickson

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Scope and Sequence

Unit	Topic	Reading context	Vocabulary	Function
1	Ecosystems	Lecture notes	abiotic, autotroph, biome, biotic, carnivore, decomposer, detritivore, ecosystem, food chain, food web, herbivore, heterotroph, nekton, omnivore, organism, phytoplankton, trophic level	Asking for an explanation
2	Forests	Textbook chapter	canopy, coniferous, deciduous, evergreen, forest, forest floor, jungle, leaf, mangrove, needle, perennial, scrub, taiga	Expressing uncertainty
3	Grasslands	Encyclopedia article	annual, domesticated, grassland, grazing, irrigation, midlatitude grassland, prairie, resistant, savanna, shallow, steppe, tuft	Drawing a conclusion
4	Deserts	Brochure	combat, desert, dormant, drought, ephemeral, evolve, expandable, fleshy, germinate, non-xerophytic, root system, trigger, waxy, succulent, thorny, xerophyte	Asking for additional information
5	Arctic Regions	Webpage	absorb, alpine tundra, arctic tundra, ice cap, iceberg, influx, ocean basin, permafrost, reflect, sea ice, solar radiation, subfreezing, thaw, tolerate, waterlogged	Showing understanding
6	Aquatic Systems	Webpage	adaptation, algae, aquatic, benthic community, biomass, concentrated, conditioning, detritus, dissolved, excess, filter, filter feeder, freshwater, nutrient, ocean floor, saltwater, sustain	Describing consequences
7	Fresh Water	Brochure	alarming, dam, disrupt, fertilizer, fragile, invasive species, nonpoint-source pollution, overexploitation, overfishing, pesticide, point-source pollution, runoff, sustainable, water diversion	Giving attribution
8	Coastal Regions	Letter to the editor	barrier island, beach, coastline, complex, coral reef, dune, erosion, lagoon, marsh, migratory, modify, reef community, sediment, wetland	Asking for suggestions
9	Cultural Geography	Course description	continent, culture, functional, interact, layout, realm, social structure, spatial perspective, telecommunications network, transportation, urban structure	Giving an explanation
10	Geopolitics 1	Textbook chapter	absolute location, adjacent, boundary, define, formal region, functional region, hinterland, homogeneity, man-made, relative location, rural, satellite, spatial system, urban	Describing a process
11	Geopolitics 2	Webpage	agriculture, allied, conflict, developed, developing, global society, government, infrastructure, isolation, resources, right, state, trade, war	Expressing an intention
12	Human Impact 1	Article	boom, cluster, concentration, demographic, distribution, fertile basin, industrialized, inhabitant, landmass, population, population density, sparse, urbanized	Making a prediction
13	Human Impact 2	Article	acid rain, alter, climate change, deforestation, desertification, deteriorate, environmental, greenhouse effect, harness, ozone layer, pollution, ultraviolet radiation, wasteland	Expressing dismay
14	Higher Education	Cover letter	bachelor's degree, biology, chemistry, geology, graduate, history, in the field, interdisciplinary, lab, master's degree, PhD, physics, physical sciences, social science, undergraduate	Giving good news
15	Careers	Webpage	area specialist, cartographer, education, emergency management, environmental planner, GIS, government agency, location analyst, nonprofit, private sector, researcher, remote sensing, resource evaluation, transportation planner, urban planner	Discussing options

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