

Frame work for Independent Travel

**A Resource for
Orientation and Mobility Instruction**



Ministry of Education

Dedication

F*ramework for Independent Travel: A Resource for Orientation and Mobility Instruction* is dedicated to all the students in British Columbia who are blind or visually impaired, particularly in School District No. 23 (Central Okanagan). It is these students who inspired the project and who remind us everyday of our commitment to Orientation and Mobility training. Their ability to travel independently and safely will be the standard of success by which the *Framework* is measured.

—The *Framework* development committee

Canadian Cataloguing in Publication Data

Main entry under title:

Framework for independent travel: A resource for orientation and mobility instruction

ISBN 0-7726-3979-5

1. Children, Blind - Orientation and mobility - Study and teaching - British Columbia. 2. Blind - Travel - Study and teaching - British Columbia. I. British Columbia. Ministry of Education. Special Programs Branch.

Acknowledgments

The Ministry of Education wished to gratefully acknowledge School District No. 23 (Central Okanagan) for its work in the development of this resource.

The Special Programs Branch of the Ministry particularly acknowledges the project committee, which included vision resource teachers, orientation and mobility specialists, parents, and others:

- Bonnie Browns, School District No. 23 (Central Okanagan)
- Tom Cowper, School District No. 23 (Central Okanagan)
- Deborah Lomond, School District No. 23 (Central Okanagan)
- Joyce Mainland, Parent/Orientation and Mobility Instructor
- Peter Middtal, School District No. 23 (Central Okanagan)
- Lynn Schwartz, School District No. 23 (Central Okanagan)
- Bruce Taylor, Vision Consultant, Sunny Hill Health Centre (Vancouver)
- Nita Wardlow, School District No. 43 (Coquitlam)

The Special Programs Branch thanks the following organizations or groups for their contributions to the development of the resource: Blind Children & Youth Parents' Association of B.C., the National Federation of the Blind, Advocates for Equality, Orientation and Mobility Instructors of the Canadian National Institute for the Blind, and the B.C. Vision Teachers Association.

In addition, the Ministry gratefully acknowledges the contributions of Janet Briggs, principal writer.

A Resource for Orientation and Mobility Instruction

Table of Contents

Acknowledgments	1
Introduction	5
Instructions for Using <i>Framework for Independent Travel</i>	7
Concept Development	10
Sensory Development.....	24
Orientation & Mapping	38
Travel Techniques	46
Communication, Personal Safety, and Advocacy	56
Appendix A: Learning Outcomes.....	65
Appendix B: Resources.....	71
Appendix C: Student Profile Forms.....	77

Introduction

Orientation and Mobility (O & M) has frequently been described as “knowing where you are, knowing where you want to go, and knowing how to get there.” O & M is the ability to move safely, efficiently, and gracefully through all environmental conditions and situations with as much independence as possible. O & M training encourages students with visual impairments to development essential skills, build confidence in their ability to travel within their schools and all other environments, and take responsibility for their decisions.

The development of these skills allows students with visual impairments to more fully participate in the life of the school and community. The ability to use these skills affects access to educational opportunities and improves quality of life. O & M instruction requires the support of the family throughout the students’ formal training. Most O & M skills are taught within the school setting, with the ultimate goal being the ability to travel independently in all environments. Orientation and mobility training needs to be a part of the Individual Education Plan for every student with significant vision loss, including those with multiple disabilities.

Orientation refers to the thinking part of moving from place to place, which is called travel. It is the process of using knowledge and sensory information to understand one’s location in the environment and how to move to a desired location. Orientation includes using language, understanding cause and effect, and learning about concepts that relate to objects and things. In addition, orientation involves increasing awareness of one’s body, developing sensory skills, and learning to use landmarks to assist in travel.

Mobility refers to the physical part of travel, which includes confident, safe and efficient movement from one place to another. Students’ strength, balance, level of independent movement, and awareness of dangers can affect travel. Confidence and safety may be influenced by factors such as: setting (busy school cafeteria vs. quiet resource classroom), the selective use of adaptive techniques, and the attitudes of parents, students, and community.

Teaching O & M requires specially trained people who are aware of the dangers, responsibilities, and techniques involved. In British Columbia, the Ministry of Education defines a qualified orientation and mobility instructor as one who:

- meets standards established by the Association for the Education and Rehabilitation of the Blind and Visually Impaired (AER); or
- has a Masters degree in orientation and mobility; or
- has completed post-graduate studies in orientation and mobility, which include at least 300 hours of supervised practice in orientation and mobility working with individuals with a variety of visual impairments.

Some school districts employ O & M specialists, while other districts use contractors to respond to this aspect of a student's education. In some instances, the vision resource teacher is also a qualified O & M instructor.

This resource, *Framework for Independent Travel: A Resource for Orientation and Mobility Instruction*, recognizes that skills are acquired gradually and cumulatively. For people with vision loss, competency in developing an awareness of their surroundings is a result of concentration and practise over a period of training. The *Framework* is designed to be used by an O & M specialist with students from kindergarten through grade 12. School boards may decide to approve the outcomes of the *Framework* as a locally developed credit elective course in grade 11 and 12.

Instructions for Using *Framework for Independent Travel*

F*ramework for Independent Travel: A Resource for Orientation and Mobility Instruction* provides teachers or instructors who are planning O & M instruction with help in establishing Individual Education Plan (IEP) goals for students. It also gives an overview of skills needed to be an independent traveller. As well as a framework for instruction, the resource can be used as an initial assessment tool to evaluate a student's functioning level and set performance target levels for the future.

This *Framework* has been designed to include the principal areas of orientation and mobility:

- Concept Development
- Sensory Development
- Orientation and Mapping
- Travel Techniques
- Communication, Personal Safety, and Advocacy.

This *Framework* is modeled after Integrated Resource Packages (IRPs), which comprise the BC curriculum. It includes a continuum of learning outcomes in orientation and mobility, which are divided into three levels to coincide with primary (grades K-3), intermediate (grades 4-7), and secondary (grades 8-12) levels in the IRPs. However, a student may be in different levels in each area; for example, level three in Concept Development, level one in Travel, and level two in Communication. While the *Framework* delineates learning outcomes for each strand and includes both assessments and an appendix of resources, it does not outline instructional strategies. O & M instructors are specially trained in these strategies.

Within each strand, the level one skills are acquired and used in *familiar* environments, beginning with the school building and grounds. By the second level, students are expected to use the basic skills with ease and begin to apply them in *unfamiliar* environments. At level three, students are expected to choose which skills and techniques to use independently in more *complex* environments. While advanced travel

A Resource for Orientation and Mobility Instruction

techniques are taught at level three, it is recognized that

O & M skills continue to be refined all through life, and proficiency may not be achieved during the school years.

Orientation & Mobility instructors can select the strands that are most appropriate for each student based on the student's previous experience and skill level. The strands do not necessarily need to be taught in the order in which they appear in the resource. It is important to recognize that most strands have prerequisite skills (e.g., a student would not be working on crossing streets in a residential area if he or she has not mastered the concept of a city block). The *Framework* recognizes that the personal safety of the student is paramount. This resource allocates a special strand emphasizing personal safety, Communication, Personal Safety, and Advocacy. In addition, references to safety issues are made throughout each strand.

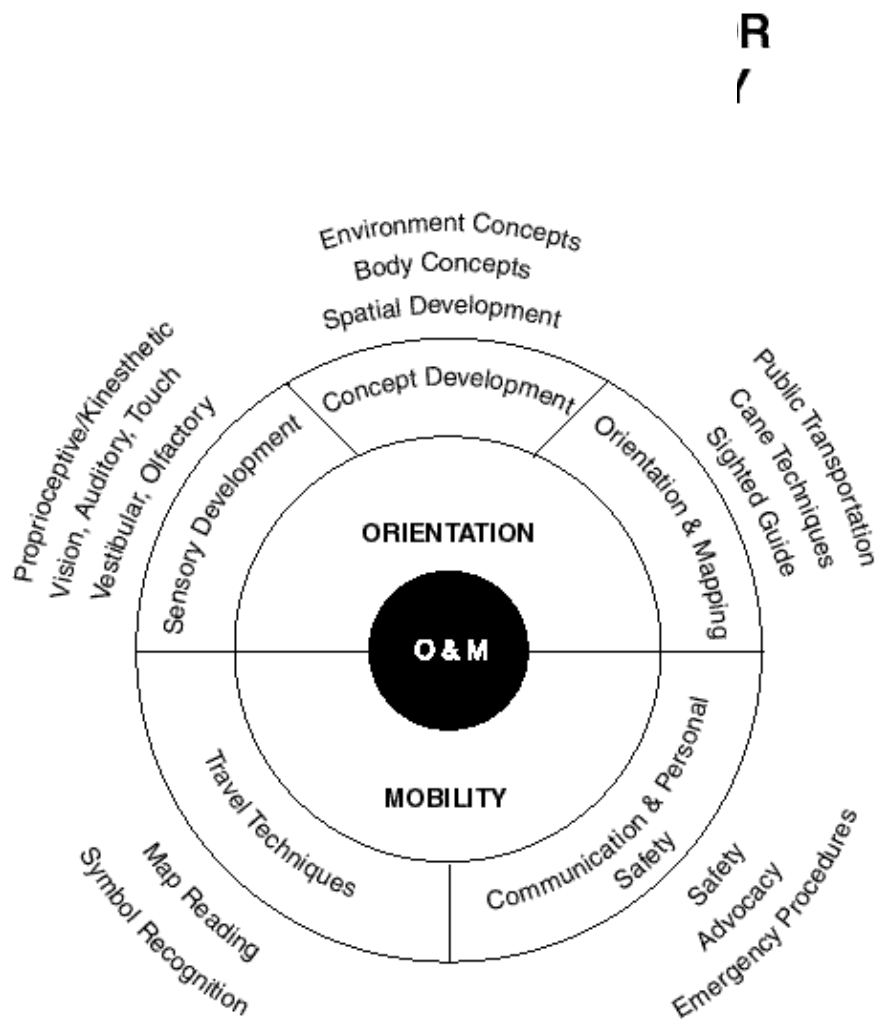
This resource can be used in conjunction with other O & M resources (see Appendix B).

Appendix C contains a template for entering a student's profile, which can be used by the instructor as a tool for assessment and record keeping.

