



## Board/Authority Authorized Course Framework Template

<b>School District/Independent School Authority Name:</b>	<b>School District/Independent School Authority Number (e.g. SD43, Authority #432):</b>
<b>Developed by:</b> The Provincial Resource Centre for the Visually Impaired (PRCVI) and BC O&M Specialists, based on collaborative work between PRCVI and Charlene Haugen, O&M Specialist, Surrey Schools (SD36)	<b>Date Developed:</b>
<b>School Name:</b>	<b>Principal's Name:</b>
<b>Superintendent Approval Date (for School Districts only):</b>	<b>Superintendent Signature (for School Districts only):</b>
<b>Board/Authority Approval Date:</b>	<b>Board/Authority Chair Signature:</b>
<b>Course Name:</b>	<b>Grade Level of Course:</b>
<b>Number of Course Credits:</b>	<b>Number of Hours of Instruction:</b>

**Board/Authority Prerequisite(s):** None.

**Special Training, Facilities or Equipment Required:**

This course must be taught by a qualified [Orientation and Mobility \(O&M\) specialist](#) who is proficient in teaching the skills, knowledge, and techniques to facilitate safer and more effective travel for individuals with visual impairments. The British Columbia Ministry of Education requires that the Orientation and Mobility specialist meet the standards established by the Association for the Education and Rehabilitation of the Blind and Visually Impaired (AER), which require:

- A master's degree in Orientation and Mobility; or

- Completion of post-graduate studies in Orientation and Mobility, which include at least 350 hours of supervised practice in orientation and mobility involving individuals with a variety of visual impairments.

### **Course Synopsis:**

Orientation and Mobility 12 is designed for students who have low vision or who are blind and require instruction in O&M skills and techniques to achieve the highest level of independent travel that is possible given the student's individual capacity. As students progress through the course they will develop the skills, knowledge, confidence, and motivation required to travel independently, safely, efficiently, and gracefully in familiar and unfamiliar indoor environments and in outdoor areas in the community. Programming should be informed by students' post-secondary plans (e.g., post-secondary education, workforce). Students will work to refine a robust toolkit of O&M knowledge, strategies, and technology. As students advance through the course, they are encouraged to assume greater responsibility in advocating for O&M supports as a student with a visual impairment and will gain the advanced knowledge and skills needed to explore new environments independently while making appropriate decisions about safer and more efficient travel.

### **Goals and Rationale:**

Orientation and Mobility, often abbreviated as O&M, refers to age-appropriate and ongoing instruction in the skills, techniques, and knowledge required for visually impaired individuals to travel safely, efficiently, gracefully, and with as much independence as possible in a variety of environments.

"Orientation" refers to the ability to know where one is located in space, one's target location, and the most efficient route to arrive at that location.

"Mobility" refers to the set of skills required to travel safely, efficiently, and effectively from one place to another across a variety of indoor and outdoor environments.

Independent, safe, efficient, and graceful travellers have well-developed orientation and mobility skills, as well as the confidence and motivation to apply their skills to travel in a variety of environments. To become independent travellers, students with visual impairments require direct instruction in O&M techniques and concepts. Through varied and extensive opportunities to develop, practice, and experiment with the use of these skills, students are better positioned for more meaningful engagement in their communities in their school and community lives.

### **Aboriginal Worldviews and Perspectives:**

Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors.

- Students with visual impairments acquire O&M knowledge and skills so that they may travel in an increasingly safer, effective, and graceful manner. For these learners, an effective O&M skillset supports physical health and well-being and promotes access to a broader range of opportunities for interactions in the community.

Learning involves patience and time.

- O&M programming requires a highly personalized approach to learning and is only effective when grounded in authentic environments that are meaningful to the learner. O&M concepts develop over time in a manner that mirrors the individual learner's requirements for independent travel with the instructor gradually shifting the responsibility for safer and more effective travel from others (e.g., parents, teachers) to the student.

Learning requires exploration of one's identity.

