COMPETENCY ASSESSMENT

CATEGORY	COMPETENCIES (29)	GEOSCIENCE WORKPLACE EXAMPLES (guidance on example content that will demonstrate the competency)
1. 1. Professionalism (7 competencies)	1.1 This competency is intended to demonstrate your knowledge and awareness of Canadian national, provincial, territorial and municipal regulations, codes, standards, and Indigenous knowledge, rights and treaties. This includes local geoscience procedures and practices as applicable. Note: This is a mandatory Canadian Work-Environment Competency. The minimum required level for this competency is 3.	1. Apply for licenses and permits 2. Undertake stakeholder consultations 3. Consider and incorporate Indigenous knowledge, rights and treaties in decision making 4. Use appropriate standards in decision making 5. Complete and file reports and notifications
	1.2 Practice within the bounds of personal expertise and limitations	1. Undertake self-assessment to identify personal limits 2. Seek advice from professionals with more appropriate expertise 3. Refer client to other professionals
	1.3 Increase relevant knowledge, skills and level of performance over time	1. Attend conferences, workshops or courses related to area of practice 2. Undertake focused research or learning to address knowledge gaps 3. Obtain relevant specialty training or certification
	1.4 This competency is intended to demonstrate your ability to understand and implement the Canadian business culture and practices. Note: This is a mandatory Canadian Work-Environment Competency. The minimum required level for this competency is 3.	1. Undertake and apply diversity training 2. Provide and accept constructive feedback 3. Contribute to workplace conflict resolution
	1.5 This competency is intended to demonstrate your ability to apply principles of the regulator's Code of Ethics in the Canadian jurisdiction in which you are applying. Note: This is a mandatory Canadian Work-Environment Competency. The minimum required level for this competency is 3.	1. Communicate consequences of disregarding professional advice 2. Respond to unethical behaviour of others 3. Identify and address conflict of interest

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	1.6 This competency is intended to demonstrate your ability to balance stakeholder needs with Canadian professional geoscientist obligations. Note: This is a mandatory Canadian Work-Environment Competency. The minimum required level for this competency is 3.	1. Undertake work activities in a manner that minimizes environmental impact 2. Make decisions consistent with client or employer needs that protect the safety, health and welfare of the public 3. Employ the principles of risk management in project cost analysis 4. Provide accessible and appropriate information to address public concerns
	1.7 This competency is intended to demonstrate your ability to address the health and safety of your clients, coworkers, the public, and yourself consistent with Canadian regulations, codes, and standards. Note: This is a mandatory Canadian Work-Environment Competency. The minimum required level for this competency is 3.	1. Proactively address workplace health and safety 2. Identify unsafe practices or hazardous situations 3. Contribute to development of site-specific health and safety requirements
2. 2. Scientific Method (5 competencies)	2.1 Apply scientific principles	1. Use mathematical and statistical principles to analyze data 2. Use principles of chemistry and physics to interpret data 3. Formulate, test and evaluate hypothesis
	2.2 Effectively utilize scientific literature	1. Undertake a literature search 2. Critically analyze and incorporate published research 3. Identify and acknowledge relevant sources
	2.3 Identify uncertainty and ambiguity in data, and limits to knowledge	1. Identify bias in data collection 2. Evaluate margin of error on results 3. Display uncertainty in analytical results or interpretation
	2.4 Apply principles of quality assurance and quality control (QA / QC)	1. Follow established protocols in data collection or analysis 2. Review project outcomes relative to quality standards 3. Establish QA / QC standards
	2.5 Undertake relevant investigation and due diligence	1. Research complete background information 2. Review similar situations to identify known hazards and risks 3. Consider potential unanticipated outcomes
3. 3. Area of Geoscience Practice (7 competencies)	3.1 Plan investigations based upon purpose of study, incorporating existing site-specific information and appropriate approaches	**Examples of investigations:** 1. geological mapping 2. geophysical survey 3. baseline monitoring 4. geohazard assessment 5. drilling program 6. sampling program 7. environmental site assessment 8. research project
	3.2 Acquire, process and analyze data using appropriate methodologies	1. Use effective devices and instruments to acquire data 2. Apply locational tools and principles to georeference data 3. Analyze and process data using 3-D modelling software

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	3.3 Incorporate relevant data from other sources	1. Integrate historical and current data 2. Include local or regional information 3. Identify analogs
	3.4 Interpret and evaluate data to construct models consistent with purpose of investigation	1. Prepare and interpret logs, sections or maps 2. Prepare and interpret spreadsheets, charts or diagrams 3. Apply geoscience principles to generate models
	3.5 Critically evaluate models	1. Address uncertainty and bias 2. Compare and contrast analogous models 3. Evaluate validity of model relative to objectives
	3.6 Formulate conclusions and recommendations	1. Define drilling targets 2. Assess site suitability and determine mitigation measures 3. Assess feasibility based on resource estimation 4. Provide alternative solutions and make recommendations
	3.7 Adapt methodologies to address unfamiliar situations	1. Modify mapping or sampling methodologies in unfamiliar terrain or geological settings 2. Adapt approach based on stakeholder values 3. Integrate additional knowledge & skills to address unfamiliar situations 4. Develop new techniques
4. 4. Complementary (10 competencies)	4.1 This competency is intended to demonstrate your ability to effectively communicate orally in the language of business of the jurisdiction in which you are applying, either French or English. Note: This is a mandatory Canadian Work-Environment Competency. The minimum required level for this competency is 3.	1. Participate in a consultation or working group 2. Deliver a geoscience lecture or presentation 3. Describe a geoscience model to a client, peer or supervisor
	4.2 This competency is intended to demonstrate your ability to effectively communicate in writing in the language of business of the jurisdiction in which you are applying, either French or English. Note: This is a mandatory Canadian Work-Environment Competency. The minimum required level for this competency is 3.	1. Prepare and respond to business correspondence 2. Write a project or funding proposal 3. Interpret and synthesize written information
	4.3 Communicate technical information effectively to a variety of audiences	1. Create or adapt a presentation for technical and non-technical audiences 2. Create or modify written material for technical and non-technical audiences 3. Deliver a geoscience presentation to students
	4.4 Manage activities	1. Plan or coordinate geoscience field work 2. Plan or coordinate data collection or analysis 3. Organize a conference, workshop or meeting
	4.5 Use time management skills	1. Prioritize activities to meet deadlines 2. Use scheduling tools 3. Adapt schedule to changing situations

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	4.6 Provide direction to others	1. Provide instructions to students 2. Advise team members or co-workers 3. Supervise the work of others
	4.7 Contribute to budgetary management	1. Evaluate quotes 2. Estimate costs 3. Control expenditures
	4.8 Apply basic principles of risk management	1. Mitigate risk associated with field work 2. Coordinate activities to manage risk 3. Communicate business risks associated with geoscience interpretations
	4.9 Contribute to secure data management	1. Use data security software 2. Protect confidential information or materials 3. Develop or follow organizational data management protocols
	4.10 Maintain comprehensive professional records	1. File and archive comprehensive and clear field observations 2. Label, store and catalogue samples 3. Prepare and retain business and administrative records