Orientation and Mobility Strands

Framework for Independent Travel: A Resource for Orientation and Mobility Instruction has five strands that include the principal areas of orientation and mobility:

- Concept Development
- Sensory Development
- Orientation and Mapping
- Travel Techniques
- Communication, Personal Safety, and Advocacy.



Concept Development

A concept is a mental representation, image, or idea. Concepts are formed by classifying or grouping objects or events with similar properties. Concepts can be attained on three levels: concrete, functional, and abstract.

Individuals who are blind or visually impaired experience difficulty attaining concepts, with both the range and variety of concepts. The importance of establishing a foundation of basic concepts, including object permanence, is fundamental to both orientation and mobility.

The necessary basic concepts related to mobility are called body concepts: body image, body schema, and body awareness. Body image includes body parts, body planes, laterality, and directionality. Concepts necessary for orientation are spatial (positional, relational, shape, measurement, action) and environmental (object in the environment, topography, texture, temperature).

Concept Development • Learning Outcomes

LEVEL ONE

Body Concepts

- Name and locate body parts
- Identify the motion of body parts
- Identify body planes, laterality and directionality in relation to self
- Describe the location of an object in relation to body parts

Spatial Concepts

- Identify positional and relational concepts
- Identify basic shapes
- Make comparative judgments
- Demonstrate awareness of basic measurement
- Identify surface planes
- Make quarter, full, and half turns
- Begin to understand time/distance relationships

Environmental Concepts

- Identify features and functions of common objects familiar to their environment
- Be aware of potential dangers in home, school, and neighbourhood
- Understand features of a landmark
- Use concepts of topography
- Use concepts of texture
- Use concepts of temperature

LEVEL TWO

Spatial Concepts

- Apply positional and relational concepts
- Identify more complex shapes
- Demonstrate a facility with concepts of measurement
- Apply action concepts to travel
- Apply time/distance and sound/distance relationships
- Transfer the notion of body concepts in relation to other people (e.g., put your right hand on the left shoulder of the person facing you)

Environmental Concepts

- Describe features of roads and intersections
- Understand features associated with larger geographical settings
- Describe vehicular and pedestrian traffic patterns
- Use concepts of topography
- Use concepts of temperature

LEVEL THREE

Environmental Concepts

- Describe features of more complex intersections
- Demonstrate proficiency in understanding and dealing with environmental concepts as they relate to advanced travel

Concept Development • Level One

Body Concepts

It is essential that students understand concepts as they relate to their bodies. Individuals are always the centre of their orientation. People perceive objects in relation to themselves. The students' development of concepts of space and objects in space depends on the relationship of the objects to the individuals.

Body concepts include body image (a person's subjective experience of his or her own body), body schema (unconscious knowledge of the body), and body awareness (the knowledge the person has of her or his body). Body concepts can be divided into five components: identification of body parts, body movement, body planes, laterality, and directionality.

LEARNING OUTCOMES

It is expected that students will be able to:

- Name and locate body parts
- Identify the motion of body parts
- Identify body planes, laterality and directionality in relation to self
- Describe the location of an object in relation to body parts

Concept Development • Level One

Body Concepts

ASSESSMENT

BODY PARTS

Head

- | | | | |
|-----------------------------------|-----------------------------------|--------------------------------|-----------------------------------|
| <input type="checkbox"/> cheeks | <input type="checkbox"/> eyelids | <input type="checkbox"/> jaw | <input type="checkbox"/> nostrils |
| <input type="checkbox"/> chin | <input type="checkbox"/> face | <input type="checkbox"/> lips | <input type="checkbox"/> teeth |
| <input type="checkbox"/> ears | <input type="checkbox"/> forehead | <input type="checkbox"/> mouth | <input type="checkbox"/> throat |
| <input type="checkbox"/> eyes | <input type="checkbox"/> gums | <input type="checkbox"/> neck | <input type="checkbox"/> tongue |
| <input type="checkbox"/> eyebrows | <input type="checkbox"/> hair | <input type="checkbox"/> nose | |

Trunk

- | | | | |
|--------------------------------|--|---|--------------------------------|
| <input type="checkbox"/> back | <input type="checkbox"/> waist | <input type="checkbox"/> stomach (tummy, belly) | <input type="checkbox"/> sides |
| <input type="checkbox"/> chest | <input type="checkbox"/> rear (bottom, seat) | <input type="checkbox"/> spine | |
| <input type="checkbox"/> hips | <input type="checkbox"/> shoulders | | |

Limbs & appendages

- | | | | |
|----------------------------------|---|---------------------------------------|------------------------------------|
| <input type="checkbox"/> ankles | <input type="checkbox"/> index finger (pointer, forefinger) | <input type="checkbox"/> forearms | <input type="checkbox"/> palms |
| <input type="checkbox"/> arms | <input type="checkbox"/> little finger (pinkie, baby) | <input type="checkbox"/> hands | <input type="checkbox"/> shins |
| <input type="checkbox"/> biceps | <input type="checkbox"/> middle finger | <input type="checkbox"/> heels | <input type="checkbox"/> thighs |
| <input type="checkbox"/> calves | <input type="checkbox"/> ring finger | <input type="checkbox"/> heel of hand | <input type="checkbox"/> thumbs |
| <input type="checkbox"/> elbows | <input type="checkbox"/> fingernails | <input type="checkbox"/> knees | <input type="checkbox"/> toes |
| <input type="checkbox"/> feet | <input type="checkbox"/> fingertips | <input type="checkbox"/> kneecap | <input type="checkbox"/> toenails |
| <input type="checkbox"/> fingers | | <input type="checkbox"/> knuckles | <input type="checkbox"/> upper arm |
| | | <input type="checkbox"/> legs | <input type="checkbox"/> wrists |

MOVEMENT

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> straighten arm | <input type="checkbox"/> put arm out to the side | <input type="checkbox"/> bend body forward | <input type="checkbox"/> stand up on tiptoes |
| <input type="checkbox"/> bend arm at elbow | <input type="checkbox"/> put arm behind | <input type="checkbox"/> bend body backward | <input type="checkbox"/> jump, move to the side |
| <input type="checkbox"/> lift arm high into the air | <input type="checkbox"/> straighten leg in front | <input type="checkbox"/> bend body to the side | <input type="checkbox"/> twist |
| <input type="checkbox"/> put arm out in front | <input type="checkbox"/> bend leg at knee | <input type="checkbox"/> squat down, bend at knees (crouch) | <input type="checkbox"/> pull |
| | | | <input type="checkbox"/> push |

BODY PLANES

- front
- back
- top
- bottom
- side

LATERALITY

- left
- right

DIRECTIONALITY

- to the left
- to the right

Concept Development • Level One

Spatial Concepts

As individuals develop an accurate knowledge of their bodies, an understanding of positional and relational concepts is also formed. For children who are blind or visually impaired, it is particularly important to learn how body parts are positioned and how they relate to one another so that the concepts can be transferred to the external environment.

The knowledge of objects in space and their relationships to each other are essential to maintain or regain orientation. Once students with visual impairments understand the body and body parts by developing a clear body image, they are then better prepared to explore the objects in the space around them. Other spatial concepts relate to shape, measurement, and actions or movements.

LEARNING OUTCOMES

It is expected that students will be able to:

- Identify positional and relational concepts
- Identify basic shapes
- Make comparative judgments
- Demonstrate awareness of basic measurement
- Identify surface planes
- Make quarter, full, and half turns
- Begin to understand time/distance relationships

Concept Development • Level One

Spatial Concepts

ASSESSMENT

Positional & relational concepts

- | | | | |
|---------------------------------|---|--|------------------------------------|
| <input type="checkbox"/> up | <input type="checkbox"/> out | <input type="checkbox"/> perpendicular | <input type="checkbox"/> beginning |
| <input type="checkbox"/> down | <input type="checkbox"/> next to (beside) | <input type="checkbox"/> front | <input type="checkbox"/> end |
| <input type="checkbox"/> top | <input type="checkbox"/> centre (middle) | <input type="checkbox"/> back | <input type="checkbox"/> between |
| <input type="checkbox"/> bottom | <input type="checkbox"/> through | <input type="checkbox"/> in front of | <input type="checkbox"/> straight |
| <input type="checkbox"/> over | <input type="checkbox"/> around | <input type="checkbox"/> in back of | <input type="checkbox"/> crooked |
| <input type="checkbox"/> under | <input type="checkbox"/> forward | <input type="checkbox"/> (behind) | <input type="checkbox"/> near |
| <input type="checkbox"/> high | <input type="checkbox"/> backward | <input type="checkbox"/> open | <input type="checkbox"/> far |
| <input type="checkbox"/> low | <input type="checkbox"/> parallel | <input type="checkbox"/> closed | <input type="checkbox"/> odd |
| <input type="checkbox"/> in | | <input type="checkbox"/> toward | <input type="checkbox"/> even |
| | | <input type="checkbox"/> away | |

Shapes

- | | | | |
|---|-------------------------------|---------------------------------|------------------------------------|
| <input type="checkbox"/> circle (round) | <input type="checkbox"/> oval | <input type="checkbox"/> square | <input type="checkbox"/> rectangle |
| <input type="checkbox"/> triangle | | | |

Distance

- centimetre
- metre

Weight

- gram
- kilogram

Amount

- | | | | | |
|----------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|
| <input type="checkbox"/> whole | <input type="checkbox"/> less | <input type="checkbox"/> most | <input type="checkbox"/> none | <input type="checkbox"/> full |
| <input type="checkbox"/> half | <input type="checkbox"/> more | <input type="checkbox"/> all | <input type="checkbox"/> some | <input type="checkbox"/> empty |
| <input type="checkbox"/> quarter | | | | |

Time

- | | | | |
|---------------------------------|--------------------------------|---------------------------------------|------------------------------------|
| <input type="checkbox"/> second | <input type="checkbox"/> week | <input type="checkbox"/> tomorrow | <input type="checkbox"/> morning |
| <input type="checkbox"/> minute | <input type="checkbox"/> month | <input type="checkbox"/> yesterday | <input type="checkbox"/> afternoon |
| <input type="checkbox"/> hour | <input type="checkbox"/> year | <input type="checkbox"/> quarter hour | <input type="checkbox"/> evening |
| <input type="checkbox"/> day | <input type="checkbox"/> today | <input type="checkbox"/> half hour | <input type="checkbox"/> night |

Width, Length, Size

- | | | | |
|--------------------------------|---------------------------------|--------------------------------|--------------------------------|
| <input type="checkbox"/> wide | <input type="checkbox"/> large | <input type="checkbox"/> short | <input type="checkbox"/> huge |
| <input type="checkbox"/> thick | <input type="checkbox"/> little | <input type="checkbox"/> big | <input type="checkbox"/> great |
| <input type="checkbox"/> tall | <input type="checkbox"/> narrow | <input type="checkbox"/> small | <input type="checkbox"/> vast |
| <input type="checkbox"/> long | <input type="checkbox"/> thin | <input type="checkbox"/> tiny | |

Surface Planes

- horizontal
- diagonal
- vertical

Turns

- quarter (90°)
- half (180°)
- full (360°)

Time/Distance

- short time
- long time
- per minute
- per hour
- per second

Concept Development • Level One

Environmental Concepts

In order to maintain orientation and move safely and efficiently, it is essential that students develop an understanding of the environment they will most likely encounter. This category of concepts related to travel includes objects in the environment, topography, texture, and temperature.