- Over the course of an O&M program, the student will reflect on their own strengths and challenges and through accurate self-knowledge will match their current O&M skillset to the travel demands in their daily lives.

Learning is embedded in memory, history and story.

- Changes in the physical environment impact all learners. However, students with visual impairments must interact directly with these changes as they navigate the environment. Therefore, a keen sense of history and memory for what came before is critical to the O&M skillset.

**BIG IDEAS**

Independent travel requires a variety of mobility techniques.

Effective exploration of the environment requires multi-sensory efficiency.

Developing and maintaining an accurate understanding of travel environments and spatial relationships are essential skills.

Development of travel techniques is an ongoing process that increases in complexity across environments.

Communication and personal safety are essential for independent travel.

**Learning Standards**

Curricular Competencies	Content
<p><i>Students are expected to do the following:</i></p> <p>Develop personal awareness and responsibility:</p> <ul style="list-style-type: none"> <li>• Use mobility aids to gather environmental information.</li> <li>• Travel flexibly and independently across a variety of environments.</li> </ul> <p>Use critical and reflective thinking:</p> <ul style="list-style-type: none"> <li>• Develop strategies for orienting to an unfamiliar route or environment.</li> <li>• Use an allocentric frame of reference to apply positional and relationship concepts to an area, intersection, or route.</li> <li>• Gather and integrate information from a variety of senses in the analysis or completion of an O&amp;M task.</li> </ul>	<p><i>Students are expected to know the following:</i></p> <p>Environmental concepts:</p> <ul style="list-style-type: none"> <li>• Understand concepts about indoor and outdoor travel and the community and region in which one lives.</li> </ul> <p>Public transportation:</p> <ul style="list-style-type: none"> <li>• Develop knowledge and practice use of a variety of local transportation modes (e.g., walking, carpool, taxi, bus, train).</li> </ul> <p>Personal safety and communication:</p> <ul style="list-style-type: none"> <li>• Understand personal safety concepts and safety precautions in various situations.</li> <li>• Understand and apply appropriate communication methods.</li> </ul>

## Big Ideas – Elaborations

Independent travel requires a variety of mobility techniques.

- The depth of understanding of the student's surroundings contributes to the development of the student's O&M skillset.
- Effective spatial cognition supported by accurate and meaningful concepts of the self in relation to the environment provides a foundation for more advanced O&M skills and techniques.
- The development of increasingly elaborate environmental concepts is required as students travel in complex and unfamiliar environments.

Effective exploration of the environment requires multi-sensory efficiency.

- Continual skill refinement in the use of tools and devices that extend and accentuate sensory access to the environment is required for travel with greater independence.
- Systematic evaluation and integration of sensory information is required for the application and elaboration of advanced O&M concepts.
- A multisensory approach to planning, analyzing, and executing route travel is most effective when students are able to maximize input through available sensory channels (e.g., visual, vestibular).

Developing and maintaining an accurate understanding of travel environments and spatial relationships are essential skills.

- Cognitive mapping/spatial updating are supported using human guide, maps, models, tactile diagrams, and other manipulatives as students tangibly represent travel environments.
- Tangible representations (e.g., maps) provide students with an important means of accessing spatial relationships between landmarks and objects in familiar and unfamiliar areas.
- The ability to produce one's own tangible representations (e.g., models) is an essential skill for students as they independently navigate complex and unfamiliar travel environments.

Development of travel techniques is an ongoing process that increases in complexity across environments.

- O&M skills and techniques require consistent updating and elaboration as the student travels with confidence in complex and unfamiliar travel environments.
- The student should maintain an ongoing motivation to refine his or her O&M skillset as the features of travel environments, including those that are most familiar, will change over time.
- New O&M techniques and technology are under continual development and the student should be an active and critical consumer of each.

Communication and personal safety are essential for independent travel.

- Accurate self-knowledge of the implications of visual impairment for safe and effective travel in the community supports greater self-determination in the application of the O&M skillset.
- Strategies for effective self-advocacy are required for independent travel across home, school, work, and community settings.
- Active problem solving and self-reflection promote the student's capacity to independently and critically evaluate the effectiveness of their own O&M skillset.

