

GS-0150 Geography

U.S. Department of the Interior

Office of Human Capital

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Geography Competency Model

Table of Contents

GEOGRAPHY Competency Model Study Summary	3
Table 1: General Competencies for Assessment and Selection.....	4
Table 2: Required Proficiency Levels for Competencies	6
Table 3: Behavioral Examples for Competencies.....	8
Table 4: Competencies by Assessment Tool	15
Table 5: Technical Competencies for Assessment and Selection.....	18
Appendix A: General Competency Definitions	19
Appendix B: Technical Competency Definitions	22
Appendix C: Tasks for GEOGRAPHY Work	25

GEORGRAPHY Competency Model Study Summary

The DOI Office of Human Capital (OHC) conducted a comprehensive study to identify the critical competencies and tasks for successful performance of Geography work across the Department. OHC worked with Geography subject matter experts from across the Department in order to create a thorough and accurate representation of the work performed by DOI Geography professionals and the knowledge, skills, and abilities required to perform that work.

The study involved a variation of the U.S. Office of Personnel Management's Multipurpose Occupational Systems Analysis Inventory – Closed-Ended (MOSAIC) method for gathering and analyzing information about work. The MOSAIC approach has been utilized to study and describe work performed within the Federal Government for over 25 years. The study included a wide-ranging literature review to build lists of tasks and competencies used to describe Geography work across the Department. Next, focus groups with DOI Geography subject matter experts were held to ensure these lists were complete and accurately represented the job. A trained job analyst also linked each task to competencies to confirm they were required to perform the work. DOI Geography professionals rated the tasks and competencies to demonstrate the importance and utility of each component of the study. Finally, Geography subject matter experts reviewed the results of the study to ensure its accuracy.

The results of this study establish a common set of Geography tasks and competencies across the Department, which can be used to create assessment and selection techniques and tools and establish common practices and terminology for recruitment, performance management, workforce planning, training, and employee development. This work provides DOI with current, validated information that can be used to ensure its Geography workforce has the tools to meet future challenges.

Please reference the Competency Model Interpretive Guidance for assistance in interpreting and applying the results of this study.

Geography Competency Model

Table 1: General Competencies by Grade¹

The following general competencies are valid for assessment and selection, performance management, and other related human capital functions across the Geography occupational series included in this study at the grade levels listed below.

¹ Italics represent the lowest grade at which the competency appears.

Geography Competency Model

GS-5	GS-7	GS-9	GS-11
<ul style="list-style-type: none"> • <i>Computer Skills</i> • <i>Continual Learning (3)</i> • <i>Integrity/Honesty (‡)</i> • <i>Interpersonal Skills</i> • <i>Reading Comprehension</i> • <i>Reasoning</i> • <i>Technology Application</i> 	<ul style="list-style-type: none"> • <i>Arithmetic/Mathematical</i> • <i>Reasoning</i> • <i>Computer Skills</i> • <i>Continual Learning (3)</i> • <i>Creative Thinking</i> • <i>Customer Service (‡)</i> • <i>Flexibility</i> • <i>Integrity/Honesty (‡)</i> • <i>Interpersonal Skills</i> • <i>Reading Comprehension</i> • <i>Reasoning</i> • <i>Spatial Orientation</i> • <i>Teamwork (2)</i> • <i>Technology Application</i> 	<ul style="list-style-type: none"> • <i>Accountability</i> • <i>Arithmetic/Mathematical Reasoning</i> • <i>Computer Skills</i> • <i>Continual Learning (3)</i> • <i>Creative Thinking</i> • <i>Customer Service (‡)</i> • <i>Flexibility</i> • <i>Decision Making</i> • <i>Information Management</i> • <i>Integrity/Honesty (‡)</i> • <i>Interpersonal Skills</i> • <i>Oral Communication (2)</i> • <i>Problem Solving (‡)</i> • <i>Reading Comprehension</i> • <i>Reasoning</i> • <i>Resilience</i> • <i>Self-management</i> • <i>Spatial Orientation</i> • <i>Teamwork (2)</i> • <i>Technology Application</i> • <i>Writing</i> 	<ul style="list-style-type: none"> • <i>Accountability</i> • <i>Arithmetic/Mathematical Reasoning</i> • <i>Computer Skills</i> • <i>Conflict Management</i> • <i>Continual Learning (3)</i> • <i>Creative Thinking</i> • <i>Customer Service (‡)</i> • <i>Flexibility</i> • <i>Decision Making</i> • <i>Information Management</i> • <i>Integrity/Honesty (‡)</i> • <i>Interpersonal Skills</i> • <i>Oral Communication (2)</i> • <i>Organization Awareness</i> • <i>Partnering</i> • <i>Planning and Evaluating</i> • <i>Problem Solving (‡)</i> • <i>Reading Comprehension</i> • <i>Reasoning</i> • <i>Resilience</i> • <i>Self-management</i>

Geography Competency Model

			<ul style="list-style-type: none"> • Spatial Orientation • Teamwork (2) • Technology Application • Writing
GS-12	GS-13	GS-14	GS-15
<ul style="list-style-type: none"> • Accountability • Arithmetic/Mathematical Reasoning • Computer Skills • Conflict Management • Creative Thinking • Customer Service (‡) • Decision Making • <i>Entrepreneurship</i> • <i>External Awareness</i> (2) • Flexibility • <i>Influencing/Negotiating</i> (‡) • Information Management • Integrity/Honesty (‡) • Interpersonal Skills • Oral Communication (2) • Organization Awareness • Partnering • Planning and Evaluating • Reading Comprehension 	<ul style="list-style-type: none"> • Accountability • Arithmetic/Mathematical Reasoning • Computer Skills • Conflict Management • Continual Learning (3) • Creative Thinking • Customer Service (‡) • Decision Making • Entrepreneurship • External Awareness (2) • Flexibility • Influencing/Negotiating (‡) • Information Management • Integrity/Honesty (‡) • Interpersonal Skills • Oral Communication (2) • Organization Awareness • Partnering 	<ul style="list-style-type: none"> • Accountability • Arithmetic/Mathematical Reasoning • Computer Skills • Conflict Management • Continual Learning (3) • Creative Thinking • Customer Service (‡) • Decision Making • Entrepreneurship • External Awareness (2) • Flexibility • Influencing/Negotiating (‡) • Information Management • Integrity/Honesty (‡) • Interpersonal Skills • Oral Communication (2) • Organization Awareness • Partnering 	<ul style="list-style-type: none"> • Accountability • Arithmetic/Mathematical Reasoning • Computer Skills • Conflict Management • Continual Learning (3) • Creative Thinking • Customer Service (‡) • Decision Making • Entrepreneurship • External Awareness (2) • Flexibility • Influencing/Negotiating (‡) • Information Management • Integrity/Honesty (‡) • Interpersonal Skills • Oral Communication (2) • Organization Awareness • Partnering