LEARNING OUTCOMES

It is expected that students will be able to:

- Identify features and functions of common objects familiar to their environment
- Be aware of potential dangers in home, school, and neighbourhood
- Understand features of a landmark
- Use concepts of topography
- Use concepts of texture
- Use concepts of temperature

Concept Development • Level One

Environmental Concepts

ASSESSMENT

Objects in the environment

- | | | | |
|--|--|---|---|
| <input type="checkbox"/> student's desk | <input type="checkbox"/> landmark | <input type="checkbox"/> radiator | <input type="checkbox"/> police car |
| <input type="checkbox"/> teacher's desk | <input type="checkbox"/> car idle | <input type="checkbox"/> ceiling | <input type="checkbox"/> guide wire |
| <input type="checkbox"/> blackboard/whiteboard | <input type="checkbox"/> curbs | <input type="checkbox"/> floor | <input type="checkbox"/> utility pole |
| <input type="checkbox"/> traffic light | <input type="checkbox"/> wheelchair ramp | <input type="checkbox"/> rug, carpet, mat | <input type="checkbox"/> fire hydrant |
| <input type="checkbox"/> traffic | <input type="checkbox"/> gutter | <input type="checkbox"/> window (screen) | <input type="checkbox"/> parking meter |
| <input type="checkbox"/> city block | <input type="checkbox"/> grates | <input type="checkbox"/> vent | <input type="checkbox"/> street sign |
| <input type="checkbox"/> neighbourhood | <input type="checkbox"/> alley | <input type="checkbox"/> roof | <input type="checkbox"/> newspaper box |
| <input type="checkbox"/> highway | <input type="checkbox"/> driveway | <input type="checkbox"/> chimney | <input type="checkbox"/> water fountain |
| <input type="checkbox"/> road | <input type="checkbox"/> parking lot | <input type="checkbox"/> elevator | <input type="checkbox"/> ambulance |
| <input type="checkbox"/> street | <input type="checkbox"/> railroad crossing | <input type="checkbox"/> escalator | <input type="checkbox"/> van |
| <input type="checkbox"/> street corner | <input type="checkbox"/> park | <input type="checkbox"/> manhole cover | <input type="checkbox"/> train |
| <input type="checkbox"/> crosswalk | <input type="checkbox"/> playground | <input type="checkbox"/> trash can | <input type="checkbox"/> plane |
| <input type="checkbox"/> shoreline | <input type="checkbox"/> house | <input type="checkbox"/> park bench | <input type="checkbox"/> boat |
| <input type="checkbox"/> grassline | <input type="checkbox"/> store | <input type="checkbox"/> bus bench | <input type="checkbox"/> ship |
| <input type="checkbox"/> grass | <input type="checkbox"/> building | <input type="checkbox"/> bus shelter | <input type="checkbox"/> lamp post |
| <input type="checkbox"/> hedges | <input type="checkbox"/> floor, story, level | <input type="checkbox"/> street sign | <input type="checkbox"/> sandwich board |
| <input type="checkbox"/> dirt | <input type="checkbox"/> door (doorway) | <input type="checkbox"/> bus stop | <input type="checkbox"/> street vendor |
| <input type="checkbox"/> bush | <input type="checkbox"/> hallway | <input type="checkbox"/> bus (city, school) | <input type="checkbox"/> sidewalk furniture |
| <input type="checkbox"/> plant | <input type="checkbox"/> stairs (step) | <input type="checkbox"/> fire engine | |
| <input type="checkbox"/> fence | <input type="checkbox"/> wall | <input type="checkbox"/> truck | |
| <input type="checkbox"/> path | <input type="checkbox"/> room | <input type="checkbox"/> car | |

Topography

- | | | | |
|---------------------------------|---------------------------------|---|----------------------------------|
| <input type="checkbox"/> side | <input type="checkbox"/> hill | <input type="checkbox"/> flat | <input type="checkbox"/> crooked |
| <input type="checkbox"/> border | <input type="checkbox"/> ramp | <input type="checkbox"/> level | <input type="checkbox"/> open |
| <input type="checkbox"/> edge | <input type="checkbox"/> slope | <input type="checkbox"/> straight | <input type="checkbox"/> closed |
| <input type="checkbox"/> end | <input type="checkbox"/> dip | <input type="checkbox"/> line | |
| <input type="checkbox"/> corner | <input type="checkbox"/> raised | <input type="checkbox"/> broken line | |
| <input type="checkbox"/> angle | <input type="checkbox"/> lean | <input type="checkbox"/> curved (curve) | |

Textures

- | | | | |
|-----------------------------------|---|---------------------------------|---------------------------------|
| <input type="checkbox"/> pavement | <input type="checkbox"/> coarse | <input type="checkbox"/> tile | <input type="checkbox"/> dull |
| <input type="checkbox"/> cement | <input type="checkbox"/> cobblestone | <input type="checkbox"/> carpet | <input type="checkbox"/> rough |
| <input type="checkbox"/> asphalt | <input type="checkbox"/> brick | <input type="checkbox"/> hard | <input type="checkbox"/> jagged |
| <input type="checkbox"/> stone | <input type="checkbox"/> interlocking brick | <input type="checkbox"/> soft | <input type="checkbox"/> bumpy |
| <input type="checkbox"/> gravel | <input type="checkbox"/> wood | <input type="checkbox"/> wet | <input type="checkbox"/> smooth |
| <input type="checkbox"/> icy | <input type="checkbox"/> glass | <input type="checkbox"/> dry | <input type="checkbox"/> torn |
| <input type="checkbox"/> slippery | <input type="checkbox"/> plastic | <input type="checkbox"/> fine | <input type="checkbox"/> grassy |
| <input type="checkbox"/> snowy | <input type="checkbox"/> linoleum | <input type="checkbox"/> sharp | <input type="checkbox"/> sticky |

Temperature

- | | | | |
|-------------------------------|-------------------------------|---------------------------------|------------------------------|
| <input type="checkbox"/> hot | <input type="checkbox"/> warm | <input type="checkbox"/> mild | <input type="checkbox"/> dry |
| <input type="checkbox"/> cold | <input type="checkbox"/> cool | <input type="checkbox"/> chilly | <input type="checkbox"/> wet |

Concept Development • Level Two

Spatial Concepts

LEARNING OUTCOMES

It is expected that students will be able to:

- Apply positional and relational concepts
- Identify more complex shapes
- Demonstrate a facility with concepts of measurement
- Apply action concepts to travel
- Apply time/distance and sound/distance relationships
- Transfer the notion of body concepts in relation to other people (e.g., put your right hand on the left shoulder of the person facing you)

Concept Development • Level Two

Spatial Concepts

ASSESSMENT

Positional & relational

- | | | | | |
|-------------------------------------|-----------------------------------|--|--|-------------------------------------|
| <input type="checkbox"/> face | <input type="checkbox"/> next | <input type="checkbox"/> outside | <input type="checkbox"/> on | <input type="checkbox"/> diagonal |
| <input type="checkbox"/> facing | <input type="checkbox"/> next to | <input type="checkbox"/> out of | <input type="checkbox"/> off | <input type="checkbox"/> horizontal |
| <input type="checkbox"/> before | <input type="checkbox"/> sideways | <input type="checkbox"/> outer | <input type="checkbox"/> adjacent | <input type="checkbox"/> vertical |
| <input type="checkbox"/> ahead | <input type="checkbox"/> distant | <input type="checkbox"/> outward | <input type="checkbox"/> medial | <input type="checkbox"/> point |
| <input type="checkbox"/> rear | <input type="checkbox"/> here | <input type="checkbox"/> clockwise | <input type="checkbox"/> median | <input type="checkbox"/> line |
| <input type="checkbox"/> after | <input type="checkbox"/> there | <input type="checkbox"/> counter clockwise | <input type="checkbox"/> cardinal directions | <input type="checkbox"/> overhang |
| <input type="checkbox"/> above | <input type="checkbox"/> against | <input type="checkbox"/> opposite | <input type="checkbox"/> northeast | <input type="checkbox"/> overhead |
| <input type="checkbox"/> upward | <input type="checkbox"/> into | <input type="checkbox"/> across from | <input type="checkbox"/> northwest | <input type="checkbox"/> anterior |
| <input type="checkbox"/> bottom | <input type="checkbox"/> in | <input type="checkbox"/> around | <input type="checkbox"/> southeast | <input type="checkbox"/> posterior |
| <input type="checkbox"/> below | <input type="checkbox"/> inside | <input type="checkbox"/> toward | <input type="checkbox"/> southwest | <input type="checkbox"/> superior |
| <input type="checkbox"/> downward | <input type="checkbox"/> within | <input type="checkbox"/> upside down | <input type="checkbox"/> S, E, N, W erly | <input type="checkbox"/> inferior |
| <input type="checkbox"/> beneath | <input type="checkbox"/> inner | <input type="checkbox"/> middle | <input type="checkbox"/> S, E, N, W bound | |
| <input type="checkbox"/> underneath | <input type="checkbox"/> inward | <input type="checkbox"/> in between | <input type="checkbox"/> S, E, N, W ward | |
| | | | <input type="checkbox"/> S, E, N, W ern | |