## Curricular Competencies – Elaborations

Develop personal awareness and responsibility:

- Use mobility aids to gather environmental information.

- Use mobility devices (cane, low vision devices, electronic travel aids) appropriately in a variety of environments and for a variety of tasks.
- Demonstrate appropriate use of guide techniques and explain guide techniques to peers, teachers, or community members.
- Travel flexibly and independently in a variety of environments.
  - Demonstrate safer street crossing procedures and traffic judgement at a variety of intersection types including those with complex phasing and channelized turn lanes.
  - Refine strategies in scanning for cars, analyzing traffic flow, and timing for street crossing.
  - Elaborate on strategies to establish, maintain, and monitor alignment and line of travel.
  - Use appropriate techniques to anticipate and provide protection from environmental hazards and, wherever possible, work with the appropriate authorities to address safety concerns.

Use critical and reflective thinking:

- Develop strategies for orienting to an unfamiliar route or environment.
  - Use strategies (e.g., low vision devices, soliciting directions, and GPS technology) to orient to an unfamiliar environment.
  - Decide what relevant information needs to be gathered before a trip (e.g., bus schedule, cross streets, far-side/near-side) and use a variety of strategies and media to gather this information.
  - Share details of a planned route with friends, family members, coworkers, etc.
  - Make skillful use of a variety of app-based technologies including GPS, scanning apps (OCR), and digital assistants.
- Use an allocentric frame of reference to apply positional and relationship concepts to an area, intersection, or route.
  - Use different means of representing environmental information (e.g., 3D printed maps, 2D raised line maps, texture/relief maps) to understand relationships between objects within the environment.
  - Refined use of recovery strategies for re-orientation in complex travel environments.
  - Analyze and apply knowledge of numbering systems to find airport departure gates, track numbers, lecture halls, hotel room numbers, etc.
  - Practice cognitive mapping and spatial updating skills to remain oriented while moving through the environment independently or with a human guide.
- Gather and integrate information from a variety of senses in the analysis or completion of an O&M task.
  - Use feedback through one sensory channel to confirm information obtained through another sensory channel.
  - Recognizing the situations and conditions where some sensory inputs may be more reliable than others.
  - Use passive and/or active echolocation to gauge spatial characteristics, time-distance, proximity of obstacles, etc.

## Content – Elaborations

Environmental concepts:

- Understand concepts about indoor and outdoor travel and the community and region in which one lives and regularly travels.
  - Concepts related to complex roadways and intersections (e.g., roundabouts, channelized turning lanes, traffic islands, highways, rail crossings).
  - Understanding local and provincial laws/regulations governing patterns of vehicular and pedestrian movement (e.g., Auditory Pedestrian Signal requirements).
  - Concepts related to international travel (e.g., navigating customs, travel visa requirements, airports, foreign traffic patterns, and regulations).

## Content – Elaborations

- Concepts related to rural travel (e.g., t crossing streets without sidewalks)

### Transportation:

- Develop knowledge and practice use of a variety of local transportation modes (e.g., walking, carpool, taxi, bus, train).
  - Evaluate the accessibility of a given mode of transportation, and where necessary, generate and communicate recommendations to improve accessibility to the relevant authority.
  - Knowledge of tools (e.g., phone, apps, websites) for route and trip planning and the combination of assistive technology required for effective access to that tool (e.g. screen reading software).
  - Create multiple contingency plans when travel cannot be executed as intended (e.g., calling taxi if bus breaks down, finding an alternate bus route if a stop is unavailable).
  - Use problem solving strategies to reroute when faced with transit delays or disorientation

### Personal safety and communication:

- Understand personal safety concepts and safety precautions in various situations.
  - Understand the effects of changing environmental conditions on safety and strategies for safety precautions (e.g., night, weather).
  - Take safety precautions into account when planning routes and developing contingency plans (e.g., flagging with cane, alternate routes, soliciting assistance)
  - Awareness of how to use safety resources specific to environment and mode of travel (e.g., public transit assistance and security, emergency contacts/resources, emergency procedures).
  - Strategies for assertiveness and, if necessary, self-defence when encountering adverse situations (e.g., overhelping, threats to personal safety).
- Understand and apply appropriate communication methods.
  - Succinct communication of relevant personal information (e.g., level of functional vision) to obtain necessary assistance.
  - Research reliable sources of information on local transportation, services, and amenities for a given jurisdiction and apply this information to accomplish travel goals.