Geography Competency Model

<ul style="list-style-type: none"> • Problem Solving (‡) • Reasoning • Resilience • Self-management • Spatial Orientation • Teamwork (2) • Technology Application • Writing 	<ul style="list-style-type: none"> • Planning and Evaluating • Political Savvy • Problem Solving (‡) • Reading Comprehension • Reasoning • Resilience • Self-management • Spatial Orientation • <i>Strategic Thinking</i> • Teamwork (2) • Technology Application • Writing 	<ul style="list-style-type: none"> • Planning and Evaluating • Problem Solving (‡) • Reading Comprehension • Reasoning • Resilience • Self-management • Spatial Orientation • Strategic Thinking • Teamwork (2) • Technology Application • Writing 	<ul style="list-style-type: none"> • Planning and Evaluating • Problem Solving (‡) • Reading Comprehension • Reasoning • Resilience • Self-management • Spatial Orientation • Strategic Thinking • Teamwork (2) • Technology Application • Writing
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Geography Competency Model

Table 2: Required Proficiency Levels by Grade Level

Proficiency Level Scale Definitions

Proficiency Level	General Competencies	Technical Competencies
5 = Expert	<ul style="list-style-type: none"> • Applies the competency in exceptionally difficult situations • Serves as a key resource and advises others 	<ul style="list-style-type: none"> • Applies the competency in exceptionally difficult situations • Serves as a key resource and advises others • Demonstrates comprehensive expert understanding of concepts and processes
4 = Advanced	<ul style="list-style-type: none"> • Applies the competency in considerably difficult situations • Generally requires little or no guidance 	<ul style="list-style-type: none"> • Applies the competency in considerably difficult situations • Generally requires little or no guidance • Demonstrates understanding of concepts and processes
3 = Intermediate	<ul style="list-style-type: none"> • Applies the competency in difficult situations • Requires occasional guidance 	<ul style="list-style-type: none"> • Applies the competency in difficult situations • Requires occasional guidance • Demonstrates understanding of concepts and processes
2 = Basic	<ul style="list-style-type: none"> • Applies the competency in somewhat difficult situations • Requires frequent guidance 	<ul style="list-style-type: none"> • Applies the competency in somewhat difficult situations • Requires frequent guidance • Demonstrates familiarity with concepts and processes
1 = Awareness	<ul style="list-style-type: none"> • Applies the competency in simplest situations • Requires close and extensive guidance 	<ul style="list-style-type: none"> • Applies the competency in simplest situations • Requires close and extensive guidance • Demonstrates awareness of concepts and processes

Geography Competency Model

Table 2: Required Proficiency Levels of General Competencies²

	GS-5	GS-7	GS-9	GS-11	GS-12	GS-13	GS-14	GS-15
Accountability			3	3	4	4	5	5
Arithmetic/Mathematical Reasoning		3	4	5	5	4	4	4
Computer Skills	3	3	4	5	5	4	4	4
Conflict Management				3	4	4	5	5
Continual Learning (3)	2	3	3	3	4	5	4	4
Creative Thinking		1	2	3	4	4	5	5
Customer Service (‡)		2	3	3	4	4	5	5
Decision Making			2	3	4	4	5	5
Entrepreneurship					3	4	4	4
External Awareness (2)					3	4	4	5
Flexibility		2	3	4	4	4	4	5
Influencing/Negotiating (‡)					3	4	4	5
Information Management			2	3	4	4	4	4
Integrity/Honesty (‡)	3	3	3	4	4	4	4	5
Interpersonal Skills	2	2	3	3	4	4	5	5
Oral Communication (2)			2	3	4	4	5	5
Organizational Awareness				1	2	3	3	3
Partnering				2	2	3	4	5
Planning and Evaluating				3	4	4	5	5
Political Savvy						3	4	5
Problem Solving (‡)			2	3	4	4	5	5
Reading Comprehension	2	2	3	4	4	4	5	5
Reasoning	2	2	2	3	4	5	5	5
Resilience			2	3	4	4	5	5
Self-Management			3	3	4	4	5	5
Spatial Orientation		3	3	4	4	5	5	5
Strategic Thinking						4	4	5
Teamwork (2)		2	3	3	4	4	5	5
Technology Application	1	2	3	3	4	4	4	4
Writing			2	3	4	4	5	5

² Bolded competencies are validated for use for assessment and selection purposes.