Secondary shapes

- | | | | | |
|-----------------------------------|--|---------------------------------------|---|-----------------------------------|
| <input type="checkbox"/> sphere | <input type="checkbox"/> cubical | <input type="checkbox"/> circular | <input type="checkbox"/> box shaped | <input type="checkbox"/> V shaped |
| <input type="checkbox"/> octagon | <input type="checkbox"/> cone | <input type="checkbox"/> squared | <input type="checkbox"/> diamond shaped | <input type="checkbox"/> U shaped |
| <input type="checkbox"/> hexagon | <input type="checkbox"/> pyramid | <input type="checkbox"/> pear shaped | <input type="checkbox"/> H shaped | <input type="checkbox"/> X shaped |
| <input type="checkbox"/> pentagon | <input type="checkbox"/> trapezoid | <input type="checkbox"/> rain drop | <input type="checkbox"/> L shaped | <input type="checkbox"/> Y shaped |
| <input type="checkbox"/> cylinder | <input type="checkbox"/> parallelogram | <input type="checkbox"/> tear drop | <input type="checkbox"/> O shaped | |
| <input type="checkbox"/> figure 8 | <input type="checkbox"/> rectangular | <input type="checkbox"/> heart shaped | <input type="checkbox"/> S shaped | |
| <input type="checkbox"/> cube | <input type="checkbox"/> rounded | <input type="checkbox"/> ring shaped | <input type="checkbox"/> T shaped | |

Distance

- | | |
|--------------------------------|------------------------------------|
| <input type="checkbox"/> block | <input type="checkbox"/> kilometre |
|--------------------------------|------------------------------------|

Volume

- | | |
|--------------------------------|-------------------------------------|
| <input type="checkbox"/> litre | <input type="checkbox"/> millilitre |
|--------------------------------|-------------------------------------|

Action

- | | | | | |
|--|----------------------------------|-----------------------------------|--|--|
| <input type="checkbox"/> 45° turn | <input type="checkbox"/> crawl | <input type="checkbox"/> position | <input type="checkbox"/> climb | <input type="checkbox"/> movement |
| <input type="checkbox"/> 90° (1/4 turn, right angle turn) | <input type="checkbox"/> roll | <input type="checkbox"/> drift | <input type="checkbox"/> march | <input type="checkbox"/> downward movement |
| <input type="checkbox"/> 180° (1/2 turn, about face, U-turn) | <input type="checkbox"/> stretch | <input type="checkbox"/> angle | <input type="checkbox"/> leap | <input type="checkbox"/> forward movement |
| <input type="checkbox"/> 360° (full turn) | <input type="checkbox"/> bend | <input type="checkbox"/> veer | <input type="checkbox"/> forward movement | <input type="checkbox"/> jaywalk |
| <input type="checkbox"/> scoot | <input type="checkbox"/> lie | <input type="checkbox"/> walk | <input type="checkbox"/> backward movement | <input type="checkbox"/> put |
| <input type="checkbox"/> creep | <input type="checkbox"/> sit | <input type="checkbox"/> run | <input type="checkbox"/> backward movement | <input type="checkbox"/> place |
| <input type="checkbox"/> stoop | <input type="checkbox"/> stand | <input type="checkbox"/> jump | <input type="checkbox"/> sideways movement | <input type="checkbox"/> grasp |
| <input type="checkbox"/> gallop | <input type="checkbox"/> squat | <input type="checkbox"/> hop | <input type="checkbox"/> sideways movement | <input type="checkbox"/> push |
| <input type="checkbox"/> upward | <input type="checkbox"/> kneel | <input type="checkbox"/> skip | | <input type="checkbox"/> pull |
| | | | | <input type="checkbox"/> swing |

Concept Development • Level Two

Environmental Concepts

LEARNING OUTCOMES

It is expected that students will be able to:

- Describe features of roads and intersections
- Understand features associated with larger geographical settings
- Describe vehicular and pedestrian traffic patterns
- Use concepts of topography
- Use concepts of temperature

Concept Development • Level Two

Environmental Concepts

ASSESSMENT

Features of roads & intersections

- | | | |
|---|---|--|
| <input type="checkbox"/> crown of road | <input type="checkbox"/> toll road | <input type="checkbox"/> 2 way stop |
| <input type="checkbox"/> camber of road | <input type="checkbox"/> through street | <input type="checkbox"/> 3 way stop |
| <input type="checkbox"/> parkway | <input type="checkbox"/> 1 way street | <input type="checkbox"/> 4 way stop |
| <input type="checkbox"/> boulevard | <input type="checkbox"/> 2 way street | <input type="checkbox"/> grid pattern |
| <input type="checkbox"/> median strip | <input type="checkbox"/> court | <input type="checkbox"/> pedestrian traffic control device |
| <input type="checkbox"/> safety island | <input type="checkbox"/> cul-de-sac | <input type="checkbox"/> T intersection |
| <input type="checkbox"/> traffic lanes | <input type="checkbox"/> audible signal | <input type="checkbox"/> + intersection |
| <input type="checkbox"/> freeway | <input type="checkbox"/> intersection | |

Features of larger geographical settings

- | | | |
|------------------------------------|--|---|
| <input type="checkbox"/> universe | <input type="checkbox"/> country | <input type="checkbox"/> residential district |
| <input type="checkbox"/> planet | <input type="checkbox"/> city | |
| <input type="checkbox"/> continent | <input type="checkbox"/> business district | |

Traffic patterns

- | | | |
|--|--------------------------------------|---------------------------------------|
| <input type="checkbox"/> traffic surge | <input type="checkbox"/> pedestrian | <input type="checkbox"/> right of way |
| <input type="checkbox"/> revving motor | <input type="checkbox"/> crowd | |
| <input type="checkbox"/> traffic jam | <input type="checkbox"/> crowd surge | |

Topography

- | | | |
|------------------------------------|---------------------------------------|--|
| <input type="checkbox"/> seam | <input type="checkbox"/> incline | <input type="checkbox"/> point |
| <input type="checkbox"/> joint | <input type="checkbox"/> tilt | <input type="checkbox"/> reference point |
| <input type="checkbox"/> perimeter | <input type="checkbox"/> irregular | <input type="checkbox"/> focal point |
| <input type="checkbox"/> ridge | <input type="checkbox"/> off set | <input type="checkbox"/> arc |
| <input type="checkbox"/> decline | <input type="checkbox"/> kitty corner | |

Temperature

- centigrade °C
- fahrenheit °F
- humid
- muggy
- sweltering

Concept Development • Level Three

Environmental Concepts

LEARNING OUTCOMES

It is expected that students will be able to:

- Describe features of more complex intersections
- Demonstrate proficiency in understanding and dealing with environmental concepts as they relate to advanced travel

Concept Development • Level Three

Environmental Concepts

ASSESSMENT

- solid line
- broken line
- irregular intersection
- Y intersection
- off-set intersection
- advanced green signal
- delayed green signal
- public transportation terminals
- bus loops

Sensory Development

The development of orientation and mobility skills goes hand in hand with the ability to gather and interpret sensory cues. Information from sight, sound, smell, and touch support purposeful movement and exploration of objects and the environment. Through the process of sensory integration, it is possible to establish and maintain one's position, locate objects, establish and confirm landmarks, and recognize safety cues.

By using the senses, students can access additional information (braille, print, voice, and tactile diagrams) that assist them in becoming familiar with a travel setting.

Practice and familiarity with a setting often enhances sensory awareness and responsiveness. The ability to use one's senses may be compromised by illness, fatigue, and stress.

Sensory Development • Learning Outcomes

LEVEL ONE

Vision

- Use vision to establish and maintain orientation
- Name eye condition and functional implications
- Visually identify dangers in familiar environments
- Use vision to identify features of a residential area

Auditory

- Locate, identify, and discriminate information from sounds
- Use sound cues to identify dangers
- Understand sound masking

Touch

- Interpret and respond to tactile information using hands, feet, and body
- Interpret and react to tactile information when using a pre-cane, cane, walker, or wheelchair

Proprioceptive/Kinesthetic

- Demonstrate awareness of the position of body parts and monitor their movement in space
- Accurately complete turns

Vestibular

- Monitor and compensate for changes of the vestibular system

Olfactory

- Use scents for orientation
- Use the sense of smell to detect danger

LEVEL TWO

Vision

- Visually identify dangers in unfamiliar environments
- Use vision to “read” business area traffic
- Use visual memory for orientation
- Maximize use of residual vision when travelling

Auditory

- Use sound cues and echo location for orientation
- Use sound to “read” vehicle flow and traffic control systems at intersections

Touch

- Use touch for orientation in unfamiliar settings
- Discriminate more complex tactile information
- Understand the impact of clothing on masking tactile cues

LEVEL THREE

Vision

- Demonstrate proficient use of vision to establish and maintain orientation and safety when travelling in complex environments
- Understand the features and use of low vision devices

Auditory

- Demonstrate proficient use of hearing to establish and maintain orientation and safety when travelling in complex environments
- Use sound to “read” traffic flow at high speed and heavy volume intersections
- Understand the characteristics of electronic travel devices in providing or enhancing auditory information

Touch

- Understand the use of alternative travel devices
- Be aware of changes in tactile sensitivity due to weather and environmental conditions

Sensory Development • Level One

Vision

Most students have some residual vision that can be used to establish and maintain orientation and safety when travelling. In addition, vision is important for developing concepts, encouraging movement, and integrating sensory cues.

LEARNING OUTCOMES

It is expected that students will be able to:

- Use vision to establish and maintain orientation
- Name eye condition and functional implications
- Visually identify dangers in familiar environments
- Use vision to identify features of a residential area

Auditory

Students with visual impairments must use information from sound to remain safe and oriented to their surroundings. Training in auditory skills can help them to develop awareness and understanding of the world, particularly about objects that may not be seen or may not be within arm's reach.