### Recommended Instructional Components:

- encourage students to think creatively and critically, communicate skillfully, and demonstrate care for self and others
- acknowledge the social nature of learning;
- allow for both physical and virtual collaboration;
- support the personal aspect to learning;
- promote risk-taking, wonder and curiosity;
- build connections across and within areas of knowledge;
- embed formative assessment practices such as learning intentions, criteria, questions, descriptive feedback, self and peer assessment;
- inspire and stretch student thinking and problem solving;
- promote student engagement;
- reflect the relationships between emotion, motivation and cognition;
- connect learning to both local and global communities;

- provide opportunities for students to share learning and reflect;
- utilize technologies and other tools in purposeful ways;
- involve explicit and intentional teaching; and
- make learning visible, open, and transparent.

**Recommended Assessment Components: Ensure alignment with the [Principles of Quality Assessment](#)**

- Written examination of content knowledge
- Creation of a portfolio detailing students' acquisition of new tools encountered in the course
- Completion of a drop-off evaluation. The student will be "dropped-off" at a familiar location and must plan and execute their route to a predetermined familiar location. Instructor will supervise from a distance and step in only when safety may be compromised.
- Student self-assessment/reflection
- Direct observation
- Video recording of student travel
- Anecdotal records
- Instructor-developed checklists and rubrics
- Teaching Age-Appropriate Purposeful Skills (TAPS) 3rd Edition (Pogrund et al., 2012)

**Learning Resources:**

Briggs, J., Browns, B., Cowper, T., Lomond, D.C Mainland, J., Mitdal, P., Schwartz, L., Taylor, B., & Wardlow, N. (2000) *Framework for independent travel: A resource for Orientation and Mobility instruction*. B.C. Ministry of Education.

Fazzi, D., Barlow, J (2017) *Orientation and Mobility techniques: A guide for the practitioner*. (2<sup>nd</sup> ed). New York: American Foundation for the Blind.

Fazzi, D. L., & Naimy, B. J. (2010). Chapter 8: Teaching orientation and mobility to school-age children. In W. R. Wiener, R. L Welsh, & B. B. Blasch (Eds.) *Foundations of orientation and mobility* (pp. 208-262). New York, NY: AFB Press.

Fazzi, D., Petersmeyer, B., (2001) *Imagining the possibilities: Creative approaches to Orientation and Mobility instruction for persons who are visually impaired*. New York: American Foundation for the Blind.

Jacobson, W. H. (2013). *The art and science of teaching Orientation and Mobility to persons with visual impairments*. New York, NY: AFB Press.

Pogrund, RL, & Griffin-Shirley, N.(Eds.).(2018). *Partners in O&M: Supporting orientation and mobility for students who are visually impaired*. Louisville, KY: American Printing House for the Blind

Pogrund, R., Sewell, D., Anderson, H., Calaci, L., Cowart, M., Gonzalez, C., Marsh, R., Roberson-Smith, B., (2012) *TAPS: An Orientation and Mobility curriculum for students with visual impairments*. Texas: Texas School for the Blind.

Sauerburger, D. (n.d.) Street Crossing Website/Resource. Accessed at [www.sauerburger.org](http://www.sauerburger.org)

**Assessment Resources:**

Briggs, J., Browns, B., Cowper, T., Lomond, D.C Mainland, J., Mitdal, P., Schwartz, L., Taylor, B., & Wardlow, N. (2000) *Framework for independent travel: A resource for Orientation and Mobility instruction*. B.C. Ministry of Education.



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