Geography Competency Model

Table 3: Behavioral Examples for Competencies

Competency Name	Definitions
Accountability	<p>Holds self and others accountable for measurable high-quality, timely, and cost-effective results. Determines objectives, sets priorities, and delegates work. Accepts responsibility for mistakes. Complies with established control systems and rules.</p> <ul style="list-style-type: none"> • <i>Takes responsibility for results and work products</i> • <i>Ensures work is completed on time and at the level of quality required</i> • <i>Understands the rules and regulations of the work performed and ensures compliance with them</i> • <i>Demonstrates responsibility with important materials, critical processes, or confidential information</i>
Arithmetic/Mathematical Reasoning	<p>Performs computations such as addition, subtraction, multiplication, and division correctly; solves practical problems by choosing appropriately from a variety of mathematical techniques such as formulas and percentages.</p> <ul style="list-style-type: none"> • <i>Accurately performs complex mathematical computations, including advanced formulas, percentages, and multi-step problem-solving, with high precision and efficiency.</i> • <i>Proactively identifies the most effective mathematical techniques for solving practical problems, optimizing accuracy and time management.</i> • <i>Demonstrates strong logical reasoning in applying mathematical concepts to real-world situations and effectively communicates solutions to others.</i> • <i>Appropriately selects and applies mathematical formulas or techniques, such as percentages and averages, to solve problems effectively.</i> • <i>Understands mathematical reasoning well enough to interpret and analyze numerical data in practical scenarios.</i>
Computer Skills	<p>Uses computers, software applications, databases, and automated systems to accomplish work.</p> <ul style="list-style-type: none"> • <i>Expertly navigates various software applications and automated systems, utilizing advanced features to enhance productivity.</i> • <i>Quickly adapts to new technologies, proactively learning and implementing best practices to improve workflows.</i> • <i>Effectively integrates multiple digital tools to optimize efficiency and accuracy in work tasks.</i> • <i>Proficiently uses standard computer applications (e.g., word processing, spreadsheets, databases) to complete tasks accurately.</i> • <i>Learns and applies new software or digital processes with minimal guidance.</i> • <i>Successfully follows digital workflows and resolves common technical issues independently.</i> • <i>Uses automation tools and databases efficiently to manage and process information.</i>

Geography Competency Model

Conflict Management	<p>Manages and resolves conflicts, grievances, confrontations, or disagreements in a constructive manner to minimize negative personal impact.</p> <ul style="list-style-type: none"> • Ensures disagreements between two or more parties remain civil • Effectively uses conflict resolution techniques to allow for productive discussion of potential solutions between disagreeing parties • Addresses grievances or disagreements and brokers accord and respect
Continual Learning (3)	<p>Assesses and recognizes own strengths and weaknesses; pursues new knowledge and skill-development.</p> <ul style="list-style-type: none"> • Takes honest inventory of own strengths and weaknesses • Identifies personal skill gaps or areas for development • Actively identifies and pursues training or developmental opportunities • Seeks out feedback from others on performance • Displays a desire to learn new things or new ways of accomplishing tasks
Creative Thinking	<p>Uses imagination to develop new insights into situations and applies innovative solutions to problems; designs new methods where established methods and procedures are inapplicable or are unavailable.</p> <ul style="list-style-type: none"> • Creates a work environment that encourages creative thinking and innovation • Explores new ideas, methodologies, and alternatives to reach outcomes • Introduces new concepts or strategies that significantly improve or revise the way work is performed • Suggests or proposes alternative ways to view or define problems; is not constrained by conventional thinking and established approaches • Combines ideas in unique ways or makes connections between disparate ideas
Customer Service (‡)	<p>Anticipates and meets the needs of General internal and external customers. Delivers high-quality products and services; is committed to continuous improvement.</p> <ul style="list-style-type: none"> • Commits to serving the public and understands their advisory role • Utilizes outreach, needs assessment, evaluation, and other marketing skills to identify and anticipate customer needs and provide exemplary customer service • Understands diverse customer groups, their perspectives, issues and needs • Works to ensure customers' needs are met, even when those needs are outside of the typical role of the position • Identifies and develops metrics to assess customer service satisfaction • Continuously improves products and services • Works and plans strategically, using a systems perspective to anticipate developing customer issues and needs and to provide timely solutions that focus on long-term benefits

Geography Competency Model

Decision Making	<p>Makes sound, well-informed, and objective decisions; perceives the impact and implications of decisions; commits to action, even in uncertain situations, to accomplish organizational goals; causes change.</p> <ul style="list-style-type: none"> <i>Decides on the best course of action, even in situations with competing stakeholders or when results of decisions are not immediately clear</i> <i>Weighs the pros and cons of potential decisions before choosing which actions to take</i> <i>Commits to determining the best alternatives and evaluating their impact on work products</i> <i>Uses sound methodology in reaching conclusions</i>
Entrepreneurship	<p>Positions the organization for future success by identifying new opportunities; builds the organization by developing or improving products or services. Takes calculated risks to accomplish organizational objectives.</p> <ul style="list-style-type: none"> <i>Is aware of organizational and programmatic goals and seeks avenues to enhance goal achievement.</i> <i>Considers overall structures, patterns, and cycles in the organization/systems, and uses assessment, analysis, and evaluation methodologies to define metrics and standards of performance.</i> <i>Streamlines operations for maximum efficiency, automation, and effectiveness where appropriate.</i> <i>Incorporates an awareness of current and future management directives, required functional and technical expertise, resource requirements, and targeted stakeholders into work plans.</i>
External Awareness (2)	<p>Understands and keeps up to date on local, national, and international policies and trends that affect the organization and shape stakeholders' views; is aware of the organization's impact on the external environment.</p> <ul style="list-style-type: none"> <i>Stays abreast of current events</i> <i>Monitors trends and identifies ways in which they may affect work processes or decisions</i> <i>Understands how the organization is situated within the economic, political, or social landscapes</i> <i>Identifies potential external influences or influencers on the organization</i>
Flexibility	<p>Is open to change and new information; adapts behavior or work methods in response to new information, changing conditions, or unexpected obstacles; effectively deals with ambiguity.</p> <ul style="list-style-type: none"> <i>Effectively adjusts strategies or course of action in response to changing conditions</i> <i>Makes quality decisions when faced with ambiguous situations</i> <i>Is willing to incorporate new information into decision making process</i> <i>Adapts behavior to overcome challenges</i>
Influencing/Negotiating (‡)	<p>Persuades others; builds consensus through give and take; gains cooperation from others to obtain information and accomplish goals.</p> <p><i>Persuades and influences parties to cooperate and accept recommendations</i></p> <ul style="list-style-type: none"> <i>Explains and clarifies perspectives of an issue and its impact on all parties</i> <i>Negotiates to achieve consensus through changed opinion, attitude or behavior</i> <i>Demonstrates logic, communicates and persuades others to see benefits of recommendations within and across groups</i> <i>Understands all sides of an issue and its impact on all parties involved</i> <i>Negotiates with individuals or groups, including those that are resistant, to consider cooperating in order to achieve an acceptable solution</i>