LEARNING OUTCOMES

It is expected that students will be able to:

- Locate, identify, and discriminate information from sounds
- Use sound cues to identify dangers
- Understand sound masking

Sensory Development • Level One

ASSESSMENT

VISION

Orientation

- Visually explores the surroundings to identify characteristics of objects, people, and places (e.g., size, shape, amount)
- Uses vision to establish and maintain line of travel
- Uses vision to establish landmarks

Eye condition/implications

- Describes how the visual impairment affects everyday activities

Identifying dangers

- Uses vision to identify dangers (e.g., vehicles, obstacles, drop offs)

Identifying features of a residential area

- Uses vision to identify features of two-lane residential streets
- Identifies T and +shaped intersections
- Uses vision to read traffic flow (e.g., one-lane versus two-lane)
- Recognizes traffic signs by shape and colour
- Identifies traffic lights and observes their control on traffic flow at intersections
- Scans for traffic at driveways and two-lane residential street crossings

AUDITORY

Orientation

- Identifies common sounds (e.g., animals, people, vehicles)
- Identifies characteristic sounds in a building (e.g., stairwells, rooms, hallways)
- Interprets information from sounds (e.g., accelerating vehicle, distance, crowds)
- Uses sound to establish landmarks
- Localizes and turns to face direction of sound source
- Tracks a moving sound source
- Demonstrates awareness of echo location (open versus closed space)

Identifying dangers

- Reacts to dangers that are identifiable by sound (e.g., school bells, alarms, sirens, barking dogs, tire squeals)

Sound masking

- Aware of how changes in health, clothing, and environment mask auditory cues

Sensory Development • Level One

Touch

Students with visual impairments can gain information about surface and object textures, shapes, size, and density through the development of tactile sensitivity. In addition, touch can be used to detect, explore, orient, and protect from hazards. Tactile cues from a dog guide or travel device (cane, electronic travel aid) or protective arm techniques can facilitate protection from objects.

LEARNING OUTCOMES

It is expected that students will be able to:

- Interpret and respond to tactile information using hands, feet, and body
- Interpret and react to tactile information when using a pre-cane, cane, walker, or wheelchair

Proprioceptive/Kinesthetic

Students with visual impairments can focus upon the position of body parts by using muscle memory and joint receptors. Repetitive training can be used to develop a “feel” for movement and action.

LEARNING OUTCOMES

It is expected that students will be able to:

- Demonstrate awareness of the position of body parts and monitor their movement in space
- Accurately complete turns

Sensory Development • Level One

ASSESSMENT

TOUCH

Response to tactile information

- Using hands, body, or feet detects and responds to characteristics of objects (e.g., temperature, shape, texture, position of objects)
- Uses a systematic pattern of tactile exploration
- Uses touch in a socially acceptable manner
- Demonstrates awareness of the effects of clothing in masking or reducing tactile sensitivity
- Uses touch to identify landmarks and hazards in a familiar setting
- Demonstrates trailing, shorelining, and squaring off, etc.
- Uses touch to establish and maintain a line of travel

Travel device

- Using a mobility device (precane, cane, walker, wheelchair) detects and responds to information (e.g., slope, texture)

PROPRIOCEPTIVE/KINESTHETIC

Movement

- Self-monitors a head up position
- Self-monitors posture and positioning when sitting or moving
- Self-monitors grasp and alignment when using a guide
- Self-monitors posture and positioning when using a cane or travel device
- Detects changes of surface planes (incline, decline, level)
- Uses appropriate reach in locating objects
- Follows instructions for unfamiliar movement (e.g. creative dance)
- Anticipates distances and direction of turns in familiar environments
- Begins to estimate distances (width of street)

Turns

- Accurately makes quarter, half, and full turns

Sensory Development • Level One

Vestibular

Inner ear receptors monitor and signal the central nervous system to changes in movement and balance. In order to sit, stand, and travel with controlled movement, students must be aware of and respond to changes of vestibular sensory cues.

LEARNING OUTCOMES

It is expected that students will be able to:

- Monitor and compensate for changes of the vestibular system

Olfactory

Information from smell can help students to locate and confirm a destination (e.g., bakery or woodwork shop). In addition, the sense of smell can help them to detect dangers.

LEARNING OUTCOMES

It is expected that students will be able to:

- Use scents for orientation
- Use the sense of smell to detect danger

Sensory Development • Level One

ASSESSMENT

VESTIBULAR

Response to vestibular cues

- Self-monitors a calm, attentive state
- Uses defensive reactions in response to loss of balance
- Adjusts body posture and body positioning when moving (knee flex, weight shift on an incline)
- Demonstrates adaptive stance, gait, or travel technique (use of sighted guide) to deal with vestibular changes

OLFACTORY

Orientation

- Associates a variety of scents with people, objects, and places (e.g., perfumes, plants, smoke, cooked foods, school cafeteria)
- Uses smell in a socially acceptable manner
- Uses other senses to compensate when the sense of smell is compromised or masked by other odours

Identifying danger

- Identifies a variety of smells associated with danger (e.g., smoke, chemicals)

Sensory Development • Level Two

Vision

LEARNING OUTCOMES

It is expected that students will be able to:

- Visually identify dangers in unfamiliar environments
- Use vision to “read” business area traffic
- Use visual memory for orientation
- Maximize use of residual vision when travelling

Auditory

LEARNING OUTCOMES

It is expected that students will be able to:

- Use sound cues and echo location for orientation
- Use sound to “read” vehicle flow and traffic control systems at intersections

Sensory Development • Level Two

ASSESSMENT

VISION

Identifying danger

- Selects safe pathway
- Recognizes changes in weather conditions that may reduce visual efficiency
- Uses caution in dangerous areas (e.g. street crossings, subway platforms, stairwells)

Reading traffic

- Reads traffic flow in business areas (e.g., traffic circles, multi-lane crossings, vehicle speed)
- Identifies traffic control systems (e.g., advance or delayed turn lane, crosswalk lines, lights)

Using visual memory

- Recognizes shape, colour, topography, and distinctive objects for orientation

Using residual vision

- Compensates for lighting, glare, or darkness
- Uses sequential scanning when travelling
- Positions self at corner for optimum visibility
- Uses preferred corner for safest crossing
- Recovers from veers

AUDITORY

Using sound cues

- Uses sound to establish and maintain line of travel
- Uses echo location for orientation and to avoid obstacles
- Demonstrates understanding of sound/distance relationships
- Uses sound to establish a parallel line of travel
- Uses sound to establish parallel and perpendicular alignment and street crossings

Reading traffic

- Detects a variety of traffic control systems (e.g., one way stop, two way stop, lights)
- Determines traffic flow (e. g., one-way versus two-way)
- Determines intersection shape (T, +, Y)

Sensory Development • Level Two

Touch

LEARNING OUTCOMES

It is expected that students will be able to:

- Use touch for orientation in unfamiliar settings
- Discriminate more complex tactile information
- Understand the impact of clothing on masking tactile cues

Sensory Development • Level Two

ASSESSMENT CONTINUED

TOUCH

Orientation

- Detects positional placement and location of objects
- Uses touch to establish landmarks in unfamiliar settings
- Reorients after crossing open space or passing an obstacle

Interpreting complex tactile information

- Uses touch to locate hazards in unfamiliar settings
- Uses touch in a more refined way
- Identifies more complex shapes (e.g., octagon)
- Discriminates tactile information (braille, watch, compass)

Effects of masking

- Demonstrates awareness of the effects of clothing related to the weather

Sensory Development • Level Three

Vision

LEARNING OUTCOMES

It is expected that students will be able to:

- Demonstrate proficient use of vision to establish and maintain orientation and safety when travelling in complex environments
- Understand the features and use of low vision devices

Auditory

LEARNING OUTCOMES

It is expected that students will be able to:

- Demonstrate proficient use of hearing to establish and maintain orientation and safety when travelling in complex environments
- Use sound to “read” traffic flow at high speed and heavy volume intersections
- Understand the characteristics of electronic travel devices in providing or enhancing auditory information

Touch

LEARNING OUTCOMES

It is expected that students will be able to:

- Understand the use of alternative travel devices
- Be aware of changes in tactile sensitivity due to weather and environmental conditions

Sensory Development • Level Three

ASSESSMENT

VISION

Orientation to complex environments

- Selectively uses the timing method to confirm visual cues at street crossings
- Recovers from veers and blocked passageways
- Locates places of safety and information
- Uses visual landmarks and references for orientation on drop off lesson
- Uses visual cues for orientation at airports, public transit stations, or conference centres

Low vision devices

- Describes the uses of near and distance devices
- Determines when to use a device
- Determines which device to use

AUDITORY

Orientation to complex environments

- Uses sound cues for orientation to unfamiliar settings
- Uses echo location to maintain position and detect hazards (e.g., van with mirror projecting into sidewalk space)
- Compensates for the impact of weather, environment, and health by selecting alternative travel technique or mode of travel

Reading Traffic

- Uses sound to determine traffic flow
- Uses sound cues to evaluate traffic control
- Uses the timing method to establish and confirm safe crossing

Electronic travel devices

- States range and coverage of signal from an electronic travel device
- Identifies quality of signal based on distance and texture of objects
- Discriminates between the sound of the device and sounds from the environment

TOUCH

Alternative travel devices

- Identifies characteristics of alternative travel devices (e.g., dog guides, ETAs)

Adapting to the environment

- Uses adaptive techniques to compensate for reduced tactile information (see Travel Techniques Level Two; Adverse Weather)

Orientation & Mapping

Orientation and mapping skills are an essential part of a student's orientation and mobility instruction. Map reading promotes the integration of concepts with skills, enhances comprehension of spatial relationships, and enables the student to travel independently in all environments.

Orientation & Mapping • Learning Outcomes

LEVEL ONE

- Locate a dropped object
- Orient to familiar environments
- Interpret a simple map
- Travel to a familiar destination
- Develop the concept of a city block

LEVEL TWO

- Orient to a more complex environment
- Locate specific destination by address
- Interpret more complex maps

LEVEL THREE

- Use tactile, auditory, and visual maps in unfamiliar settings
- Orient to unfamiliar settings and proceed to a predetermined destination

Orientation & Mapping • Level One

LEARNING OUTCOMES

It is expected that students will be able to:

- Locate a dropped object
- Orient to familiar environments
- Interpret a simple map
- Travel to a familiar destination
- Develop the concept of a city block

Orientation & Mapping • Level One

ASSESSMENT

Locating dropped objects

- uses circular search pattern
- uses gridline search pattern
- establishes perimeter of search area
- uses appropriate protective techniques to recover dropped object

Orientation

- uses systematic perimeter method
- uses systematic gridline method
- identifies landmarks and/or significant features (auditory, tactile, visual, olfactory)
- labels walls for reference (door wall, window wall, blackboard wall, etc.)
- establishes focal point for orientation
- describes relationship between two points (i.e., teacher's desk and blackboard)
- uses clock face for referencing object positions
- uses sensory cues to locate exits and entrances (mats, sound of doors, etc.)
- understands concept of intersection (hallways, sidewalks)
- uses sensory cues to establish parallel/perpendicular line of travel

Interpret a simple map

- traces graphic line symbols and perimeter
- establishes orientation to map (top)
- scans map in systematic pattern
- uses and develops auditory maps
- understands symbol representation (shapes and textures)
- comprehends relative size, distance, direction
- assists in reconstruction of a visual/tactile map

Travel to a familiar destination in or out of school

- describes a route
- travels to a destination
- returns to a starting point (reverse direction)
- travels a route represented by a tactile/visual/auditory map
- demonstrates simple problem solving enroute

Concept of a city block

- establishes focal or start point
- identifies components of a city block
- constructs a simple visual/tactile map
- records an auditory map of area
- understands intersecting streets

Orientation & Mapping • Level Two

LEARNING OUTCOMES

It is expected that students will be able to:

- Orient to a more complex environment
- Locate specific destination by address
- Interpret more complex maps

Orientation & Mapping • Level Two

ASSESSMENT

Orientation to more complex environments

- uses landmarks and environmental cues for orientation
- applies information from maps to the environment
- travels to a destination
- uses map to reorient
- uses compass
- uses cardinal directions
- solicits aid to establish orientation
- identifies actual location on map

Locating a specific address

- understands patterns of numbering systems
- establishes focal point in reference to a numbering system (street and building)
- aware of exceptions in patterns of numbering (unnumbered doors, A/B addresses, etc.)