Geography Competency Model

Information Management	Identifies a need for and knows where or how to gather information; organizes and maintains information or information management systems. <ul style="list-style-type: none"> • <i>Demonstrates an understanding of where and how data or other information are maintained</i> • <i>Shows familiarity with the information management systems of the organization</i> • <i>Effectively searches for and finds appropriate information to address the needs of a project</i> • <i>Uses discretion when handling sensitive content</i>
Integrity/Honesty (†)	Behaves in an honest, fair, and ethical manner. Shows consistency in words and actions. Models high standards of ethics. <ul style="list-style-type: none"> • <i>Takes pride in exhibiting personal and organizational integrity and honesty</i> • <i>Acts in a just, fair, and ethical manner and encourages ethical behavior among others, even when risky to do so</i> • <i>Inspires trust and confidence among stakeholders through reliability, authenticity, and accountability</i>
Interpersonal Skills	Treats others with courtesy, sensitivity, and respect. Considers and responds appropriately to the needs and feelings of different people in different situations. <ul style="list-style-type: none"> • <i>Shows respect for the values and ideas of others, even when not agreeing with them</i> • <i>Empathizes with the concerns of others</i> • <i>Demonstrates tact and courtesy when interacting with associates</i> • <i>Is proactive in defusing arguments among peers</i> • <i>Seeks feedback from others to avoid blind-spots that can cause misunderstandings</i> • <i>Explores issues with the team; shares information; solicits ideas' uses participative decision-making processes</i>
Oral Communication (2)	Makes clear and convincing oral presentations. Listens effectively; clarifies information as needed. Effectively communicates technical information to non-technical information to non-technical audiences and stakeholders. <ul style="list-style-type: none"> • <i>Speaks honestly, effectively and with integrity</i> • <i>Makes convincing, articulate, and accurate oral presentations using non-verbal and vocal qualities that support the verbal spoken message</i> • <i>Effectively uses various communication channels, including meetings, presentations and briefings</i> • <i>Actively considers, plans for, and reacts appropriately to the audience and the contextual environment in order to minimize barriers to understanding</i> • <i>Explains complex information clearly and accurately, and seeks feedback to determine that understanding has occurred</i> • <i>Acts as an effective facilitator in group or team settings</i>

Geography Competency Model

Organizational Awareness	<p>Knows the organization's mission and functions, and how its social, political, and technological systems work and operates effectively within them; this includes the programs, policies, procedures, rules, and regulations of the organization.</p> <ul style="list-style-type: none"> • <i>Demonstrates awareness of the mission, functions, and various levels of the organization</i> • <i>Understands how decisions or actions of one organizational component may affect other components</i> • <i>Leverages knowledge of organizational components, programs, and directions to improve products, actions, or decisions</i> • <i>Shows familiarity with the rules and regulations of the organization</i>
Partnering	<p>Develops networks and builds alliances; collaborates across boundaries to build strategic relationships and achieve common goals.</p> <ul style="list-style-type: none"> • <i>Demonstrates an understanding of interrelationships, roles, and responsibilities within the organization</i> • <i>Develops and maintains professional relationships</i> • <i>Is aware of organizational and programmatic goals and seeks avenues to mutually enhance goal achievement</i> • <i>Identifies opportunities for collaboration across organization units</i>
Planning and Evaluating	<p>Organizes work, sets priorities, and determines resource requirements; determines short- or long-term goals and strategies to achieve them; coordinates with other organizations or parts of the organization to accomplish goals; monitors progress and evaluates outcomes.</p> <ul style="list-style-type: none"> • <i>Sets difficult but obtainable goals, benchmarks, or milestones</i> • <i>Determines resources required for successful completion of work and works with others to procure these resources</i> • <i>Collaborates effectively with other components of the organization</i> • <i>Establishes meaningful, observable metrics to track progress or evaluate performance</i> • <i>Ensures a clear and appropriate division of labor among team members</i>
Political Savvy	<p>Identifies the internal and external politics that impact the work of the organization. Perceives organizational and political reality and acts accordingly.</p> <ul style="list-style-type: none"> • <i>Determines who holds resources in the organization</i> • <i>Networks with appropriate stakeholders to obtain necessary resources</i> • <i>Maintains awareness of stakeholders external to the organization and the resources they have to offer</i> • <i>Adapts communication style with various stakeholders</i> • <i>Demonstrates an understanding of the interrelationships, roles, and responsibilities of an organization</i> • <i>Develops a coalition of like-minded entities to achieve desired outcomes</i>

Geography Competency Model

Problem Solving (‡)	Identifies and analyzes problems; weighs relevance and accuracy of information; generates and evaluates alternative solutions; makes recommendations. <ul style="list-style-type: none"> • Examines problems and solutions with a long-term perspective • Effectively leads others in the effort of developing, identifying, and formulating problem solving strategies consistent with organizational goals • Uses logic to develop and implement innovative tools and techniques to resolve complex problems and issues • Uses logic to resolve complex, unique, or unusual problems • Consistently anticipates challenges that are not obvious to others • Determines the relevance of information in reaching effective conclusions • Formulates recommendations for the best course of action to address problems
Reading Comprehension	Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations. <ul style="list-style-type: none"> • Demonstrations proper interpretation of written material • Applies what is learned from written material to specific situations • Can interpret various forms of written text or graphics to include charts, graphs, and tables
Reasoning	Identifies rules, principles, or relationships that explain facts, data, or other information; analyzes information and makes correct inferences or draws accurate conclusions. <ul style="list-style-type: none"> • Determines the relevance of information in reaching effective conclusions • Uses logic to determine relationships among information in order to reach conclusions • Makes appropriate inferences from data, rules, or other information
Resilience	Deals effectively with pressure; remains optimistic and persistent, even under adversity. Recovers quickly from setbacks. <ul style="list-style-type: none"> • Achieves desired results in face of adversity • Overcomes barriers to accomplish goals • Stays positive in spite of setbacks • Works successfully in high pressure environments
Self-Management	Sets well-defined and realistic personal goals; displays a high level of initiative, effort, and commitment towards completing assignments in a timely manner; works with minimal supervision; is motivated to achieve; demonstrates responsible behavior. <ul style="list-style-type: none"> • Sets own goals and priorities and coordinates activities and deadlines with others to ensure project goals are met • Continually applies significant effort and persistence toward achievement of goals in all situations • Takes initiative and seeks out new or additional responsibilities and tasks • Completes work and meets objectives with minimal supervisory intervention
Spatial Orientation	Knows one's location in relation to the environment; determines where other objects are in relation to one's self (for example, when using a map). <ul style="list-style-type: none"> • Accurately determines their location and adjusts plans based on the spatial relationship of objects or features in their environment.

Geography Competency Model

	<ul style="list-style-type: none"> • <i>Effectively uses maps, diagrams, or visual cues to locate necessary paths or areas and solves navigation challenges with minimal guidance.</i> • <i>Understands the positioning of nearby objects and ensures safe and efficient movement within the space.</i>
Strategic Thinking	<p>Formulates effective strategies consistent with the business and competitive strategy of the organization in a global economy. Examines policy issues and strategic planning with a long-term perspective. Examines objectives and sets priorities; anticipates potential threats or opportunities.</p> <ul style="list-style-type: none"> • <i>Is aware of organizational and programmatic goals and seeks creative avenues to enhance goal achievement</i> • <i>Considers overall structures, patterns, and cycles in the organization/systems, and uses assessment, analysis, and evaluation methodologies to define metrics and standards of performance</i> • <i>Incorporates new processes and procedures into annual plans</i> • <i>Identifies potential opportunities and barriers facing the organization's objectives and priorities</i> • <i>Provides advice and guidance to resolve, implement, or manage program or policy issues that involve areas of uncertainty in approach or methodology</i> • <i>Streamlines operations for maximum efficiency, automation, and effectiveness where appropriate</i>
Teamwork (2)	<p>Motivates team members to accomplish group goals. Performs well in team settings and assists others when needed. Develops and maintains effective working relationships with others.</p> <ul style="list-style-type: none"> • <i>Volunteers to assist associates with projects</i> • <i>Commits to working toward team or group goals</i> • <i>Displays team pride and empowers team pride among other group members</i> • <i>Works effectively in group settings in order to achieve team objectives</i>
Technology Application	<p>Uses machines, tools, instruments, or equipment effectively; uses computers and computer applications to analyze and communicate information in the appropriate format.</p> <ul style="list-style-type: none"> • <i>Effectively applies technology in the work setting</i> • <i>Uses machines, tools, instruments, or equipment to accomplish work</i> • <i>Uses technology appropriately and efficiently to complete tasks, contributing to team and organizational goals.</i>

Geography Competency Model

Writing	<p>Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material that is appropriate for the intended audience.</p> <ul style="list-style-type: none"> <i>Composes clear, concise, and logical documents or correspondence involving complex technical information</i> <i>Consistently and effectively tailors written products to a wide range of audiences and for diverse purposes in order to achieve a desired outcome</i> <i>Proofreads and edits the writing of others</i> <i>Effectively explains complex technical material to a non-technical audience</i> <i>Uses correct grammar, punctuation, and spelling</i> <i>Writes in an organized fashion that is easy to understand</i>
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Table 4: General Competencies by Assessment Tool

Competency	Structured Resume Review	Structured Interview	Biodata	Cognitive Ability Test
Accountability	Low	High	High	Low
Arithmetic/Mathematical Reasoning	Medium	Medium	Low	High
Computer Skills	Medium	High	Medium	Medium
Conflict Management	Low	High	Medium	Low
Continual Learning (3)	Medium	High	High	Low
Creative Thinking	Low	High	Low	Low
Customer Service (‡)	Low	High	Low	Low
Decision Making	Low	High	Medium	Medium
Entrepreneurship	High	High	Medium	Medium
External Awareness (2)	Low	High	Low	Low
Flexibility	Low	High	Medium	Low
Influencing/Negotiating (‡)	Medium	High	Low	Low
Information Management	Medium	Medium	Medium	Medium
Integrity/Honesty (‡)	Low	High	Medium	Low
Interpersonal Skills	Low	High	Low	Low
Oral Communication (2)	Medium	High	Medium	Low
Organizational Awareness	Low	High	Low	Low

Geography Competency Model

Partnering	Medium	High	Medium	Low
Planning and Evaluating	Medium	High	Medium	High
Political Savvy	Medium	High	Low	Medium
Problem Solving (‡)	Low	High	Medium	Low
Reading Comprehension	Low	Low	Low	High
Reasoning	Low	Low	Low	High
Resilience	Low	High	Medium	Low
Self-Management	Low	High	Medium	Low
Spatial Orientation	Low	High	Medium	Low
Strategic Thinking	Low	High	Medium	Low
Teamwork (2)	Medium	Medium	Medium	Low
Technology Application	Medium	High	Low	Low
Writing	Medium	Low	Medium	Low

Competency	Job Knowledge Test	Personality Inventory	Situational Judgment Test	Work Sample
Accountability	Low	High	High	Low
Arithmetic/Mathematical Reasoning	Low	Medium	Low	High
Computer Skills	High	Low	Medium	High
Conflict Management	Low	High	Medium	Low
Continual Learning (3)	Low	High	High	Low
Creative Thinking	Low	High	Low	Low
Customer Service (‡)	Low	High	Low	Low
Decision Making	Low	High	Medium	Medium
Entrepreneurship	Low	High	Medium	Medium
External Awareness (2)	Low	High	Medium	Low
Flexibility	Low	High	Medium	Low
Influencing/Negotiating (‡)	Low	High	Low	Low
Information Management	Medium	Low	Medium	High
Integrity/Honesty (‡)	Low	High	Medium	Low
Interpersonal Skills	Low	High	Low	Low
Oral Communication (2)	Medium	Medium	Medium	Medium
Organizational Awareness	Low	High	Low	High
Partnering	Low	Medium	Medium	Medium
Planning and Evaluating	Medium	Medium	Medium	High
Political Savvy	Medium	High	Low	Medium