Interpreting a more complex map

- locates north indicator
- understands more complex symbols (varied size, shape)
- uses a legend for interpretation
- tactually travels a route on a map, pointing out symbols and landmarks
- understands concepts of parallel and perpendicular
- understands map of residential neighbourhood
- estimates distance using concepts of scale

Orientation & Mapping • Level Three

LEARNING OUTCOMES

It is expected that students will be able to:

- Use tactile, auditory, and visual maps in unfamiliar settings
- Orient to unfamiliar settings and proceed to a predetermined destination

Orientation & Mapping • Level Three

ASSESSMENT

Using maps

- uses an unfamiliar map to plan and execute a route
- uses a compass to orient to a map and surroundings
- uses a map and/or compass to plan an alternate route
- accesses information from a mall or building directory
- creates an auditory map for personal use and use by others

Drop off lesson

- establishes present location and determines direction of travel
- applies the use of a compass and map
- solicits aid

OPTION: Investigate new technologies (e.g., Global Positioning System, night vision goggles).

Travel Techniques

Independent and safe mobility involves the development of motor skills, acquisition of basic concepts, and awareness of the travel setting. Teaching these outcomes in a developmentally sequential manner allows the student to acquire the necessary skills on which to build more complex orientation and mobility techniques.

The ability to travel independently is integral to every aspect of personal, educational, and social development. The effective use of appropriate travel techniques enables students who are visually impaired to participate in activities as independently as is individually possible.

Travel Techniques • Learning Outcomes

LEVEL ONE

- Follow proper sighted guide technique
- Demonstrate a basic understanding of the uses of the long cane or adaptive mobility device (e.g., walker, hula hoop)
- Establish and maintain posture and balance while travelling with or without a cane
- Move safely in a familiar environment
- Use the full range of beginning O & M skills to travel safely and independently in familiar environments

LEVEL TWO

- Instruct and use correct sighted guide technique
- Use basic cane techniques proficiently
- Travel safely and independently in unfamiliar indoor environments
- Travel safely and independently in residential neighbourhoods
- Safely and independently cross residential streets
- With supervision, travel safely in business areas
- With supervision, safely cross streets in business or commercial areas
- Travel safely in adverse weather conditions in familiar environments
- Travel a familiar route safely at night
- With supervision, use public transportation

LEVEL THREE

- Apply the use of all cane techniques
- Plan and execute routes to unfamiliar commercial areas
- Use advanced travel techniques with supervision (e.g., cross multi-laned streets with high speed and high volume traffic)
- Use public transportation independently
- Independently travel to a stated destination from a drop off starting point

Travel Techniques • Level One

LEARNING OUTCOMES

It is expected that students will be able to:

- Follow proper sighted guide technique
- Demonstrate a basic understanding of the uses of the long cane or adaptive mobility device (e.g., walker, hula hoop)
- Establish and maintain posture and balance while travelling with or without a cane
- Move safely in a familiar environment
- Use the full range of beginning O & M skills to travel safely and independently in familiar environments

Travel Techniques • Level One

ASSESSMENT

Sighted guide technique

- | | |
|--|--|
| <input type="checkbox"/> initiates contact | <input type="checkbox"/> accepts and refuses aid |
| <input type="checkbox"/> uses proper arm, hand and body position | <input type="checkbox"/> uses proper doorway technique |
| <input type="checkbox"/> transfers sides | <input type="checkbox"/> uses proper seating technique |
| <input type="checkbox"/> reverses directions | <input type="checkbox"/> holds cane in proper position |
| <input type="checkbox"/> ascends and descends stairs | |

Using a long cane/mobility device

- | | |
|--|---|
| <input type="checkbox"/> uses proper grip | <input type="checkbox"/> moves the cane/device in a controlled manner |
| <input type="checkbox"/> uses proper arm position | <input type="checkbox"/> stores cane/device appropriately |
| <input type="checkbox"/> detects obstacles and drop offs | <input type="checkbox"/> enters and exits vehicles |
| <input type="checkbox"/> identifies surfaces | <input type="checkbox"/> negotiates stairs using cane |
| <input type="checkbox"/> explores objects and surroundings | <input type="checkbox"/> negotiates doorways using cane |
| <input type="checkbox"/> locates doorknobs and handles | <input type="checkbox"/> selects appropriate canes/devices |

Posture

- | | |
|--|--|
| <input type="checkbox"/> maintains upright head position | <input type="checkbox"/> moves in a coordinated fashion |
| <input type="checkbox"/> holds body erect | <input type="checkbox"/> maintains posture on curbs and stairs |
| <input type="checkbox"/> maintains relaxed shoulder position | <input type="checkbox"/> uses appropriate gait |

Moving safely

- | | |
|--|---|
| <input type="checkbox"/> uses upper and lower protective arm technique | <input type="checkbox"/> takes line of direction |
| <input type="checkbox"/> uses trailing | <input type="checkbox"/> problem solves |
| <input type="checkbox"/> traverses open doorways | <input type="checkbox"/> clears before moving |
| <input type="checkbox"/> uses foot slide | <input type="checkbox"/> uses diagonal technique (both hands) |
| <input type="checkbox"/> locates handrail on stairways | <input type="checkbox"/> uses shortened grip |
| <input type="checkbox"/> squares off | <input type="checkbox"/> uses “freeze” (no foot movement) |
| <input type="checkbox"/> recovers balance | |

Travel Techniques • Level Two

LEARNING OUTCOMES

It is expected that students will be able to:

- Instruct and use correct sighted guide technique
- Use basic cane techniques proficiently
- Travel safely and independently in unfamiliar indoor environments
- Travel safely and independently in residential neighbourhoods
- Safely and independently cross residential streets
- With supervision, travel safely in business areas
- With supervision, safely cross streets in business or commercial areas
- Travel safely in adverse weather conditions in familiar environments
- Travel a familiar route safely at night
- With supervision, use public transportation

Travel Techniques • Level Two

ASSESSMENT

Sighted guide technique

- uses the “switch and catch” technique in doorways
- seats oneself in an auditorium or theatre
- holds doors open on own
- transfers cane to maneuver through doorways without needing verbal cues
- uses proper technique on escalators and elevators
- corrects improper sighted guide technique

Cane techniques

- constant contact
- 2 point touch
- shorelining
- touch and drag
- gate position at crossings

Unfamiliar indoor environments

- anticipates environmental hazards and uses appropriate protective or cane technique (diagonal and touch techniques, trailing, touch and drag)
- knows when and how to use low vision devices
- uses indoor numbering systems
- identifies and uses landmarks (fire extinguishers, water fountains, pop machines, etc.)
- independently negotiates stairs using a cane
- uses appropriate cane techniques (2 point touch, constant contact, shortened grip, shorelining)
- uses a cane to locate door handles
- detects intersecting hallways
- knows and uses procedures for exiting buildings in an emergency
- uses low vision devices
- uses elevators, escalators, automatic and revolving doors (under supervision)

Residential Neighbourhoods

- uses outdoor numbering systems
- uses appropriate cane techniques (with or without sidewalks)
- recovers from a veer
- maintains a straight line of travel past gas stations, driveways, and parking lots
- detects intersecting sidewalks and corners
- recovers from encounters with obstacles (e.g., parked cars, bikes)
- identifies landmarks for reference
- uses information from the environment (wind, sun)
- maintains orientation
- uses cardinal directions
- follows multi-step directions
- uses low vision devices

Travel Techniques • Level Two

ASSESSMENT CONTINUED

Crossing residential streets

- identifies shapes of intersections (+,T)
- evaluates traffic patterns (two-way stop, four-way stop, one-way) and forms of traffic control (signs, lights)
- determines safest time to cross
- uses low vision devices
- maintains straight line of travel when crossing
- maintains correct alignment at crossings (grassline, parallel vehicles)
- demonstrates time/distance judgment
- reads the “crown” and slope of road
- recovers from a veer or obstacle
- maintains desired direction of travel after crossing
- determines and uses appropriate cane techniques

Business areas (supervised)

- safely moves through a parking lot
- detects intersecting sidewalks and corners
- accesses building or store entrances
- uses low vision devices
- recovers from obstacles (sandwich boards, construction, newspaper boxes, etc.)
- applies use of cane techniques
- locates specific destinations
- uses landmarks for reference
- safely crosses driveways and parking lots to access buildings set back from the street
- uses vending machines
- uses pay phones
- moves along with a line up
- travels in a grocery store

Crossing commercial streets (supervised)

- uses skills from crossing residential streets (see above)
- understands off-set intersections and factors deterring crossing safely
- crosses at intersections that feature high volume traffic patterns
- assesses traffic pattern and speed
- identifies traffic control systems used in high volume intersections:
 - advance and delay turn lights
 - pedestrian control lights
 - audible signal
- negotiates intersections that feature turn lanes and traffic islands
- maintains orientation to desired direction of travel after crossing
- applies appropriate cane technique