Geography Competency Model

Problem Solving (§)	Low	Low	High	High
Reading Comprehension	Low	Low	High	Medium
Reasoning	Low	Low	High	Medium
Resilience	Low	Medium	Low	Low
Self-Management	Low	Medium	Low	Low
Spatial Orientation	Low	Low	Medium	Medium
Strategic Thinking	Low	Low	Medium	Medium
Teamwork (2)	Low	Medium	Medium	Medium
Technology Application	High	Low	High	High
Writing	Low	Low	Low	High

Table 5: Technical Competencies for Assessment & Selection

The following technical competencies are valid for assessment and selection, performance management, and other related human capital functions for the occupational series listed below. (NOTE: While the technical competencies below have been validated for assessment and selection for the series listed below, other technical competencies not listed below may be required depending on the position. Rely on the results of a job analysis and feedback from the hiring manager and subject matter experts to determine the exact technical competencies needed for a particular hire).

Table 5: Technical Competencies for Assessment & Selection by Grade
GS-0150 – Geography

- Application Development (2)
- Cartography (2)
- Compliance (2)
- Data Extraction and Transformation
- Data Interpretation (2)
- Data Management (2)
- Data Protection
- Geography (3)
- Geographical Sciences
- Geology (2)

- Geospatial Information Systems (2)
- Modeling and Simulation (3)
- Project Management (2)
- Remote Sensing (2)
- Requirements Analysis (2)
- Research (2)
- Research and Statistics (2)
- Stakeholder Engagement
- Technology Awareness (2)
- Technical Documentation (3)

Appendix A: GEOGRAPHER General Competencies

Accountability	Holds self and others accountable for measurable high-quality, timely, and cost-effective results. Determines objectives, sets priorities, and delegates work. Accepts responsibility for mistakes. Complies with established control systems and rules.
Arithmetic/Mathematical Reasoning	Performs computations such as addition, subtraction, multiplication, and division correctly; solves practical problems by choosing appropriately from a variety of mathematical techniques such as formulas and percentages.
Computer Skills	Uses computers, software applications, databases, and automated systems to accomplish work.
Conflict Management	Manages and resolves conflicts, grievances, confrontations, or disagreements in a constructive manner to minimize negative personal impact.
Continual Learning (3)	Assesses and recognizes own strengths and weaknesses; pursues new knowledge and skill-development.
Creative Thinking	Uses imagination to develop new insights into situations and applies innovative solutions to problems; designs new methods where established methods and procedures are inapplicable or are unavailable.
Customer Service (‡)	Anticipates and meets the needs of General internal and external customers. Delivers high-quality products and services; is committed to continuous improvement.
Decision Making	Makes sound, well-informed, and objective decisions; perceives the impact and implications of decisions; commits to action, even in uncertain situations, to accomplish organizational goals; causes change.
Entrepreneurship	Positions the organization for future success by identifying new opportunities; builds the organization by developing or improving products or services. Takes calculated risks to accomplish organizational objectives.
External Awareness (2)	Understands and keeps up to date on local, national, and international policies and trends that affect the organization and shape stakeholders' views; is aware of the organization's impact on the external environment.

Geography Competency Model

Flexibility	Is open to change and new information; adapts behavior or work methods in response to new information, changing conditions, or unexpected obstacles; effectively deals with ambiguity.
Influencing/Negotiating (‡)	Persuades others; builds consensus through give and take; gains cooperation from others to obtain information and accomplish goals.
Information Management	Identifies a need for and knows where or how to gather information; organizes and maintains information or information management systems.
Interpersonal Skills	Treats others with courtesy, sensitivity, and respect. Considers and responds appropriately to the needs and feelings of different people in different situations.
Oral Communication (2)	Makes clear and convincing oral presentations. Listens effectively; clarifies information as needed. Effectively communicates technical information to non-technical audiences and stakeholders.
Organizational Awareness	Knows the organization's mission and functions, and how its social, political, and technological systems work and operates effectively within them; this includes the programs, policies, procedures, rules, and regulations of the organization.
Partnering	Develops networks and builds alliances; collaborates across boundaries to build strategic relationships and achieve common goals.
Physical Strength and Agility	Ability to bend, lift, climb, stand, and walk for long periods of time; ability to perform moderately heavy laboring work.
Planning and Evaluating	Organizes work, sets priorities, and determines resource requirements; determines short- or long-term goals and strategies to achieve them; coordinates with other organizations or parts of the organization to accomplish goals; monitors progress and evaluates outcomes.
Political Savvy	Identifies the internal and external politics that impact the work of the organization. Perceives organizational and political reality and acts accordingly.
Problem Solving (‡)	Identifies and analyzes problems; weighs relevance and accuracy of information; generates and evaluates alternative solutions; makes recommendations.
Reading Comprehension	Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.
Reasoning	Identifies rules, principles, or relationships that explain facts, data, or other information; analyzes information and makes correct inferences or draws accurate conclusions.

Geography Competency Model

Resilience	Deals effectively with pressure; remains optimistic and persistent, even under adversity. Recovers quickly from setbacks.
Self-Management	Sets well-defined and realistic personal goals; displays a high level of initiative, effort, and commitment towards completing assignments in a timely manner; works with minimal supervision; is motivated to achieve; demonstrates responsible behavior.
Spatial Orientation	Knows one's location in relation to the environment; determines where other objects are in relation to one's self (for example, when using a map).
Stamina*	Exerts oneself physically over long periods of time without tiring, which may include performing repetitive tasks such as data entry or coding.
Strategic Thinking	Formulates effective strategies consistent with the business and competitive strategy of the organization in a global economy. Examines policy issues and strategic planning with a long-term perspective. Determines objectives and sets priorities; anticipates potential threats or opportunities.
Teamwork (2)	Motivates team members to accomplish group goals. Performs well in team settings and assists others when needed. Develops and maintains effective working relationships with others.
Technology Application	Uses machines, tools, instruments, or equipment effectively; uses computers and computer applications to analyze and communicate information in the appropriate format.
Writing	Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical materials, that is appropriate for the intended audience.

**Competencies are validated through multiple statistical analyses. The competency Stamina was not found to be valid for the overall Geography model however, one analysis indicated that it was required at entry for initial hiring for GS 5-12 employees. Another analysis indicated it was not an important competency for the 0150 job series at any grade level. Thus, it was not included in the overall model.*

Geography Competency Model

Appendix B: GEOGRAPHER Technical Competencies³

Application Development (2)	Uses programming languages to script and automate tasks; applies programming languages and skills across multiple platforms or frameworks.
Archaeology (2)	Application of principles, concepts, theories, and methods of the study of past human activities through the physical remains of life and past human activities, including associated cultural resource management, ethnohistory and history, site evaluation, stabilization, and reconstruction methods.
Botany (2)	Application of the concepts, principles, and theories of plants, including structures and functions, classification, taxonomy, plant communities, distribution, habitat requirements, life histories, reproduction, conservation, and care of plant species.
Cartography (2)	Applies cartographic principles, theories, and methods in the design, development, revision and/or interpretation of maps, charts, and related cartographic products, and photogrammetric and cartographic processing.
Compliance (2)	Ensure adherence to regulatory requirements, laws, regulations, industry standards, and agency policies. Ability to identify, manage and mitigate compliance risks while fostering a culture of ethical behavior and accountability within the organization.
Data Extraction and Transformation	Retrieves and ingests disparate types of data from a variety of unstructured and structured sources, and then organizes, cleans, and transforms data sets for easy access, analysis, and optimization.
Data Interpretation (2)	Synthesize data to identify trends, derive actionable insights, and support informed decision-making by applying scientific methods and data visualization techniques.

³ Includes competencies identified for positions by SMEs that were not considered “critical” across each occupational series. These competencies may still be used for training and development purposes.

Geography Competency Model

Data Management (2)	Application of the principles, procedures, and tools of data management, such as modeling techniques, data backup, data recovery, data dictionaries, data warehousing, data mining, data archiving, data disposal, and data standardization processes.
Data Protection	Protect sensitive information by implementing security measures and data management strategies, to ensure data security during data sharing and optimal data retrieval processes.
Earth Science (2)	Application of interdisciplinary disciplines associated with the earth's composition, structure, or other physical aspects, including atmosphere.
Ecology (2)	Application of the concepts, principles, and theories of the interrelationships among organisms and their environment, including competition and predation, evolution and natural selection, population dynamics, and the impact of natural phenomena or human actions on natural systems, processes, and biota.
Engineering Interdisciplinary	Employ engineering concepts, principles, theories, and methods from various engineering disciplines to develop comprehensive solutions, fostering teamwork and leveraging diverse perspectives to address complex challenges effectively. Adapt to emerging technologies and methodologies to drive continuous improvement and efficiency in engineering processes.
Field Data Collection	Ability to collect, record, and ensure accuracy of field data (for example, stream and river discharge measurements).
Fire Ecology	Evaluates the interactions between fire and ecosystems by analyzing fire behavior, studying its effects on vegetation and wildlife, and implementing management strategies to promote ecological health and resilience in fire-prone landscapes.

Geography Competency Model

Geology (2)	Understand and interpret geological data to understand Earth's processes, materials, and history, utilizing various tools and techniques to inform resource use and management
Geographical Sciences (3)	Application of the concepts, principles, theories, and methods for describing the location and distribution of features and phenomena including their relationships and characteristics.
Geography (3)	Assess and analyze geospatial data and use geographic concepts to support data visualization, decision making, operations and cartographic products.
Geospatial Information Systems (2)	Application of knowledge and skill in manipulating computer systems designed for capturing, storing, checking, and displaying data related to positions on Earth's surface in order to better understand spatial patterns and relationships.
History	Research and analyze historical events to identify patterns, causes, and impacts, utilizing primary and secondary sources from multiple perspectives to construct well-supported interpretations in contexts with narratives that inform contemporary discussions.
Modeling and Simulation (3)	Develop and execute models and simulations by creating accurate representations of data and designs, analyzing outcomes, and refining processes to support decision-making and optimize performance.
Physical Sciences (2)	Analyze physical phenomena by applying scientific principles and methodologies, testing hypotheses, and interpreting data to advance understanding and solve practical problems in physical sciences.
Project Management (2)	Coordinating project execution by planning, organizing resources, coordinating tasks, and managing timelines to ensure successful completion and achievement of project goals.
Public Planning (2)	Develop and execute public planning strategies by analyzing community needs, coordinating with interested parties, and ensuring effective implementation of policies and programs to enhance public services and infrastructure.

Geography Competency Model

Remote Sensing (2)	Process and analyses remote sensing data to extract insights, applying appropriate techniques and technologies to interpret imagery and spatial information for decision-making.
Requirements Analysis (2)	Conduct requirements analysis to gather, document, and validate stakeholder needs, ensuring that project specifications align with business objectives and facilitating effective communication between technical teams and end-users.
Research (2)	Conducting research to gather, analyze, and interpret data, contributing to informed decision-making and advancing knowledge in the field.
Research and Statistics (2)	Application of scientific principles, methods, and tools of basic and applied research (for example, statistics and data analysis) used to conduct a systematic inquiry into a subject matter area.
Sociology and Anthropology (2)	Application of the concepts, principles, and theories of group behavior and dynamics; societal trends and influences; and cultures, their history, migrations, ethnicity, and origins.
Stakeholder Engagement	Engage stakeholders through regular communication, active listening, and addressing concerns to build strong relationships, foster collaboration, and ensure alignment with project and organizational goals.
Surveying (2)	Measure and map land, utilizing appropriate tools and techniques to gather data for the measurement or determination of land boundaries, distances, elevations, areas, angles, and other features of the earth's surface and/or environmental assessment.
Technology Awareness (2)	Maintain a current understanding of emerging technologies and industry trends, applying this knowledge to enhance organizational processes, drive innovation, and inform strategic decision-making in a technology-driven environment.
Technical Documentation (3)	Following procedures for developing technical and operational support documentation.