Travel Techniques • Level Two

ASSESSMENT CONTINUED

Adverse weather

- adapts for ice and snow travel
- selectively uses cane or sighted guide
- recognizes when auditory and tactile cues are distorted
- dresses appropriately for weather
- gathers weather information in advance
- assesses need for alternate mode of travel (i.e., taxi)
- locates a taxi

Night travel

- uses a flashlight and reflective clothing
- uses eccentric head tilt to avoid glare from headlights
- uses shadows to gain information
- distinguishes between daytime and night time sounds
- compensates for the motorist's reduced visibility and reaction time

Using public transportation (supervised)

Bus

- accesses bus schedule information
- locates correct bus stop
- indicates and confirms destination with driver
- boards the bus safely
- establishes and maintains orientation at drop off points

Taxi

- acquires and records information specific to a taxi trip
- travels to rendezvous spot and locates the taxi
- indicates and confirms destination with driver
- enters and exits the taxi safely
- pays the fare
- establishes and maintains orientation at drop off point

Travel Techniques • Level Three

LEARNING OUTCOMES

It is expected that students will be able to:

- Apply the use of all cane techniques
- Plan and execute routes to unfamiliar commercial areas
- Use advanced travel techniques with supervision (e.g., cross multi-laned streets with high speed and high volume traffic)
- Use public transportation independently
- Independently travel to a stated destination from a drop off starting point

Travel Techniques • Level Three

ASSESSMENT

Cane techniques

- 3 point touch
- touch and slide

Unfamiliar commercial travel

- uses appropriate self-protective techniques
- selects and uses low vision devices appropriately
- selects and uses ETAs
- uses appropriate cane skills as dictated by the environment
- applies orientation strategies
- safely crosses streets
- uses public transportation
- uses stairs, escalators, elevators, and revolving doors
- uses Hines Break
- negotiates railroad crossings and open sidewalk spaces (gas stations, parking lots)
- travels in airports, bus stations, railway stations

Advanced travel techniques

- uses skills from crossing commercial streets (see Level Two Crossing Commercial Streets page 43)
- assesses traffic pattern and speed
- traverses traffic islands and lane dividers

Using public transportation

Bus

- phones and records information specific to a bus route
- locates correct bus stop
- indicates and confirms destination with driver
- establishes and maintains orientation at drop off points
- recovers from a missed stop by problem solving
- completes a bus route, including transfers
- uses rapid transit system

Taxi

See Level Two Taxi (page 44)

Communication, Personal Safety, and Advocacy

Effective communication skills, the knowledge and application of personal safety procedures, and the ability to be an effective self-advocate are fundamental in reaching one's destination, safely and efficiently.

Communication, Personal Safety, and Advocacy • Learning Outcomes

LEVEL ONE

- Demonstrate appropriate social interactions at home, school, and in public
- Identify basic safety rules
- Discriminate denominations of coins and bills
- Understand personal medical issues
- Understand safety implications of eye condition
- Know emergency procedures

LEVEL TWO

- Demonstrate appropriate interactions with the public
- Demonstrate more complex personal safety rules
- Communicate with the public regarding the use of dog guides or low vision devices

LEVEL THREE

- Independently demonstrate appropriate social interactions with the public
- Independently demonstrate the rules of safe travel in unfamiliar environments
- Advocate on behalf of persons with visual impairments

Communication, Personal Safety, and Advocacy • Level One

LEARNING OUTCOMES

It is expected that students will be able to:

- Demonstrate appropriate social interactions at home, school, and in public
- Identify basic safety rules
- Discriminate denominations of coins and bills
- Understand personal medical issues
- Understand safety implications of eye condition
- Know emergency procedures

Communication, Personal Safety, and Advocacy • Level One

ASSESSMENT

Communication

- communicates need
- accepts or refuses assistance appropriately
- uses the rules of social etiquette
- asks clear questions and confirms answers
- identifies appropriate sources of assistance
- makes simple monetary exchanges at stores

Basic safety

- states name, address, and phone number
- states parents' and teachers' names
- demonstrates 'Stop, look and listen' rule
- defines "stranger" and safety rules with respect to strangers
- participates in early self-defence program if available
- demonstrates understanding of personal space and private body parts
- demonstrates strategies for refusing unwanted touch
- knows basic first aid

Medical issues

- takes appropriate precautions related to eye condition
- communicates pertinent medical information, including use of glasses and other low vision devices

Emergency procedures

- demonstrates how to use a phone
- exits home or school safely in an emergency
- demonstrates effective use of 911 emergency access through role play
- identifies a variety of emergency vehicles

Communication, Personal Safety, and Advocacy • Level Two

LEARNING OUTCOMES

It is expected that students will be able to:

- Demonstrate appropriate interactions with the public
- Demonstrate more complex personal safety rules
- Communicate with the public regarding the use of dog guides or low vision devices

Communication, Personal Safety, and Advocacy • Level Two

ASSESSMENT

Communication with the public

- communicates politely and clearly
- communicates appropriately (knows what level of information to share)
- uses appropriate stance, facial expressions, and gestures
- uses appropriate language when interacting with the public
- gathers transit information and directions for travel
- solicits aid from appropriate sources

Personal safety

- accesses and operates public telephones
- assesses and reacts to unsafe situations
- monitors personal space and appropriateness of touch
- safely and independently exits buildings in emergencies
- carries and stores wallet safely
- participates in first aid training
- keeps track of valuables while using public transportation
- handles money discretely
- sits near driver on the bus

Advocacy

- answers queries about the need or use of dog guides

OPTIONAL: Consider participating in a first aid and self-defence training course.

Communication, Personal Safety, and Advocacy • Level Three

LEARNING OUTCOMES

It is expected that students will be able to:

- Independently demonstrate appropriate social interactions with the public
- Independently demonstrate the rules of safe travel in unfamiliar environments
- Advocate on behalf of persons with visual impairments

Communication, Personal Safety, and Advocacy • Level Three

ASSESSMENT

Communication

- knows how to get attention from an appropriate source, in person or by phone
- engages in conversational etiquette
- communicates with motorists and cyclists through body language and gestures
- communicates need or advocacy issue clearly
- confirms and clarifies information received
- uses and stores debit card or credit cards, and cheques
- interacts with motorists and cyclists

Personal safety

- chooses to refuse or accept assistance or attention verbally or physically if necessary
- carries oneself confidently and purposefully
- monitors personal space and appropriateness of touch
- identifies and takes measures to avoid potential dangers
- physically removes oneself from potential danger and locates a safe haven
- clearly reports emergencies and critical information
- safely exits buildings, vehicles, and public transportation in emergencies
- clearly communicates the intent to cross or not to cross a road
- stays clearly visible in all conditions
- understands and assesses personal safety issues while travelling

Advocacy

- communicates needs to public officials (architectural modifications, audible signals)
- initiates information sharing about one's blindness and related issues (e.g., use of cane, dog guides, low vision devices)

OPTIONAL: Consider carrying a safety survival kit containing emergency money, cell phone, etc.

Appendix A

Learning Outcomes

CONCEPT DEVELOPMENT	SENSORY DEVELOPMENT	ORIENTATION & MAPPING	TRAVEL TECHNIQUES	COMMUNICATION, SAFETY & ADVOCACY
<p>ENVIRONMENTAL CONCEPTS</p> <ul style="list-style-type: none"> • Describe features of more complex intersections • Demonstrate proficiency in understanding and dealing with environmental concepts as they relate to advanced travel 	<p>VISION</p> <ul style="list-style-type: none"> • Demonstrate proficient use of vision to establish and maintain orientation and safety when travelling in complex environments • Understand the features and use of low vision devices <p>AUDITORY</p> <ul style="list-style-type: none"> • Demonstrate proficient use of hearing to establish and maintain orientation and safety when travelling in complex environments • Use sound to “read” traffic flow at high speed and heavy volume intersections • Understand the characteristics of electronic travel devices in providing or enhancing auditory information <p>TOUCH</p> <ul style="list-style-type: none"> • Understand the use of alternative travel devices • Be aware of changes in tactile sensitivity due to weather and environmental conditions 	<ul style="list-style-type: none"> • Use tactile, auditory, and visual maps in unfamiliar settings • Orient to unfamiliar settings and proceed to a predetermined destination 	<ul style="list-style-type: none"> • Apply the use of all cane techniques • Plan and execute routes to unfamiliar commercial areas • Use advanced travel techniques with supervision (e.g., cross multi-laned streets with high speed and high volume traffic) • Use public transportation independently • Independently travel to a stated destination from a drop off starting point 	<ul style="list-style-type: none"> • Independently demonstrate appropriate social interactions with the public • Independently demonstrate the rules of safe travel in unfamiliar environments • Advocate on behalf of persons with visual impairments <div data-bbox="1650 1182 1990 1344" style="border: 1px solid black; text-align: center; padding: 10px;"> <p>Level Three</p> </div>

CONCEPT DEVELOPMENT	SENSORY DEVELOPMENT	ORIENTATION & MAPPING	TRAVEL TECHNIQUES	COMMUNICATION, SAFETY & ADVOCACY
<p>SPATIAL CONCEPTS</p> <ul style="list-style-type: none"> • Apply positional and relational concepts • Identify more complex shapes • Demonstrate a facility with concepts of measurement • Apply action concepts to travel • Apply time/distance and sound/distance relationships • Transfer the notion of body concepts in relation to other people (e.g., put your right hand on the left shoulder of the person facing you) <p>ENVIRONMENTAL CONCEPTS</p> <ul style="list-style-type: none"> • Describe features of roads and intersections • Understand features associated with larger geographical settings • Describe vehicular and pedestrian traffic patterns • Use concepts of topography • Use concepts of temperature 	<p>VISION</p> <ul style="list-style-type: none"> • Visually identify dangers in unfamiliar environments • Use vision to “read” business area traffic • Use visual memory for orientation • Maximize use of residual vision when travelling <p>AUDITORY</p> <ul style="list-style-type: none"> • Use sound cues and echo location for orientation • Use sound to “read” vehicle flow and traffic control systems at intersections <p>TOUCH</p> <ul style="list-style-type: none"> • Use touch for orientation in unfamiliar settings • Discriminate more complex tactile information • Understand the impact of clothing on masking tactile cues 	<ul style="list-style-type: none"> • Orient to a more complex environment • Locate specific destination by address • Interpret more complex maps 	<ul style="list-style-type: none"> • Give instruction to a sighted guide • Use correct sighted guide technique • Use basic cane techniques proficiently • Travel safely and independently in unfamiliar indoor environments • Travel safely and independently in residential neighbourhoods • Safely and independently cross residential streets • With supervision, travel safely in business areas • With supervision, safely cross streets in business or commercial areas • Travel safely in adverse weather conditions in familiar environments • Travel a familiar route safely at night • With supervision, use public transportation 	<ul style="list-style-type: none"> • Demonstrate appropriate interactions with the public • Demonstrate more complex personal safety rules • Communicate with the public regarding the use of dog guides or low vision devices <div data-bbox="1654 1081 1984 1166" style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Level Two</p> </div>