Geography Competency Model

Web Technology (2)	Implement web technologies/platforms to design, develop, and optimize interactive websites and applications, ensuring functionality, usability, and accessibility while leveraging best practices in web security, user experience, and responsive design.
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Appendix C: GEOGRAPHER Study Tasks

1	Communicates landscape characteristics and changes, including hydrological, biological, climatic, seismic, topographic, and volcanic activity, and other phenomena.
2	Provides verbal input and/or deliverables for reports and presentations used to inform policy, planning, and management decisions.
3	Develops trainings or how-to guides in areas of specialization.
4	Develop standard operating procedures and workflows to manage data.
5	Advises users and management on evolving geospatial trends and their potential impact on resource requirement.
6	Communicates landscape characteristics and changes, including hydrological, biological, climatic, seismic, topographic, and volcanic activity, and other phenomena.
7	Advises on both controversial and noncontroversial issues and provides guidance for managers on findings for improved effectiveness of organizations or programs.
8	Addresses resistance and conflict on controversial issues, such as disagreement of analysis results or programmatic change.
9	Conducts workshops, formal training sessions, demonstrations, and other information transfer activities regarding the availability, proper use, and applications of geospatial software and digital spatial data.
10	Presents scientific and technical information orally and in writing to colleagues, resource managers, and at regional, national, and international meetings and conferences.
11	Conducts briefings to ensure that senior officials, scientists, and others understand the benefits of access to geospatial datasets.
12	Provides subject matter expert technical support to management on policies and standards related to geospatial data and technology.
13	Informs management regarding potentially controversial matters having implications for the organization.
14	Provides subject matter expertise on cartographic standards and data integration.
15	Collects feedback from users and stakeholders through surveys, interviews, and/or focus groups, to improve processes and procedures for meeting end user needs.
16	Analyzes geospatial data for completeness and quality.
17	Analyzes data to address geospatial inquiries.
18	Collects and interprets geographic, socio-economic, physical, biological, topographical, and/or ecological information.
19	Uses Geospatial Information Systems (GIS) or other sensing instruments for monitoring temporal or spatial changes and/or natural or physical and human processes geography.
20	Analyzes costs associated with new geospatial product development.

Geography Competency Model

21	Develops, populates, reviews, and updates digital GIS schemas, layers, databases and geographic datasets.
22	Develops, acquires, and/or refines datasets for special image processing and GIS applications.
23	Creates, edits, and compiles geographic data pertaining to both natural and anthropogenic features, collected in the field or using remote sensing techniques.
24	Compiles and synthesizes geographic, biologic, and/or socio-economic data over the area of a large state, several states, and/or smaller areas such as local areas, project areas, and counties.
25	Compiles geospatial metadata for published digital datasets.
26	Converts raw data into a usable format and integrates that into databases.
27	Transforms spatial data between different formats, coordinate systems, or projections to ensure compatibility and accuracy in geographic analysis and visualization.
28	Contributes data and analysis to large-scale climate, land use, and natural and cultural resource management change reports.
29	Develops models of natural and human-induced biological and physical processes.
30	Develops reports and presentation to communicate status of ongoing projects.
31	Creates graphic representations, such as digital and publication-quality data, maps, and other tools.
32	Defines requirements for field data collections to aid in validation of derived elevation products.
33	Authors reports of scientific findings, interpretations, conclusions, and recommendations for scientific publications.
34	Produces final reports and data deliverables.
35	Conducts testing and operation of water, land, air, and remotely sensed data collection instruments.
36	Tests and evaluates computer hardware and software programs and applications.
37	Installs and monitors geospatial data collection instruments.
38	Develops estimates of personnel, equipment, materials, and schedules required to carry out highly specialized studies.
39	Procures supplies, hardware, and software for laboratory and field activities.
40	Assesses cartographic product viability, identifies markets, and ascertains potential for technology transfer and product opportunities.
41	Evaluates proposals for supplies and services.
42	Reviews research proposals.
43	Conducts geospatial technology and security training needs assessments.
44	Evaluates new technologies and assesses scientific software solutions.
45	Mentors, instructs, guides, hires, and/or manages interns.
46	Coordinates data collection and management with principal investigators from within and outside the organization.
47	Controls management and dissemination of sensitive data as required and maintains appropriate clearance.

Geography Competency Model

48	Serves as Contracting Officer Representative (COR) for development of task orders and contracts and monitoring contractors for adherence to schedules and standards.
49	Plans and leads field operations.
50	Performs project management tasks for scientific research and development.
51	Protects staff scientific integrity from political or other pressures.
52	Collaborates with interdisciplinary professionals concerning the use of mapping, remote sensing, and geospatial data.
53	Serves as liaison or spokesperson with technical and management representatives from government, academia, and private industry.
54	Represents the organization at national and regional meetings and disseminates information about the organization to other government agencies or organizations.
55	Interacts and maintains relationships with scientists and managers representing Federal agencies, state governments, universities, hardware software vendors, and international agencies.
56	Leads or participates in working groups as part of larger agency, bureau, or national efforts.
57	Maintains contact with foreign and domestic government agencies, tribal organizations, non-governmental organizations, members of Congress, elected state and local government officials, and the national and local media.
58	Publish findings that advance the field in reports, symposia, and/or journals.
59	Investigates novel and obscure natural resource problems and environmental conditions.
60	Design a geospatial project plan; coordinate with stakeholders to incorporate goals into geospatial components of plans.
61	Design and implement geospatial data collection and management strategies to support organization projects.
62	Participates in local, regional, or multi-regional studies used in decision-making aimed at documenting changes in natural and human-induced biological and physical processes.
63	Conducts multi-disciplinary scientific studies.
64	Conducts fieldwork studies using geospatial data to assess the impact of climate, land use, and topographic changes on a variety of geographic areas.
65	Uses geospatial data, equipment, or technology to aid in multidisciplinary studies.
66	Performs or conducts market research for labor, equipment, software or other contracting needs.
67	Conducts policy research.
68	Ensures geospatial practices safeguards sensitive locations, maintaining data integrity, and considers the social, environmental, and political implications of geospatial technologies.