CONCEPT DEVELOPMENT	SENSORY DEVELOPMENT	ORIENTATION & MAPPING	TRAVEL TECHNIQUES	COMMUNICATION, SAFETY & ADVOCACY
<p>BODY CONCEPTS</p> <ul style="list-style-type: none"> Name and locate body parts Identify the motion of body parts Identify body planes, laterality and directionality in relation to self Describe the location of an object in relation to body parts <p>SPATIAL CONCEPTS</p> <ul style="list-style-type: none"> Identify positional and relational concepts Identify basic shapes Make comparative judgments Demonstrate awareness of basic measurement Identify surface planes Make quarter, full, and half turns Begin to understand time/distance relationships <p>ENVIRONMENTAL CONCEPTS</p> <ul style="list-style-type: none"> Identify features and functions of common objects familiar to their environment Be aware of potential dangers in home, school, and neighbourhood Understand features of a landmark Use concepts of topography Use concepts of texture Use concepts of temperature 	<p>VISION</p> <ul style="list-style-type: none"> Use vision to establish and maintain orientation Name eye condition and functional implications Visually identify dangers in familiar environments Use vision to identify features of a residential area <p>AUDITORY</p> <ul style="list-style-type: none"> Locate, identify, and discriminate information from sounds Use sound cues to identify dangers Understand sound masking <p>TOUCH</p> <ul style="list-style-type: none"> Interprets and respond to tactile information using hands, feet, and body Interpret and react to tactile information when using a pre-cane, cane, walker, or wheelchair <p>PROPRIOCEPTIVE/ KINESTHETIC</p> <ul style="list-style-type: none"> Demonstrate awareness of the position of body parts and monitor their movement in space Accurately complete turns <p>VESTIBULAR</p> <ul style="list-style-type: none"> Monitor and compensate for changes of the vestibular system <p>OLFACTORY</p> <ul style="list-style-type: none"> Use scents for orientation Use the sense of smell to detect danger 	<ul style="list-style-type: none"> Locates a dropped object Orient to familiar environments Interpret a simple map Travel to a familiar destination Develop the concept of a city block 	<ul style="list-style-type: none"> Follow proper sighted guide technique Demonstrate a basic understanding of the uses of the long cane or adaptive mobility device (e.g., walker, hula hoop) Establish and maintain posture and balance while travelling with or without a cane Move safely in a familiar environment Use the full range of beginning O & M skills to travel safely and independently in familiar environments 	<ul style="list-style-type: none"> Demonstrate appropriate social interactions at home, school, and in public Identify basic safety rules Discriminate denominations of coins and bills Understand personal medical issues Understand safety implications of eye condition Know emergency procedures <div data-bbox="1654 1159 1990 1243" style="border: 1px solid black; padding: 5px; text-align: center; font-size: 24pt; font-weight: bold;">Level One</div>

Appendix B

Resources

ORIENTATION AND MOBILITY TEACHER RESOURCES

TAPS: AN ORIENTATION & MOBILITY CURRICULUM FOR STUDENTS WITH VISUAL IMPAIRMENTS (1993)

Texas School for the Blind.

THE ART AND SCIENCE OF TEACHING ORIENTATION AND MOBILITY TO PERSONS WITH VISUAL IMPAIRMENTS (1993)

Author: W.H. Jacobson

American Foundation for the Blind.

CONCEPT DEVELOPMENT FOR VISUALLY HANDICAPPED CHILDREN: A RESOURCE GUIDE FOR TEACHERS AND OTHER PROFESSIONALS WORKING IN EDUCATIONAL SETTINGS (1985)

Authors: W.T. Lydon & M.L. McGraw

American Foundation for the Blind.

FOUNDATIONS OF ORIENTATION AND MOBILITY (1980)

Authors: R.L. Welsh & B.B. Blasch, Eds.

American Foundation for the Blind.

HAND IN HAND: ESSENTIALS OF COMMUNICATION AND ORIENTATION AND MOBILITY FOR YOUR STUDENTS WHO ARE DEAF-BLIND. 2 VOLS. (1995)

Authors: K.M. Heubner, J.G. Prickett, T.R. Welch, E. Joffe, Eds.

American Foundation for the Blind

THE HILL PERFORMANCE TEST OF SELECTED POSITIONAL CONCEPTS (1981)

Author: E.W. Hill

Stoelting Co.

INDEPENDENCE WITHOUT SIGHT OR SOUND: SUGGESTIONS FOR PRACTITIONERS WORKING WITH DEAF-BLIND ADULTS (1993).

Author: D. Sauerburger.

American Foundation for the Blind.

ORIENTATION AND MOBILITY TECHNIQUES: A GUIDE FOR THE PRACTITIONER (1976)

Authors: E.W. Hill & Ponder

American Foundation for the Blind.

COGNITIVE LEARNING THEORY AND CANE TRAVEL INSTRUCTION: A NEW PARADIGM (1995)

Author: Richard Mettler

State of Nebraska, Department of Public Institutions, Division of Rehabilitation Services for the Visually Impaired.

BEYOND ARMS REACH: ENHANCING DISTANCE VISION (1992)

Authors: Audrey J. Smith, Lizabeth N. O'Donnell

Pennsylvania College of Optometry Press

LOW VISION: A RESOURCE GUIDE WITH ADAPTATIONS FOR STUDENTS WITH VISUAL IMPAIRMENTS, SECOND EDITION (1994)

Author: Nancy Levorh

Texas School for the Blind.

CARE AND FEEDING OF THE LONG WHITE CANE: INSTRUCTIONS IN CANE TRAVEL FOR BLIND PEOPLE

Author: Thomas Bickford

National Film Board.

ORIENTATION & MOBILITY CURRICULUM

W. Ross Macdonald School for the Visually Impaired.

PRIORITY GOALS ORIENTATION & MOBILITY PRE-SCHOOL – AGE 18.

Child Light

London, Ontario

TRAVEL TALES – A MOBILITY STORYBOOK (1988)

Authors: Julia Halpern-Gold, Shelly Faust-Jones, and Robin Weinstock Adler

Mostly Mobility.

GAMES FOR PEOPLE WITH SENSORY IMPAIRMENTS: STRATEGIES FOR INCLUDING INDIVIDUALS OF ALL AGES (1996)

Framework for Independent Travel

Authors: Lauren J. Lieberman, Jim F. Cowart
Human Kinetics

“SIMON SAYS” IS NOT THE ONLY GAME (1982)

Authors: B. Leary & M. von Schneden
American Foundation for the Blind.

**AN ORIENTATION AND MOBILITY PRIMER FOR FAMILIES AND YOUNG CHILDREN
(1989)**

Authors: B. Dodson-Burk, E. Hill
American Foundation for the Blind.

**A RESOURCE MANUAL FOR UNDERSTANDING AND INTERACTING WITH INFANTS,
TODDLERS AND PRESCHOOL AGE CHILDREN WITH DEAF-BLINDNESS**

SKI*HI Institute
Utah State University, Logan, UT.

OPTICAL DEVICES – Reference hand-outs

University of Waterloo, School of Optometry – Low Vision Clinic, Waterloo, ON.
(elstief@quark.uofw.ca)

ORIENTATION & MOBILITY TRAINING

CIL Instructional Kit
New York Center for Independent Living, NY.

O & M TEAM EVALUATES SENSORY 6 (1990)

Authors: J. McKinley, R. Lundt, T. Johnson
Technology Today, June 1990.

PRECANE MOBILITY DEVICES (1986)

Author: S. Bashbach
Journal of Visual Impairment and Blind, 88(9).

PROJECT IVEY: INCREASING VISUAL EFFICIENCY (1986)

Florida Bureau of Education for Exceptional Students

Department of Education, Tallahassee, FL.

SENSORY DEVELOPMENT – CIL INSTRUCTIONAL KIT

New York Center for Independent Living, NY.

THE OUT OF SYNC CHILD (1998)

Author: C. Stock-Kranowitz

Perigee Press.

Appendix C

Student Profile Forms

FRAMEWORK FOR INDEPENDENT TRAVEL STUDENT PROFILE

STUDENT NAME													
DATE													
LEVEL		CONCEPT DEVELOPMENT			SENSORY DEVELOPMENT						ORIENTATION AND MAPPING	TRAVEL TECHNIQUES	COMMUNICATION AND ADVOCACY
		Body Concepts	Spatial Concepts	Environmental Concepts	Vision	Auditory	Touch	Proprioceptive/Kinesthetic	Vestibular	Olfactory			
LEVEL 3	Achieved												
	Working toward												
LEVEL 2	Achieved												
	Working toward												
LEVEL 1	Achieved												
	Working toward												

**FRAMEWORK FOR INDEPENDENT TRAVEL
STUDENT PROFILE**

STUDENT NAME _____

DATE _____

	CONCEPT DEVELOPMENT			SENSORY DEVELOPMENT						ORIENTATION AND MAPPING	TRAVEL TECHNIQUES	COMMUNICATION PERSONAL SAFETY AND ADVOCACY
	Body Concepts	Spatial Concepts	Environmental Concepts	Vision	Auditory	Touch	Proprioceptive	Vestibular	Olfactory			
LEVEL 3												
LEVEL 2												
LEVEL 1												

To order copies of this Resource Guide

Schools:

Additional Copies of this resource will be available to schools for a limited time only from:

Office Products Centre

4248 Glanford Avenue

Victoria BC V8Z 4B8

Phone: (250) 952-4460

Fax: (250) 952-4442

Toll-free: 1-800-282-7955

Please quote catalogue number RB0094 when ordering.

General Public:

Copies are available to the general public from:

Crown Publications

521 Fort Street

Victoria BC V8W 1E7

Phone: (250) 386-4636

Fax: (250) 386-0221

Please quote catalogue number RB0094 when ordering.